**Memo**

**To:** EMS of Lane County

**From:** Drs. Skalabrin, Stroke Medical Director and Wilder, Stroke Intervention Medical Director

**Re:** Recent Guideline Changes for the Treatment of Acute Ischemic Stroke

**Date:** February 20, 2018

AHA/ASA published 2018 guidelines for the Early Management of Patients with Acute Ischemic Stroke (*Stroke,* March 2018). Two recent trials, DAWN and DEFUSE, have indicated a significant benefit to acute Ischemic stroke (AIS) patients with an Emergent Large Vessel Occlusion (ELVOs) who receive a thrombectomy within **24** hours of last seen well (LSW) versus standard of care.

**What does this mean for EMS?**

1. This latest information applies to ELVOs and not all strokes.
2. It becomes even more important for EMS to identify a C-STAT positive patient, possible ELVO, and communicate this to the Emergency Department.
3. Acute ischemic stroke patients who are C-STAT positive and up to 24 hours from LSW should be treated as a Code 3.
4. **All C-STAT positive patients should receive IV tPA if eligible. Consider the following key points:**

* If the patient **can** be delivered to the endovascular center in less than 2 hours from LSW, bring to endovascular capable hospital for IV tPA and further workup.
* If the patient **cannot** be delivered to the endovascular center within 2 hours from LSW, but can be delivered to a stroke ready hospital within 2 hours from LSW, bring to the closest stroke ready hospital. Report C-STAT positive status and encourage contact with endovascular capable hospital.
* For C-STAT positive patients who **cannot** be delivered to any hospital within 2 hours from last seen well, bring to endovascular center for further workup.

**Note:** Consider ambulance/air rendezvous to minimize transport time. Call ahead to alert endovascular center that patient is C-STAT positive.

**Case Study:**

* 13:10 a 79 y/o woman working in her yard on the coast, collapsed with left hemiplegia and rightward gaze deviation
* 13:11: 911 activated
* 13:18: EMS at scene and noted positive C-STAT
* 13:24: Air transport contacted
* 13:47: EMS rendezvoused with helicopter at Mapleton Highschool Football Field
* 14:04: Lift-0ff
* 14:25: Arrival at RB helipad
* 14:34: Arrival at RB ED
* NIHSS 19
* Cortical signs:
  + Right-sided eye deviation
  + Left-sided hemiplegia
  + Neglect
  + Left-sided visual field cut
* 14:42: CT: Hyperdense MCA
* 14:43: CT Angiography: Right ICA/MCA occlusion
* 14:49: ELVO Alert
* 14:57: IV tPA (Door to Needle Time: 23 minutes)
* 15:08: Cath Lab arrival
* 15:10: Groin puncture (Door to Groin Time: 36 minutes)
* Right ICA terminus occlusion



* 15:36: Second pass revascularization
* LSW to revascularization: 2 hours and 26 minutes



* Discharged home day 3 with mild residual neglect