



Emergency Medical Services
Partners

November 2017, Issue 90 (Stroke Supplement)

health.uconn.edu/ems

UConn Health Stroke Center Sets New Standard for Stroke Treatment With New Imaging: RAPID Technology Extends Stroke Window to 24 Hours

UConn Health is offering a new standard of care for stroke patients. New software, called “RAPID,” makes radiologic interpretation of perfusion data simpler, helping physicians determine which patients are good candidates for mechanical thrombectomy. For stroke patients it means **the narrow window for intervention potentially quadruples, to 24 hours from the onset of symptoms.**

“It enables us to easily check how large an area of the brain is deprived of blood flow,” says Dr. Leo Wolansky, chair of the UConn Department of Radiology. “We can distinguish between the part of the brain that’s already dead (cerebral infarction) and the part of the brain that is in danger of dying but can be saved.” That’s important because mechanical thrombectomy (which UConn now offers) is only an option for blood vessels around brain tissue that is still alive.



Historically when a cerebral infarction, the most common type of stroke, happens, the race is on to administer the clot-dissolving medication known as a tissue plasminogen activator (TPA). Mechanical thrombectomy traditionally has also been an option with a very limited timespan. With the introduction of advanced imaging such as RAPID, **patients now can be treated safely for up to 24 hours of their stroke if the CT perfusion scan is favorable.**

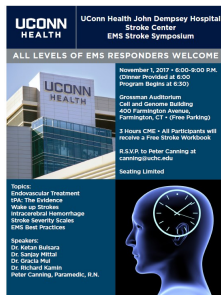
“We can tell if there is brain that can be saved, even beyond the previously accepted window of time for thrombectomy,” Wolansky says. “This creates the possibility of treating many ‘wake-up’ strokes, people who went to sleep well, but woke up eight hours later with a stroke.”

The message for EMS: Call in a Stroke Alert for any patient suspected of an acute stroke (up to 24 Hours).

(Abridged from article by Chris DeFrancesco in UConn Today)

EMS Stroke Symposium—November 1, 2017 6:00-9:00 P.M. - 3 Hours CME

The Stroke Center at UConn Health John Dempsey Hospital will be hosting an **EMS Stroke Symposium** the evening of November 1, 2017 from 6:00-9:00 PM in Grossman Auditorium at 400 Farmington Avenue, Farmington. The Keynote Address will be given by UConn Health’s new neurosurgeon, Dr. Ketan Bulsara, who will talk about endovascular stroke care and the latest imaging advances that may broaden the stroke window to 24 hours. Other topics will include Intracerebral Hemorrhage, tPA: the Evidence, Wakeup Strokes, and EMS Best Practices. Speakers include Dr. Sanjay Mittal, Dr. Gracia Mui, and Dr. Richard Kamin. Dinner will be served at 6:00 P.M. with the program starting at 6:30. Seating is limited so please R.S.V.P. to Peter Canning at canning@uchc.edu. Three hours CME will be offered.





**North Central Connecticut
EMS Council**

Stroke Destination Determination

Suspected stroke patients should be brought to the closest certified stroke center or stroke-ready hospital.*

*Stroke ready hospital shall have:

- 1) Access to 24 hour CT scan
- 2) Access to a neurologist either in person or through telemedicine
- 3) Ability to conduct emergency lab testing
- 4) Ability to give TPA
- 5) Policies in place to transfer patients to a primary or comprehensive stroke center

Consider patient preference/history if multiple stroke centers are in similar proximity.

In all instances, those patients requiring immediate hemodynamic or airway stabilization should be transported to the closest appropriate facility.

Stroke Severity Scales

Stroke experts are hard on work on developing an effective assessment tool to help EMS be able to identify candidates for endovascular therapy in the field. To date, no severity scale has demonstrated sufficient sensitivity and specificity to merit hospital bypass. Stay tuned.

“The Biology of stroke is clear and immutable: patients must be treated with extraordinary speed....Delayed treatment is the same as no treatment.”

