Charleston Area Medical Center has been ranked among the top 5 percent of hospitals, according to an independent study of mortality and complication rates for nearly 4,300 hospitals nationwide as released by Healthgrades, the nation’s leading health care ratings company.

CAMC is the only hospital in West Virginia and one of only 260 hospitals nationwide to achieve the Distinguished Hospital Award for Clinical Excellence based on its outstanding clinical quality performance.

"This award acknowledges the achievements CAMC has made to provide our patients with consistently high levels of clinical care," said Tom Bryson, CAMC's president and CEO. "Our physicians and staff have demonstrated the commitment and collaborative spirit necessary to implement the best possible programs and processes that produce exceptional clinical outcomes which this recognition validates."

The Healthgrades Distinguished Hospital Award for Clinical Excellence is presented only to those hospitals that stand out above the rest for overall clinical care across a broad spectrum of services. While many hospitals have specific areas of expertise and high-quality outcomes in certain areas, the select hospitals recognized with this award exhibit comprehensive high-quality care across multiple clinical specialties.

**DISTINGUISHED HOSPITAL**

**CLINICAL EXCELLENCE™**

**2014**

**Power of Many makes outpatient cancer center a reality**

Employees, donors, patients and community members cheered as the final steel beam, signed by those touched by cancer, was placed atop the cancer center on Nov. 18.

The 100,000-square-foot facility, being built on a vacant lot across the street from CAMC Memorial Hospital, will open its doors to patients in March 2015.

Many cancer and cancer-related services will be more efficiently and effectively served by the new center including radiation oncology, medical oncology, oncological surgery, office space, clinical trials and an infirmary center.

You can continue to follow the construction by logging on to the webcams at camc.org/watchourprogress.

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**FARM TO HOSPITAL: PROVIDING HEALTHIER FOODS**

Hospital food used to leave a bad taste in some patients’ mouths. One reason hospital food doesn’t taste like the food you make at home is that food prepared at home usually has more fresh herbs and spices. Hospital food used to leave a bad taste in some patients’ mouths. One reason hospital food doesn’t taste like the food you make at home is that food prepared at home usually has more fresh herbs and spices.

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CAMC is working to implement a value-chain food system, incorporating local providers and growing fresh herbs for CAMC.

This idea was developed through work with the Greater Kanawha Valley Foundation and the Food Foundation, which focused on ways to stimulate rural Appalachian economies. CAMC is the first hospital in the nation to work with the Food Foundation on value chains.

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"National honors like these are important because they represent years of commitment to excellence by our physicians, clinicians and staff," said Dale Wood, CAMC’s chief quality officer. "For patients, this recognition represents objective confirmation that we are continuing to offer exceptional quality, and they can feel confident that they are receiving high quality care."

From 2010 through 2012, if all other hospitals performed at the level of Distinguished Hospitals for Clinical Excellence, 156,036 lives could have potentially been saved.

"We’re fortunate to be part of a health system that places quality and patient safety at the forefront,” Wood said. "Our success comes from everyone working together and being committed to doing the right thing for every patient, every time."
Cadmium poisoning (Cadmium Disease) is a chronic health problem caused by prolonged exposure to cadmium in the workplace or environment. Cadmium is a heavy metal that is found in soil, water, and air. It can enter the body through ingestion, inhalation, or skin absorption. Over time, cadmium accumulates in the body, especially in the kidneys and bones. This can lead to a range of health problems, including kidney disease, bone disease, and respiratory problems.

The primary source of cadmium exposure is smoking tobacco, which contains high levels of cadmium. Other sources of cadmium exposure include industrial processes, such as smelting and refining of metals, and the use of cadmium-containing products, such as batteries and paints. Exposure to cadmium can occur through the workplace, where it is used in certain industries, or in the environment, where it is released through industrial and agricultural activities.

Cadmium poisoning affects the kidneys, bones, lungs, and other organs. Symptoms of cadmium poisoning may include kidney stones, bone pain, and lung problems. In severe cases, cadmium poisoning can cause kidney failure and death.

