Suspected Stroke Algorithm: Goals for Management of Stroke

Identify signs and symptoms of possible stroke
Activate Emergency Response

Critical EMS assessments and actions
- Support ABCs; give oxygen if needed
- Perform prehospital stroke assessment
- Establish time of symptom onset (last normal)
- Triage to stroke center
- Alert hospital; consider direct transfer to CT scan
- Check glucose if possible

Immediate general assessment and stabilization
- Assess ABCs, vital signs
- Provide oxygen if hypoxic
- Obtain IV access and perform laboratory assessments
- Check glucose; treat if indicated
- Perform neurologic screening assessment
- Activate stroke team
- Order emergent CT scan or MRI of brain
- Obtain 12-lead ECG

Immediate neurologic assessment by stroke team or designee
- Review patient history
- Establish time of symptom onset or last known normal
- Perform neurologic examination (NIH Stroke Scale or Canadian Neurological Scale)

Does CT scan show hemorrhage?

No hemorrhage

Probable acute ischemic stroke; consider fibrinolytic therapy
- Check for fibrinolytic exclusions
- Repeat neurologic exam; are deficits rapidly improving to normal?

Patient remains candidate for fibrinolytic therapy?

Candidate
- Review risks/benefits with patient and 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

Not a candidate
- Administer aspirin
  - Consult neurologist or neurosurgeon; consider transfer if not available

Hemorrhage

Consult neurologist or neurosurgeon; consider transfer if not available

ED Arrival 60 min

Does CT scan show hemorrhage?

No hemorrhage

Probable acute ischemic stroke; consider fibrinolytic therapy
- Check for fibrinolytic exclusions
- Repeat neurologic exam; are deficits rapidly improving to normal?

Patient remains candidate for fibrinolytic therapy?

Candidate
- Review risks/benefits with patient and 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

Not a candidate
- Administer aspirin
  - Consult neurologist or neurosurgeon; consider transfer if not available

ED Arrival 3 hours

Stroke Admission 3 hours

NINDS Time Goals
- ED Arrival: 10 min
- ED Arrival: 25 min
- ED Arrival: 45 min
- ED Arrival: 60 min
- Stroke Admission: 3 hours