KENTUCKY BOARD OF EMERGENCY MEDICAL SERVICES

EMT-Basic
EMT-Advanced
EMT-Paramedic

Patient Care Protocols

9/2017 Revision

SUSPECTED STROKE PROTOCOL

This protocol is for patients who have an acute episode of neurological deficit without any evidence of trauma.
Signs consistent with acute Stroke:

- Sudden onset of weakness or numbness in the face, arm, or leg, especially on one side of the body
- Sudden onset of trouble seeing in one or both eyes
- Sudden onset of trouble walking, dizziness, loss of balance or coordination
- Sudden onset of confusion, trouble speaking or understanding
- Sudden onset of severe headache with no known cause
- Consider other causes of altered mental status, i.e., hypoxia, hypoperfusion, hypoglycemia, trauma,
    - or overdose

ABSOLUTE CONTRAINDICATIONS FOR FIBRINOLYTIC THERAPY:

- Intracranial hemorrhage on CT
- History of Intracranial hemorrhage
- Systolic B/P >185mm Hg or Diastolic B/P >110 mm Hg
- Serious Head Trauma or Stroke within three (3) months.
- Thrombocytopenia and Coagulopathy
- Blood Glucose <50mg/dl or >400mg/dl

Basic Standing Orders:

- Routine Patient Care.
- Obtain glucose reading via glucometer.
- Administer oxygen to keep SPO2 > 94%, suction as necessary, and be prepared to assist ventilation.
- Perform Cincinnati Pre-hospital Stroke Scale.
- If positive, determine time of onset of symptoms. Time of onset of stroke is critical:
    - To patient: When was the last time you were normal?
    - To family or bystander: When was the last time you saw the patient normal?
- Obtain mobile phone contact of an informant, encourage transportation of family member.
- Maintain normal body temperature.
- Obtain 12-lead EKG during transport.
- Protect any paralyzed or partially paralyzed extremity.
- Early notification of the emergency department is critical.
- Consider Paramedic intercept / air medical transport.
- Perform a stroke severity scale for large-vessel involvement such as the CSTAT.

Advanced Standing Orders:

Do not delay transport for ALS procedures

- Large bore IV access with 0.9% Normal Saline 100 ml per hour, unless contraindicated. **Avoid dextrose in the absence of hypoglycemia.**

Paramedic Standing Orders:

Do not delay transport for ALS procedures

- Treat blood pressure elevation of > 220/120 with 1 single dose of IV Beta Blocker or Calcium Channel Blocker **(NOT NTG)** if still elevated in 15 minutes contact medical control.
- Manage compromised airway.
- Continuously reassess.

Appendix: Stroke Assessment Resources

Is this a stroke?

Cincinnati Pre-Hospital Stroke Scale

This scale evaluates for facial palsy, arm weakness, and speech abnormalities. Items are scored as either normal or abnormal.

Facial Droop
The patient shows teeth or smiles.

Normal Both sides of face move equally
Abnormal One side of face does not move as well as the other.

Arm Drift
The patient closes their eyes and extends both arms straight out for 10 seconds.

Normal Both arms move the same, or both arms do not move at all.
Abnormal One arm either does not move, or one arm drifts down compared to the other.

Speech
The patient repeats “You can’t teach an old dog new tricks,” or some other simple, familiar saying.

Normal The patient says correct words with no slurring of words.
Abnormal The patient slurs words, says the wrong words, or is unable to speak

http://www.metrohealth.org/?id=473&sid=1

How severe is this stroke? C-STAT

The Cincinnati Prehospital Stroke Severity Scale's individual items and scoring.

Cincinnati Prehospital Stroke Severity Scale

2 points: Conjugate gaze deviation (≥ 1 on NIHSS item for Gaze)

1 point: Incorrectly answers at least one of two level of consciousness questions on NIHSS (age or current month) **and** does not follow at least one of two commands (close eyes, open and close hand) (≥ 1 on the NIHSS item for Level of Consciousness 1b and 1c)

1 point: Cannot hold arm (either right, left or both) up for 10 seconds before arm(s) falls to bed (≥ 2 on the NIHSS item for Motor Arm)

2 or >= Positive C-STAT

Brian S. Katz et al. Stroke. 2015;46:1508-1512

American Heart Association.

Updated Certified Stroke Centers in Kentucky can be located here: https://kbems.kctcs.edu/medical_direction/Stroke%20Centers.pdf

- St. Elizabeth Edgewood
- St. Elizabeth Ft. Thomas
- St. Elizabeth Florence
- St Elizabeth Covington
- St Elizabeth Grant

- University of Louisville Hospital, Louisville
- Baptist Health Louisville
- Jewish Hospital, Louisville
- Sts. Mary and Elizabeth Hospital, Louisville
- Norton Hospital , Louisville
- Norton Audubon Hospital-Louisville
- Norton Brownsboro Hospital-Louisville
- Norton Suburban Hospital, Louisville

- Baptist Health Lexington
- University of Kentucky Hospital, Lexington
- Saint Joseph Hospital

