VAN Assessment for EMS

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What is an ELVO?

- Emergent Large Vessel Occlusion
- Cortical signs will be present (Vision, Aphasia, Neglect)
Why the need for an additional assessment?

- In February 2018 the American Heart Association released new Acute Ischemic Stroke Guidelines for the treatment of stroke.
- This extended the window for Endovascular treatment for ELVO from <6 hours to <24 hours.
  - Wake up strokes that are VAN positive and meet criteria with ELVO’s, can now receive treatment for their stroke symptoms.
What is Stroke VAN?

It is a way to tell if someone is having a large artery stroke. Large artery stroke types tend to have worse outcomes and disable people. They are best treated with the additional use of Neurointerventional clot retrieval. Using VAN can assist people in getting loved ones in a center that performs these procedures, in turn giving them the best possible chance of functioning independently.
**Why Was it Developed?**

There are other large artery stroke / large vessel occlusion (LVO) screening tools but some are longer, some are less accurate, and some over estimate the number of people that actually have a large clot. We had a genuine desire to get patients that have a massive stroke to the appropriate care faster. VAN allows us to identify these patients in the field by loved ones, EMS, and as soon as patient arrives to the hospital by trained nurses.
What Does VAN Stand For?

**Vision** – Can someone see to the left, right, up and down?

**Aphasia** – Medical term for understanding language and producing language.

**Neglect** – When someone looks to one side and ignores the other side. They usually have eyes looking to left or right.
EMS VAN: Acute Stroke Screening Tool

Is ARM weakness present?

☐ Yes  Continue the VAN exam

☐ No.  Patient is VAN negative. Stop VAN Exam.

<table>
<thead>
<tr>
<th>Visual Disturbance?</th>
<th>Yes</th>
<th>No</th>
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<td>Aphasia?</td>
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<td>Neglect?</td>
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If patient has any degree of weakness PLUS any one of the below:

Visual Disturbance (Assess field cut by testing both sides, 2 fingers right, 1 left)
Aphasia (Inability to speak or understand. Repeat and name 2 objects, close eyes, make fist)
Neglect (Forced gaze to one side or ignoring one side, touching both sides)

This is likely a large artery clot (cortical symptoms) = VAN Positive
Thrombectomy

Catheter aspiration thrombectomy

Blood clot is removed using suction

Mechanical thrombectomy

Blood clot is broken up into small pieces and removed
Pre Intervention

Post intervention

Removed Thrombus