Suspected Stroke

History
- Previous stroke or TIA
- Previous cardiac or vascular surgery
- Associated diseases (diabetes, hypertension, CAD)
- Atrial fibrillation
- Medications (blood thinners)
- History of trauma

Signs and Symptoms
- Altered mental status
- Weakness or paralysis
- Blindness or other sensory loss
- Aphasia or dysarthria
- Syncope
- Vertigo or dizziness
- Vomiting
- Headache
- Seizure
- Respiratory pattern change
- Hypertension/hypotension

Differential
- See Altered Mental Status
- TIA
- Seizure
- Todd’s paralysis
- Hypoglycemia
- Stroke
  - Thrombotic or embolic (~85%)
  - Hemorrhagic (~15%)
- Tumor
- Trauma
- Dialysis or renal failure

Recent signs and symptoms consistent with Stroke

Perform Cincinnati Stroke Screen
If stroke Cincinnati screening is positive, perform LAMS
Blood glucose analysis
Cardiac monitor
12-Lead ECG

CINCINNATI STROKE SCREEN consistent with acute Stroke?

Time of onset OR last seen normal is < 6 hours

INITIATE TRANSPORT
Keep scene time < 10 minutes
If available, transport a family member or guardian with patient
Declare a Stroke Alert

Establish IV
- Consider one 20g or larger IV or saline lock in each AC
Transport to a Stroke Receiving Center

Time of onset OR last seen normal is => 6 hours but <= 24 hours

Establish IV
- Consider one 20g or larger IV or saline lock in each AC

Time of onset OR last seen normal is > 24 hours

Approved Stroke Receiving Centers
- John Muir – Concord
- Kaiser – Richmond
- Kaiser – Walnut Creek
- San Ramon Regional
- Eden – Castro Valley
- Kaiser – Oakland
- Kaiser – Vallejo
- Marin General
- Summit – Oakland
- Sutter – Solano
- Valley Care

Consider IV
Transport per Policy 4002

Consider other causes
Monitor and reassess

Diabetic TG if indicated

Notify receiving facility. Contact Base Hospital for medical direction, as needed
Pearls

- Acute stroke care is evolving rapidly.
- Time last seen normal: One of the most important items that prehospital providers can obtain, on which all treatment decisions are based. Be very precise in gathering data to establish the time of onset and report as an actual time (i.e. 13:45 NOT \text{“}about 45 minutes ago\text{“}). Without this information, patients may not be able to receive thrombolytics at the hospital. For patients with “woke up and noticed stroke symptoms,” time starts when the patient was last awake.
- The differential listed on the Altered Mental Status TG should also be considered.
- Be alert for airway problems (difficulty swallowing, vomiting and aspiration).
- Hypoglycemia can present as a LOCALIZED neurologic deficit, especially in the elderly.
- Document the Cincinnati Stroke Screen and LAMS in the EHR.

<table>
<thead>
<tr>
<th>Finding</th>
<th>Interpretation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Facial Droop</td>
<td>Normal: Symmetrical smile or face</td>
</tr>
<tr>
<td></td>
<td>Abnormal: Asymmetry</td>
</tr>
<tr>
<td>Arm Weakness</td>
<td>Normal: Both arms move symmetrically</td>
</tr>
<tr>
<td></td>
<td>Abnormal: Asymmetrical arm movement</td>
</tr>
<tr>
<td>Speech Abnormality</td>
<td>Normal: Correct words; no slurring</td>
</tr>
<tr>
<td></td>
<td>Abnormal: Slurred or incorrect words</td>
</tr>
</tbody>
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<table>
<thead>
<tr>
<th>Finding</th>
<th>LAMS Assessment</th>
<th>Scoring</th>
<th>Interpretation</th>
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<tbody>
<tr>
<td>Facial Droop</td>
<td>Absent - 0 points</td>
<td>Normal: Equal grip in both hands</td>
<td></td>
</tr>
<tr>
<td>Arm Weakness</td>
<td>Absent - 0 points</td>
<td>Abnormal: Unequal grip in one hand</td>
<td></td>
</tr>
<tr>
<td>Grip</td>
<td>Normal - 0 points</td>
<td>Normal: Both arms move symmetrically</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Weak - 1 point</td>
<td>Abnormal: Asymmetrical arm movement</td>
<td></td>
</tr>
<tr>
<td></td>
<td>No grip - 2 points</td>
<td>Falls rapidly: some or no effort</td>
<td></td>
</tr>
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</table>

A LAMS score of $\geq 4$ indicates a high likelihood of a LVO Stroke

Cincinnati Stroke Screen

LAMS Assessment