- Baptist Health LaGrange

- Highlands Regional Medical Center

- The Medical Center, Bowling Green
- TriStar Greenview Regional Hospital
- Hardin Memorial Health, Elizabethtown
- Pikeville Medical Center, Pikeville
- Owensboro Health, Owensboro
- King's Daughter's Medical Center, Ashland
- Baptist Health Paducah
- Lake Cumberland Regional Hospital
- Jackson Purchase Medical Center
- Baptist Health Floyd, Indiana
- Harlan ARH

Map Last Updated Feb. 2017

Scan This QR Code for Most Up-To-Date Map

OH – 49 PSC and 8 CSC's

WV – 6 PSC's

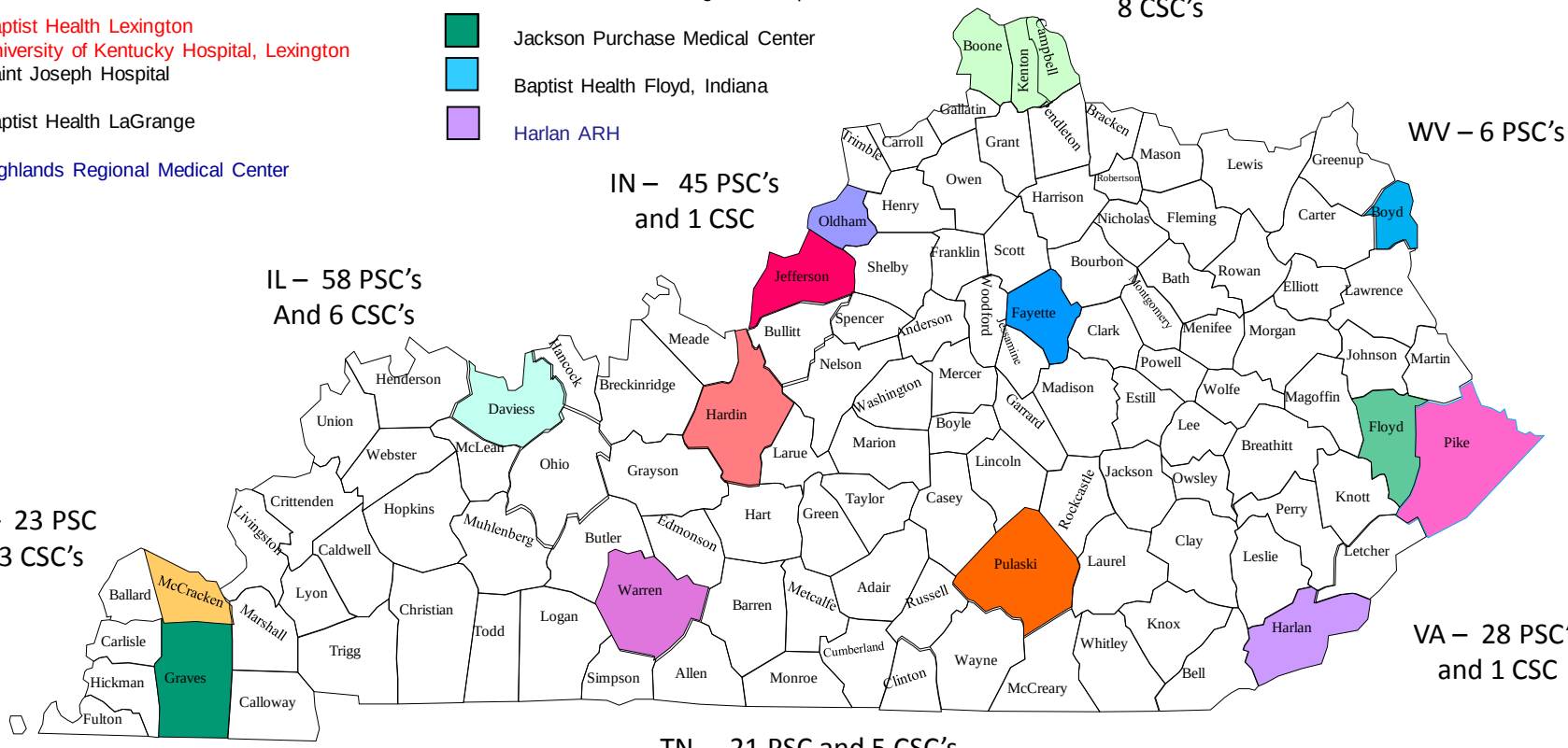
IN – 45 PSC's and 1 CSC

IL – 58 PSC's And 6 CSC's

MO – 23 PSC and 3 CSC's

VA – 28 PSC's and 1 CSC

TN – 21 PSC and 5 CSC's



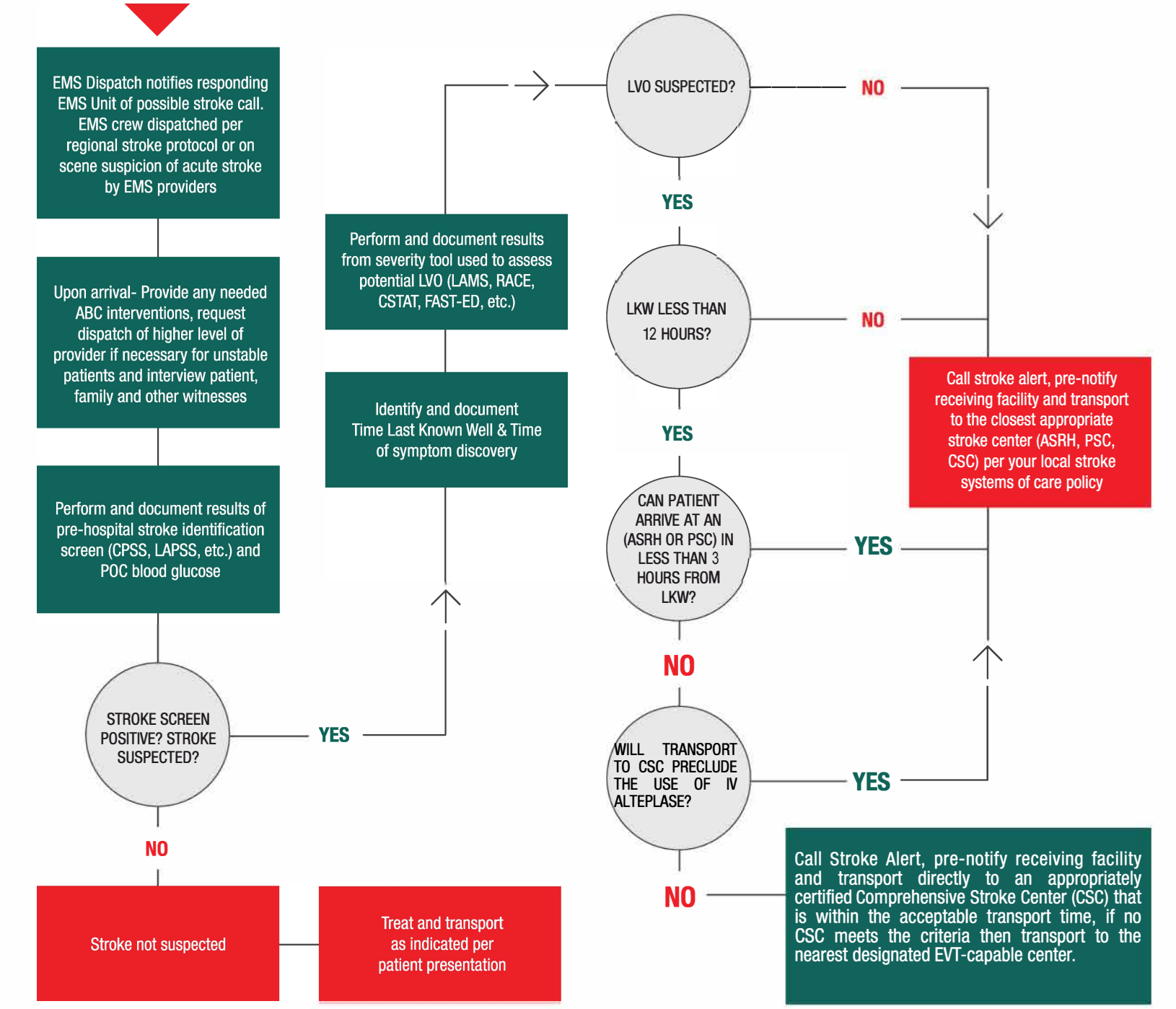
The Joint Commission, HFAP and DNV Certified Primary Stroke Centers in Kentucky (21)

TJC Comprehensive Stroke Centers (4) Acute Stroke Ready Hospitals (4)

REV. FEB 2017

SEVERITY-BASED STROKE TRIAGE ALGORITHM FOR EMS

*THE PATIENT SHOULD BE TRANSPORTED TO THE APPROPRIATE FACILITY AS SOON AS POSSIBLE.



ON SCENE

- Each EMS agency should utilize the Cincinnati Prehospital Stroke Scale (CPSS) to assess patients with non-traumatic onset of focal neurologic deficits. Patients with a positive CPSS should be further assessed using the Cincinnati Stroke Severity Assessment Tool (C-STAT) to assess for possible Large Vessel Occlusion (LVO).
- Interview patient, family members and other witnesses to determine Last Known Well (LKW) time and time of Symptom Discovery.
- Attempt to identify possible stroke mimics (eg, seizure, migraine, intoxication) and determine if patient has pre-existing substantial disability (need for nursing homecare or inability to walk without help from others).
- Patients who are eligible for IV Alteplase if transported to nearest Acute Stroke Ready Hospital (ASRH) or PSC should not be rerouted to a CSC or EVT-capable Center if doing so would result in a delay that would make them ineligible for IV Alteplase.
- Collect a list of current medications (especially anticoagulants) and obtain patient history including co-morbid conditions (eg. serious kidney or liver disease, recent surgery, procedures or stroke) that may impact treatment decisions.
- Encourage family to go directly to Emergency Department if not transported with patient and obtain mobile number of next of kin and witnesses.