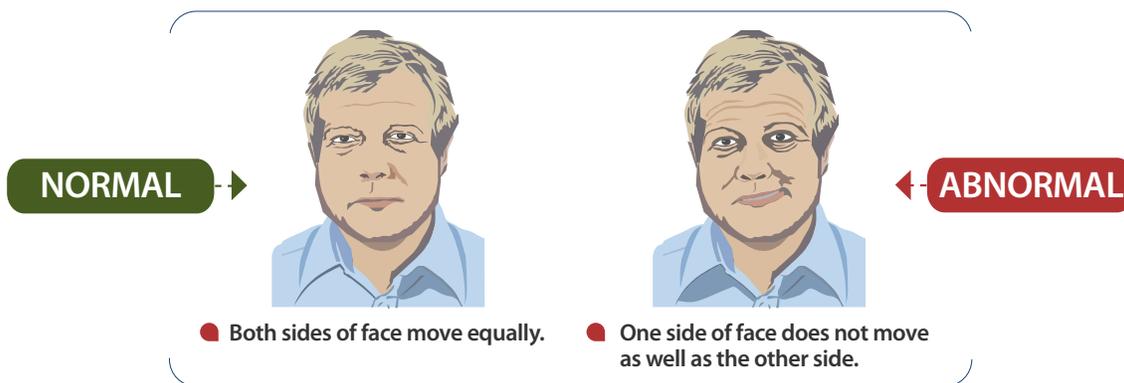


## The Cincinnati Prehospital Stroke Scale

### Facial droop

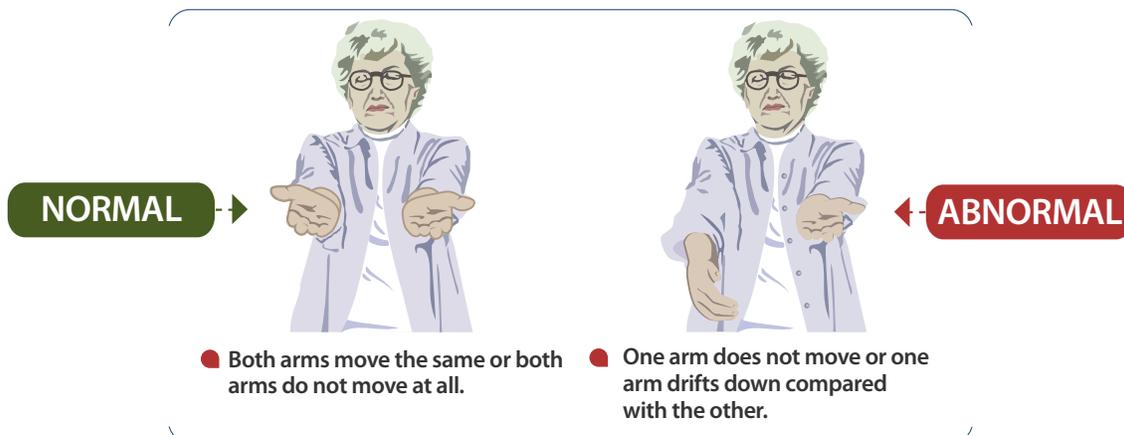
(have patient show teeth or smile)



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

### Arm drift

(patient closes eyes and extends both arms straight out, with palms up for 10 seconds)



- Both arms move the same or both arms do not move at all.
- One arm does not move or one arm drifts down compared with the other.

### 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.

**If any 1 of these 3 signs is abnormal, the probability of a stroke is 72%.**

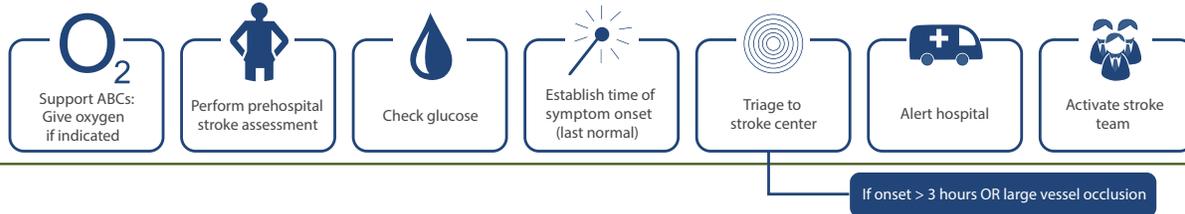


# Suspected stroke algorithm: Goals for management of stroke



## Identify signs and symptoms of possible stroke active emergency response

### Critical EMS assessments and actions



#### Immediate general assessment and stabilization\*

#### Immediate neurologic assessment by stroke team or designee

TIME GOALS

Within 10 min of ED arrival physician evaluation



- Assess ABCs, vital signs
- Provide **oxygen**, if hypoxic
- Obtain IV access and perform laboratory assessments
- Check glucose; treat if indicated
- Obtain 12-lead ECG
- Perform neurologic screening assessment
- Order emergent CT brain without contrast or MRI scan

- Review patient history
- Establish time of symptom onset or last known normal
- Perform neurologic examination (NIH Stroke Scale or Canadian Neurological Scale)

Within 20 min of ED arrival CT scan of head



**Does CT scan show hemorrhage?**

No hemorrhage

Hemorrhage

**Probably acute ischemic stroke; consider fibrinolytic therapy**

Consult neurologist or neurosurgeon; consider transfer if not available.

Within 45 min of ED arrival results of CT scan



- Check fibrinolytic exclusions
- Repeat neurologic exam: are deficits rapidly improving to normal?

- Begin stroke or hemorrhage pathway
- Admit to stroke unit or intensive care unit

Within 60 min of ED arrival administration of TPA



**Patient remains candidate for fibrinolytic therapy?**

Not a candidate

**Consider EVT transfer within 60 minutes**

Candidate\*

Stroke admission within 3 hours



- Review risks/benefits with patient & family. If acceptable:**
- Give rTPA\*\*
  - No anticoagulants or antiplatelet treatment for 24 hours

- Begin post-rTPA stroke pathway
- Aggressively monitor:
  - BP per protocol
  - For neurologic deterioration
- Emergent admission to stroke unit or intensive care unit

\* Jauch EC, Cucchiara B, Adeoye O, Meurer W, Brice J, Chan Y-F, Gentile N, Hazinski MF. "Part 11: adult stroke: 2010 American Heart Association Guidelines for Cardiopulmonary Resuscitation and Emergency Cardiovascular Care". *Circulation*. 2010;122(suppl 3):S818-S828. [http://circ.ahajournals.org/content/122/18\\_suppl\\_3/S818](http://circ.ahajournals.org/content/122/18_suppl_3/S818) \*\* Tissue Plasminogen Activator for Acute Ischemic Stroke. *N Engl J Med*. 1995;333(24):1581-1587

