CONTACT:
Ralph Berry
901-486-4269
rberry@sullivanbranding.com

Ashley Bowles
901-581-8975
abowles@sullivanbranding.com

The University of Tennessee College of Medicine Launches the World's First Mobile Stroke Unit with Advanced CT Imaging Capabilities Including CT Angiography Imaging for the Brain and Blood Vessels

The Mobile Stroke Unit in Memphis, where stroke incidence is 37 percent higher than the national average, is the first launched in the high-incidence Southeastern United States "Stroke Belt"

MEMPHIS, Tenn. March 22, 2016 – The University of Tennessee College of Medicine in Memphis, Tenn. today introduced the world's most comprehensive Mobile Stroke Unit, capable of conducting and producing advanced quality imaging for stroke diagnosis and noninvasive CT-angiography with a Siemens SOMATOM® Scope CT scanner. This is the first time CT capabilities of this magnitude have been available in a mobile setting, creating the ability to diagnose and launch treatment including tissue plasminogen activator (tPA) treatment and the potent blood pressure drug nicardipine within the critical first hour time frame and select patients for endovascular interventions, neurosurgery and neuro-critical care directly from the prehospital arena.

While other Mobile Stroke Units have been launched in a small number of communities, the combination of many firsts in terms of mobile application and utilization make UT's the most complete Mobile Stroke Unit in the world. Those other Mobile Stroke Units allow for initial treatment to begin quickly and for prepping for emergency room arrival, while the sophistication of The UT College of Medicine Mobile Stroke Unit means a patient will be prepped to go straight to the catheterization laboratory, Neuro Intensive Care Unit or Hospital Stroke Unit, bypassing the stop in the emergency department entirely.

"We are thrilled to have this medical first in Memphis. I want to stress that the Mobile Stroke Unit is a product of worldwide industry leaders brought together to create the first-of-its-kind vehicle," said David Stern M.D., the Robert Kaplan Executive Dean and Vice-Chancellor for Clinical Affairs for The University of Tennessee College of Medicine and The University of Tennessee Health Science Center. "The vehicle framework is from Canada, the Siemens SOMATOM Scope CT scanner was developed by a German company, the custom assembly took

place in New York, with the oversight and direction coming from UT College of Medicine in Memphis, Tenn. led by Dr. Andrei V. Alexandrov, the Chairman of the Department of Neurology at The University of Tennessee Health Science Center and Semmes-Murphey Professor, who is originally from Russia."

The Mobile Stroke Unit, weighing in at more than 14 tons, includes features and capabilities never before assembled for mobile deployment. These include:

- A hospital-quality CT scanner with advanced imaging capabilities to not only allow brain imaging, but also imaging of blood vessels in the brain. Other Mobile Stroke Units in the U.S. and Europe use smaller portable CT scans that only image the brain (without vessels) and also require the team to move the patient for each slice (picture) that is taken. UT's Mobile Stroke Unit provides the same number of slices in high resolution as obtained and expected in the hospital setting since it is equipped with a dedicated gantry that automatically moves the patient to obtain images.
- Due to these advanced imaging capabilities, the Mobile Stroke Unit will be able to bypass hospital emergency departments and take patients directly to endovascular suites, operating rooms, stroke or neurocritical units.
- It is the largest Mobile Stroke Unit in the world, complete with an internal power source capable of matching regular electrical outlet access.
- The Mobile Stroke Unit is the first in the world to be staffed with stroke fellowship-trained, doctorally-prepared nurses certified as advanced neurovascular practitioners, ANVP-BC.
- The Mobile Stroke Unit capacity includes the ability to transport trainees and researchers interested in building the science of early stroke management.

Mobile Stroke Unit Will Serve a Community with a Major Stroke Health Problem

"We have a tremendous burden of stroke in Shelby County, with a stroke rate per 100,000 population that is 37 percent higher than the national average*," said Dr. Stern. "The goal of the Mobile Stroke Unit is to minimize morbidity and mortality, to have more patients walk out of the hospital fully functional. Time is everything for stroke treatment; the quicker we are able to assess and attend to a patient, the better his or her chances are for recovery."

According to the American Stroke Association, stroke is the fifth leading cause of death in the United States, killing someone approximately every four minutes. African Americans have nearly twice the risk of a first-ever stroke and a much higher death rate from stroke. Also, according to the American Stroke Association, stroke is the leading cause of disability in the United States.