There is no cure for cadmium poisoning. Treatment consists of removing cadmium from the body as quickly as possible, and providing supportive care to manage the symptoms. Prevention is the key to preventing cadmium poisoning. This can be achieved by reducing exposure to cadmium in the workplace and environment, and by avoiding smoking tobacco.

In conclusion, cadmium poisoning is a serious health problem that affects millions of people worldwide. It is caused by prolonged exposure to cadmium in the workplace or environment, and can lead to a range of health problems, including kidney disease, bone disease, and respiratory problems. Treatment consists of removing cadmium from the body as quickly as possible, and providing supportive care to manage the symptoms. Prevention is the key to preventing cadmium poisoning. This can be achieved by reducing exposure to cadmium in the workplace and environment, and by avoiding smoking tobacco.
Patient Blood Management: Slow the flow

Although blood transfusion can improve outcomes and be a life saving product, it is not always administered appropriately for the right indication and/or in the right dose. Many patients are not aware of the risks of blood transfusions:

- Blood transfusion introduces a foreign substance into the body.
- Blood transfusion is a liquid transfusion.
- Transfusion Associated Cerebral Overload
- Transfusion Related Immune Modulation
- Reactions–Acute and Delayed (Allergic, Septic)
- Transfusion Related Acute Lung Injury
- Mistransfusion – Human Error
- Transfusion Transmitted Diseases (HIV, Hepatitis B/C, Syphilis)

Blood transfusions can increase a patient’s length of stay in the hospital and increase the cost of care. CAMC’s patient blood management program was designed to improve patient outcomes by reducing and/or avoiding blood transfusions entirely.

This program is a collaborative medical approach that takes into account each patient’s medical and surgical needs.

Converting a patient’s own blood minimizes the need to receive donated blood. Collaboratively doctors, nurses and other hospital staff consider other treatment options to reduce the need for transfusions. These include the use of medications, evidence-based techniques to minimize blood loss during a medical or surgical procedure and the latest technology to determine the need for a blood transfusion.

Managing a patient’s blood involves the patient working with the team who will be providing the care. The process begins before the patient comes to the hospital, continuous medical evaluation and follows the patient even after discharge from the hospital.

The benefit of not performing a transfusion can be measured in the number of blood products, the amount of risk to the patient, minimized risk of blood-borne diseases, the time required to perform the test and decreased risk of infection after surgery.

The patient blood management goals are to improve patient outcomes, respect the request of patients who do not want blood products of any form and educate medical professionals in how proper blood management can improve outcomes for all patients.

CAMC wants to improve the appropriate use of blood and blood products and offer the choice of bloodless health care to both medical and surgical patients.

A team of health care professionals is working with a vending company to determine whether offering low-calorie, non-beverage options in vending machines in a university and hospital-based setting will result in lower calories consumed out of the machines on a monthly basis.

“The machines being studied are located in the WVU building and inside Memorial Hospital. We certainly aren’t doing anything revolutionary,” said Dr. Stephen A. Carter, principal investigator. “The study will last for six months.”

Several low-calorie items will be offered in the machines, which are managed by AVI Foodsystems. Those low-calorie items include Fiber One Bars, Special K Cracker Chips, Snyder’s Bully Sticks, Welch’s Fruit Snacks, PopCorners Kettle Chips and Jack Link’s Beef Jerky.

“In general, items of less than 170 calories, and some fewer than 100 calories, have been added to the already existing menu items being offered within the machines,” Carter said. The team, which includes Carter; Raymond Chadwick, OSMIV; Suzanne Kemper, MPH; Christine C. Chahoud, OSMIV; and Kevin Buckalew and Roni Boggs from AVI Foodsystems, hopes to present findings at the 2014 Research Day in April.

“We also would like to possibly present at other local, state and national meetings, and perhaps obtain a publication,” said Carter. “We hope we can show that the study will result in fewer calories consumed per machine without a loss of total items sold or a loss of total income per machine to the vending machine company (AVI) that I am impressed that AVI is willing to be involved in a study that could possibly result in low income per machine for larger facilities.”

For more information call (304) 347-1358.