Comment
Volume 384, Issue 9958,
December 2014, Pages 1904-1906



EMS Stroke Checklist



Key Questions/Interventions/Documentation
Please include the following in your radio patches and documentation:

1. Last Known Time Without Symptoms
2. Cincinnati Stroke Scale
3. Blood Glucose Tested
4. Acute Stroke Alert Called to Hospital*

***Remember: Early Notification Saves Lives!**

If you are not certain, it is okay to say:
“Possible” Stroke Alert

Cincinnati Pre-hospital Stroke Scale

1. FACIAL DROOP: Have patient show teeth or smile.



Normal:
both sides
of the face
move equally



Abnormal:
one side of
face does not
move as well
as the other
side

2. ARM DRIFT: Patient closes eyes & holds both arms out for 10 sec.



Normal:
both arms
move the
same or both
arms do not
move at all



Abnormal:
one arm does
not move or
drifts down
compared to
the other

3. ABNORMAL SPEECH: Have the patient say “you can’t teach an old dog new tricks.”

Normal: patient uses correct words with no slurring **Abnormal:** patient slurs words, uses the wrong words, or is unable to speak

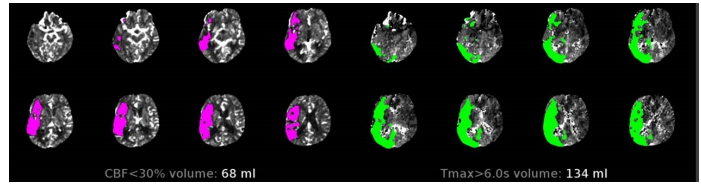
40 Minute Door-to-tPA Median Time

UConn Health is proud to publicize our door to tPA times. This represents the time from when the stroke patient enters the emergency department to the moment tPA is bolused into the patient's IV line (and includes time to CT scan and the time involved in weighing the pros and cons of each case and time obtaining consent).



Through the use of prehospital **Stroke Alert** and direct to CT scan procedures, we have some of the best door-to-tPA times in the nation. The national benchmark is 60 minutes. Our 2017 EMS average is 48 minutes, our median time is 40 minutes, and we have had many cases under 30 minutes with a 2017 record of 25 minutes. We would like to publicly thank our EMS partners for their key contribution to our success and patient outcomes.

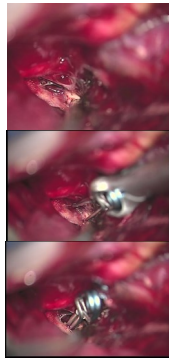
Large MCA Stroke



In October 15, **Simsbury EMS** paramedic Greg Shovak and his partner Michael Strumpf alerted **UConn John Dempsey Hospital** at 8:00 AM of their patient with slurred speech, right gaze and left mobility deficit/weakness with a last known well time of 2:00 AM. His CT scan showed a large right MCA stroke, involving most of the right MCA. The subsequent CTA of the head/neck showed a thrombus within the proximal to mid portion of the M1 segment of the right MCA with absent to diminished flow within the M2, M3 & M4 of the right MCA. CT Perfusion with RAPID technology, which can determine the amount of ischemic damage outside normal treatment windows, extending the possible window up to 24 hours, showed the patient only met two of the three criteria for intervention and therefore was treated conservatively.

Hemorrhage with Aneurysm Clipping

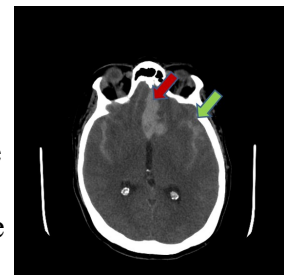
Upon waking this patient presented with a gradual onset of the "worst headache of my life" with photophobia, nausea, vomiting & dizziness. **West Hartford Fire Department** Paramedic Jeff D'Albero and his crew from Station 2 responded along with **American Medical Response** paramedic Angel Rodriguez and EMT Christopher Sneed. The patient was taken to



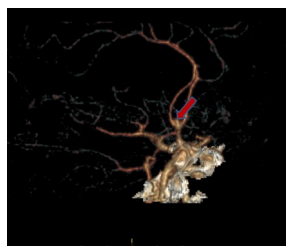
UConn John Dempsey Hospital where a subarachnoid hemorrhage with PCA aneurysm was found via CT imaging. Neurosurgeon & Neuro-interventionalist Dr. Ketan Bulsara brought the patient to the OR for a right fronto-temporal craniotomy & a microsurgical clip ligation of the aneurysm. The procedure was a success! The patient was discharged home 11 days later, alert and fully oriented, eating a regular diet and ambulating independently. Great job EMS and UCONN Health Stroke team!

Lifestar Transfer to UConn—Coiling

Charlotte Hungerford Hospital (CHH) called a stroke alert on a patient who presented with the "worst headache of her life" and became unresponsive. A massive subarachnoid hemorrhage was found on the initial head CT. The patient was intubated and CHH requested an acute care transfer to **UConn Health John Dempsey Hospital**. Neurosurgeon and Neuro-interventionalist Dr. Ketan Bulsara instantly accepted care and the patient arrived to UConn via **Lifestar**. Dr. Bulsara brought the patient to the EP lab to complete cerebral coiling & embolization of the aneurysm. The procedure went flawlessly. The patient is doing very well. She is awake, alert, eating a regular diet and getting out of bed with assistance from our Intensive Care Unit RN staff.