"If we eliminate the treatment delay getting to and through the emergency room, we can save up to 90 minutes, and as a neurologist, I know that *time is brain*, so the more time we save, the less likely it is that permanent brain damage will occur in a patient. Our hypothesis is that we will deliver hospital-level standard of stroke care faster, equally safe, but with better outcomes

due to the ability to intervene much earlier," said Dr. Alexandrov. "Our 'time to treatment' target is less than one hour."

The UT Mobile Stroke Unit is funded through a public -private collaboration for which more than $3 million has been raised, which will enable operation for up to three years. The Unit will operate 12 hours a day, one week on and one week off beginning late April 2016.

"The Mobile Stroke Unit will be based in the heart of a 10-mile, most critical needs areas of Memphis with the highest incidence of stroke, but can be deployed within the entire metro region. We estimate that 300 patients will need to be treated by the Mobile Stroke Unit to prove its effectiveness over the course of three years," said Dr. Alexandrov. "We believe this study will help establish a baseline of results that medical communities worldwide can use to develop and deploy similar programs to affect stroke outcomes. Our goal is a sustainable model for future funding and an overall lowering of morbidity and mortality through early treatment."

"The launch of this Mobile Stroke Unit is a true community collaboration of donors, hospitals, local EMS and the University," said Dr. Stern. "Beyond the highest quality education and research, our focus at the UT College of Medicine is to ensure our research and clinical efforts translate into a positive impact on the health of our community. The Mobile Stroke Unit is a perfect example of this commitment."

The UT Mobile Stroke Unit will be operated by a subsidiary of the UT College of Medicine's faculty practice plan – University Clinical Health, an affiliated tax-exempt, nonprofit corporation.

About the UT College of Medicine in Memphis:
The College of Medicine (www.uthsc.edu/Medicine) is a part of The University of Tennessee Health Science Center (UTHSC), Tennessee's only public, statewide, academic health system. The mission of UTHSC is to bring the benefits of the health sciences to the achievement and maintenance of human health, with a focus on the citizens of Tennessee and the region, by pursuing an integrated program of education, research, clinical care, and public service. Founded in 1911, during its more than 100 years, UTHSC has educated and trained more than 57,000 health care professionals in academic settings and health care facilities across the state. For more information, visit www.uthsc.edu. The neurology practice group of UT College of Medicine is operated by University Clinical Health www.universityclinicalhealth.com. Multiple physician practice groups make up the College of Medicine faculty practice arm with the largest number of faculty being members of University Clinical Health.

###

*Centers for Disease Control Division for Heart Disease and Stroke Prevention
http://nccd.cdc.gov/DHDSPAtlas/DetailedReports.aspx?AreaIds=47157&ThemeSubClassId=3&filterIds=9,2,3,4,7&filterOptions=1,1,1,1,1

CONTACT:
Ralph Berry
901-486-4269
rberry@sullivanbranding.com

Ashley Bowles
901-581-8975
abowles@sullivanbranding.com

The University of Tennessee College of Medicine Mobile Stroke Unit
Fact Overview

What Makes this Mobile Stroke Unit One-of-a-Kind in the World

- A hospital-quality CT scanner with advanced imaging capabilities to not only allow brain imaging, but also imaging of blood vessels in the brain. Other Mobile Stroke Units in the U.S. and Europe use smaller portable CT scans that only image the brain (without vessels) and also require the team to move the patient for each slice (picture) that is taken.
- UT's Mobile Stroke Unit provides the same number of slices in high resolution as obtained and expected in the hospital setting since it is equipped with a dedicated gantry that automatically moves the patient to obtain images.
- This is the first time CT capabilities of this magnitude have been available in a mobile setting, creating the ability to diagnose and launch treatment including tissue plasminogen activator (tPA) treatment and the potent blood pressure drug nicardipine within the critical first hour time frame and select patients for endovascular interventions, neurosurgery and neurocritical care right from the prehospital arena.
- It is the largest Mobile Stroke Unit in the world, complete with an internal power source capable of matching regular electrical outlet access.
- The Mobile Stroke Unit will be able to bypass hospital emergency departments and take patients directly to endovascular suites, operating rooms, and stroke or neurocritical units.