Imaging Services – more experience, more locations, more convenience

Medical imaging services feature the latest technology, such as 3T MRI and low-dose radiation CT scans, as well as several convenient locations and flexible scheduling. The medical imaging technologies performing the exams have specific uses to help radiologists diagnose any condition or injury you may have. Whether it’s an X-ray to check for broken bones or an MRI, our locations provide multiple services to make sure patients receive the advanced diagnostic tests they need quickly and conveniently. The chart below lists the services provided at each location, as well as the hours and scheduling information. For detailed information about each service and rates, visit camc.org/imaging.

<table>
<thead>
<tr>
<th>Location</th>
<th>Services</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAMC Imaging Center – Kanawha City</td>
<td>Low-dose radiation CT, MRI, breast MRI, PET/CT, bone density (DEXA scan), digital X-ray and mammography, ultrasound, CT, ultrasound, bone density (DEXA scan), digital X-ray and mammography, ultrasound, CT, ultrasound, bone density (DEXA scan)</td>
<td></td>
</tr>
<tr>
<td>CAMC Imaging Center – Southridge</td>
<td>Digital mammography, breast biopsies, stereotactic breast biopsies, ultrasound, bone density (DEXA scan), breast cancer risk assessments</td>
<td>Monday – Friday, 8 a.m. to 5:45 p.m.</td>
</tr>
<tr>
<td>CAMC Urgent Care Center – Cross Lanes</td>
<td>CT, X-ray, ultrasound</td>
<td>Saturday, 8 a.m. to noon</td>
</tr>
<tr>
<td>CAMC General Hospital</td>
<td>ST MRI, low-dose radiation CT, X-ray, fluoroscopy, ultrasound, bone density (DEXA scan)</td>
<td>Inpatient services, 24/7</td>
</tr>
<tr>
<td>CAMC Memorial Hospital</td>
<td>MRI, low-dose radiation CT, X-ray, fluoroscopy, ultrasound, bone density (DEXA scan)</td>
<td>Inpatient services, 24/7</td>
</tr>
<tr>
<td>CAMC Women and Children’s Hospital</td>
<td>Large bore MRI, low-dose radiation CT, X-ray, ultrasound, bone density (DEXA scan)</td>
<td>Inpatient services, 24/7</td>
</tr>
<tr>
<td>CAMC Teays Valley Hospital</td>
<td>Large bore MRI, CT, X-ray, ultrasound, bone density (DEXA scan)</td>
<td>Outpatient services – call central scheduling at (304) 388-1170</td>
</tr>
</tbody>
</table>

Patient calls pain treatment “a life saver”

“I went through all the treatments and nothing worked for me,” Loudemilk said. “I told all the therapy I could take so they sent me to a surgeon. He didn’t think I was a candidate for surgery, and that’s when I decided to try something different.”

Admittedly defeated at first, she has become a true believer. “Dr. Pope helped me get my life back.”

Jason E. Pope, MD, specializes in pain management and is certified by the American Board of Anesthesiology with a subspecialty in pain medicine.

“Before we had advanced pain care technologies, people in Mykle’s position were placed in pain purgatory and we told they had to live with the pain. As she can now tell you, this is not true. People do not have to suffer.”

Dr. Pope describes that the first step to determining the best course of treatment for a patient is to understand the pain and what it is doing for the person. Loudemilk was hit by a car in January 2012. She came to the CAMC Teays Valley Hospital Pain Relief Center suffering from severe back and leg pain. For her pain was constant, she intercepted with her ability to walk, stand or rest. It hurt to drive, do housework and even sleep.

The implanted device is about the size of a silver dollar and is typically implanted in the lower neck and arm pain or back and leg pain.

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It was a life saver.”

Almost a year later after the device placement, she continues to get excellent relief. “I need it and I depend on it,” Loudemilk said. “It was a life saver.”

About the CAMC Teays Valley Hospital Pain Relief Center

Directed by Pope, the Pain Relief Center is dedicated to individualized patient care, utilizing state-of-the-art imaging guided procedures, medical management and ultrasound-minimally invasive surgical options to treat chronic pain. These strategies together offer the best chance for long-term success while minimizing or avoiding potentially harmful addictive medications. For more information about neurostimulation and other pain management treatments, call the CAMC Teays Valley Hospital Pain Relief Center at (304) 737-5430.