Massive subarachnoid hemorrhage (green arrow) with blood in interhemispheric fissure (red arrow)



Anterior communicating artery aneurysm

UCONN HEALTH UConn Health John Dempsey Hospital
Stroke Center
EMS Stroke Symposium

ALL LEVELS OF EMS RESPONDERS WELCOME

November 1, 2017 • 6:00-9:00 P.M.
(Dinner Provided at 6:00
Program Begins at 6:30)

Grossman Auditorium
Cell and Genome Building
400 Farmington Avenue,
Farmington, CT • (Free Parking)


3 Hours CME • All Participants will
receive a Free Stroke Workbook

R.S.V.P. to Peter Canning at
canning@uchc.edu

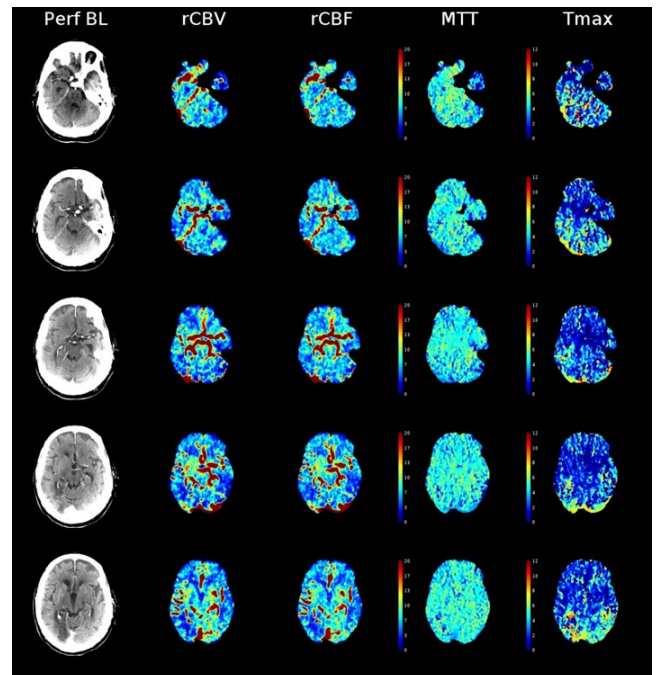
Seating Limited

Topics:
Endovascular Treatment
tPA: The Evidence
Wake up Strokes
Intracerebral Hemorrhage
Stroke Severity Scales
EMS Best Practices

Speakers:
Dr. Ketan Bulsara
Dr. Sanjay Mittal
Dr. Graela Mul
Dr. Richard Kamlin
Peter Canning, Paramedic, R.N.



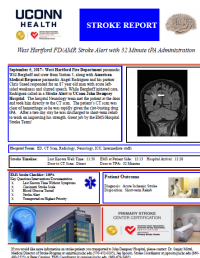
The Future is Now: Up to 24 Hour Stroke Window at UConn Health



Call in a Stroke Alert for any patient suspected of an acute stroke (up to 24 Hours).

EMS STROKE FEEDBACK

We endeavor to provide our EMS responders with full follow-up on all stroke calls where the patient receives tPA, endovascular treatment or other major procedures. If you would like more information on stroke patients you transported to **UConn John Dempsey Hospital**, please contact: EMS Coordinator Peter Canning at canning@uchc.edu or (860) 679-3485 or Jennifer Sposito, Stroke Coordinator at jsposito@uchc.edu (860-480-2523). Our stroke team is also available to come out to your training center and do case reviews and stroke education. We recognize that EMS and the great care you provide is essential to our success as a stroke center.



UConn Health EMS Website

For news, educational information, CME schedule and past copies of our newsletter *Partners*, check out our website at:

health.uconn.edu/ems

UConn EMS CONTINUING EDUCATION

EMS Monthly CME (3 Hours)

October 18, 2017
November 15, 2017
December 20, 2017
8:30-11:30 A.M.

Cell and Genome Building
400 Farmington Avenue
Farmington, CT

ALL EMS RESPONDERS WELCOME

CONTACT US:

Any questions or suggestions about EMS?
Looking for patient follow-up?

Contact EMS Coordinator Peter Canning at
canning@uchc.edu or call (860) 679-3485.