Who's on Board

A combination of the following:

- A vascular neurologist
- Stroke fellowship-trained, doctorally-prepared nurses certified as advanced neurovascular practitioners, ANVP-BC. Only 88 of these expert nurses are in practice and four have been recruited to Memphis for the Mobile Stroke Unit
- A CT technologist
- An emergency medical paramedic
- An emergency medical technician driver/helper
- The Mobile Stroke Unit capacity includes the ability to transport trainees and researchers interested in building the science of early stroke management

How It Will Work

- A family member or bystander recognizes stroke warning signs in a person and calls 911.
- The Mobile Stroke Unit will be dispatched to the scene and perform a detailed stroke assessment of the patient.
- CT scan of the brain and blood vessels, and other appropriate diagnostics are performed to determine what kind of stroke the patient is experiencing.
- Once the type of stroke is determined, the doctor administers the appropriate vital initial treatment. That treatment could include tissue plasminogen activator (tPA) to begin the process of brain damage mitigation or nicardipine within the critical first hour time frame. The patient could then be selected for endovascular interventions, neurosurgery and neurocritical care right from the prehospital arena.
- After the patient is evaluated, given initial treatment and stabilized, the patient will be taken to a primary stroke center at a local hospital for the next phase of care, being able to bypass the emergency department and go straight to the hospital's Neuro Intensive Care Unit, Cardiac Catheterization Lab or Stroke Unit for treatment.
- The Unit will operate out of Fire Department 14 with immediate access to high stroke populations in Whitehaven and Frayser, but will travel to all of Shelby County.
- Initially, it will operate one week on and one week off so as to evaluate its performance to maximize its efficiency to treat stroke.

Time is Brain

- The average time from ambulance arrival to pick up a patient through hospital arrival, beginning diagnosis and treatment is 75 minutes or more.
- The average anticipated time from this new Mobile Stroke Unit arrival at the patient to diagnosis and initial treatment for a stroke is 15 minutes.
- The quicker a patient receives medical treatment, the less permanent brain damage occurs.
- According to the American Stroke Association, stroke is the fifth leading cause of death in the U.S., killing someone approximately every four minutes.
- African Americans have nearly twice the risk of a first-time stroke and a higher death rate from stroke.
- "Time is brain," said Andrei V. Alexandrov, M.D., Chairman of the Department of Neurology at The University of Tennessee Health Science Center and Semmes-Murphey Professor. "The longer a blood clot sits there, the more brain cells die. If you're having a stroke, you only have one hour to decide to do something, and that hour will largely determine how you are you going to spend the rest of your life."
- According to the American Stroke Association, stoke is the leading cause of disability in the U.S.

Why Memphis

- Shelby County has a tremendous burden of stroke with a stroke incidence 37 percent higher than the national average. [1]

[1] Centers for Disease Control Division for Heart Disease and Stroke Prevention
http://nccd.cdc.gov/DHDSPAtlas/DetailedReports.aspx?AreaIds=47157&ThemeSubClassId=3&filterIds=9,2,3,4,7&filterOptions=1,1,1,1,1

- Tennessee is ranked 48th in stroke mortality with a rate of 45.6 per 100,000 people in 2013.[2]
- Stroke risk factors, according to the American Stroke Association include:
    - *Obesity.* More than 35 percent of the population in Shelby County is obese, compared to 25 percent of the U.S. population. [3]
    - *Race.* African Americans have a much higher risk of death from a stroke than Caucasians do. Shelby County's demographics include more than a 53% African American population. [4]
    - *Hypertension.* Tennessee is ranked the sixth highest state for hypertension rates with more than 38 percent of Tennesseans suffering from high blood pressure. The national average is 28 percent [5]

Special Recognitions

- The University of Tennessee College of Medicine physicians, led by Dr. Stern and Dr. Alexandrov (bios in folder)
- The University of Tennessee Advisory Board, led by Chairman David Levine
- Memphis Fire Department EMS teams

Key Donors

- Jan Young and The Assisi Foundation
- Jack Moore
- An anonymous foundation
- The H.W. Durham Foundation, Inc.

Special Acknowledgement

- George Cates
- Ron Belz
- Dr. John Dreyzehner, Tennessee Commissioner of Health
- Gary Shorb

###

[2] Centers for Disease Control, 2013

3 Centers for Disease Control, County Health Rankings
http://www.countyhealthrankings.org/app/tennessee/2015/rankings/shelby/county/outcomes/overall/snapshot

4 United States Census Bureau
http://www.census.gov/quickfacts/table/PST045215/47157

[5]The State of Obesity: Better Policies for a Healthier America.
http://stateofobesity.org/states/tn/