Dr. Jason E. Pope calls with Myrtle Loudemilk about her condition.

Myrtle Loudemilk goes to work and constantly looks for things to do. She recently reroofed her house, almost entirely by herself, which included pushing holes in the walls, taking the cabinet doors off and refinishing them, and tearing up and replacing the floor.

This is the same woman who, just a year ago, was in so much pain she said she could barely move.

“The longer it went, the more bent over I got,” Loudermilk said. “I was homebound because of pain before I put the stimulator in.”

She came to the CAMC Teays Valley Hospital Pain Relief Center suffering from severe back pain and leg pain. For her pain was constant, she intercepted with her ability to walk, stand or rest. It hurt to drive, do housework and even sleep.

The implanted device is about the size of a silver dollar and is typically implanted in the lower neck and arm pain or back and leg pain. It uses mild electrical pulses to interrupt pain signals as they travel to the brain.

For more information call (304) 347-1358.

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Research can save limbs from amputation

The CAMC Clinical Trials Center is participating in a breakthrough, randomized clinical trial which evaluates the effectiveness of a new cell-based technology in patients with non-reconstructible critical limb ischemia, or CLI. Dr. Ali Alsadahm is the lead physician for the study with Drs. John Campbell, Patrick Stieck, Shadi Shalihalmah, Arun Nagarajan, Ahmed Khalid, Mark Bates and Ardena Naniyanlapa also participating in the study.

CLI, a severe condition of peripheral artery disease (PAD), is a blockage of the arteries which decreases blood flow to the legs and feet to the point of severe pain at rest or skin slough formation. Not only in the condition is painful, but it also may result in amputation of the affected limb.

Clinical trials are one of 50 sites in the United States currently participating in this trial. This investigational approach, called “bone marrow aspirate concentrate,” uses a patient’s own cells, including stem cells harvested from their bone marrow to stimulate growth of new blood vessels in the lower extremities. These patients with CLI have no surgical or catheter-based option (i.e., ‘no-option critical limb ischemia’ NO-CLI). A unique aspect of this stem cell-based treatment is that the procedure allows both the cell harvest and implantation to be carried out in one procedure under local anesthesia with sedation.

A patient’s bone marrow is harvested from their bone marrow aspirate concentrate and concentrated into the leg that has poor blood flow and then concentrated into the leg that has poor blood flow. There, the cells may respond to the low-oxygen environment and help build new vessels, improving blood flow. With increased blood flow in the extremity, ulcers may be able to heal.

Patients accepted into the study will have a 46 percent chance of being randomized to receive their own bone marrow concentrate (STEM) and a 53 percent chance of being randomized to receive placebo. Since this is a randomized study, all patients will have some marrow samples drawn, so neither they nor the investigators can tell which trial they received. The bone marrow will be stored approximately 210 total patients.

To qualify, potential candidates must have the following characteristics:

- Diagnosed by a physician as having rupture of the arterial wall
- Have gangrene, an ulcer or sore of the foot or leg
- No longer a candidate for surgical treatment or any other invasive procedure (i.e., angioplasty or bypass surgery) and have exhausted all viable options.
- Not receiving dialysis treatment.

Candidates will be evaluated for eligibility if enrolled, the safety and efficacy of the investigational treatment will be assessed over two years.

To learn more about the Harvest CLI clinical trial, contact the CAMC Clinical Trials Center at (304) 386-9944 or the study website can be found at www.harvestcli clinicaltrial.com.

Skilled clinical trial team brings critical care to outlying hospitals

The neonatal/pediatric transport team keeps the services of CAMC Women and Children’s Hospital and Children’s Hospital of West Virginia available to premature and critically ill newborns and pediatric patients up to two years of age. The neonatal/pediatric transport team travels by ambulance or by fly in a helicopter based on the patient’s acuity and weather conditions.

We bring in patients from outlying facilities throughout West Virginia and in other states who need a higher level of care,” said Valerie Jones, RN-C, transport team lead. “Our modes of transportation are Kanawha County Critical Care Ambulance and West Virginia Air Commons.

The transport team is a multidisciplinary effort that includes registered nurses, respiratory therapists and physician emergency medical technicians. The team functions under the supervision of a neonatologist or pediatric specialist who provides telephonic consultation and advice.

“At the transport team, you must have good decision skills because that’s not always a physician available in person,” said Amanda Koch, RN, transport team member. “We have specialized training in intubation, central and PIC line insertion, needle aspiration and also survival training for our flight.

Complex care is initiated by the transport team on arrival at the referring hospital and continued during the transport to CAMC Women and Children’s neonatal and pediatric intensive care units. Services include:

- Provides patient care through the use of the monitoring and intubation equipment
- Transports critically ill patients by ground or air

The CAMC Transport Center facilitates transfers via the neonatal/pediatric transport team to CAMC Women and Children’s Hospital. Physicians or hospitals requesting a patient transfer to the neonatal intensive care unit (NICU) or pediatric intensive care unit (PICU) at Women and Children’s can call the Transport Center’s toll-free number at 1-877-226-2273.

Clinical trial studies uncontrolled hypertension

The CAMC Clinical Trials Center will be participating in the SYMPlicity HTN-4 renal denervation clinical trial for uncontrolled hypertension, otherwise known as high blood pressure. The trial will be led at CAMC by Drs. Ardena Naniyanlapa, Mark Bates, John Campbell and James Campbell.

Uncontrolled high blood pressure, defined by the American Heart Association as blood pressure ≥140/90 mmHg, poses a major risk to people including the more than 300 million Americans. High blood pressure is an especially dangerous chronic disease because of its association with increased cardiovascular risk, including stroke and heart attack. Other risk factors include age, race, gender, and other diseases such as heart failure and kidney disease. Reduction of high blood pressure and control of hypertension has been shown to reduce the occurrence of these cardiovascular events and save lives.

Renal denervation is an investigational catheter-based procedure that destroys the nerves that link the walls of the arteries leading to the kidneys. These nerves are part of the sympathetic nervous system, which is one of the ways the body controls blood pressure. In people with hypertension, the renal nerves could be hyperactive, raising blood pressure and contributing to heart, kidney and vascular damage.

This investigational interventional treatment, may represent an innovative approach to treating the growing number of patients with uncontrolled high blood pressure in the United States. Renal denervation and ongoing treatment with antihypertensive medications have the potential to help patients achieve their target blood pressure levels.

SYMPlicity HTN-4 is a randomized, controlled trial designed to evaluate the efficacy and safety of renal denervation with the investigational Symplicity renal denervation system in patients with uncontrolled high blood pressure and systolic blood pressure 140-160 mmHg on one or more antihypertensive medications.

The trial will randomly assign approximately 350 patients at CAMC and to a historically controlled group that will not receive the investigational renal denervation treatment. All patients will continue to take their blood pressure medications.

Patients enrolled in the SYMPlicity HTN-4 trial will be randomly assigned to a group, with two out of three assigned to the treatment group and one out of three assigned to the control group. The primary efficacy endpoint of the trial is reaching an office systolic blood pressure with at least a 5-mmHg reduction or achieving a 5-mmHg reduction in 24-hour ambulatory blood pressure six months post-randomization.

This trial has a design that may be beneficial for all patients in the control group since those in the control group may have the option to receive renal denervation treatment six months following randomization, which may help extend the benefit of this procedure if the trial demonstrates benefit.

The Symplicity® renal denervation system consists of a flexible catheter and proprietary generator. The catheter is introduced into the renal artery to locale the renal artery in several places to deactivate the renal nerves. The treatment does not involve a permanent implant and is performed under conscious sedation.

The Symplicity® renal denervation system has been used since 2007 to treat nearly 5,000 patients worldwide and is commercially available in Europe, Asia, Africa, Australia and the Americas. The Symplicity® renal denervation system is not approved by the U.S. Food and Drug Administration for commercial distribution in the United States.

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