



UT Health

San Antonio

School of  
Health Professions



# 911 Dispatch Stroke Assessment-

**Protocol to decrease time to treatment at Stroke Centers**

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# Goal of project

- Rapid Stroke Screening by 911 Paramedic Dispatchers
- Alerts to responding crews
- Rapid On scene assessment
- Call Stroke Alert From Scene
- Rapid Load-Less than 10 minute transport unit on scene time.
- Do what you can enroute
- Education in 2016 & 2017 with VAN Training target group and all Medics



This patient has left sided facial droop



# 911 Call

- If Stroke Symptoms—Shunt to Card 28-Stroke Card Units are Dispatched-
- Tell me why you think it's a Stroke ?
- The Paramedic Dispatchers will interrogate caller or patient to do a version of a FAST Stroke Assessment
  - Face- Was the smile equal on both sides?
  - Arm- Raise both arms above his/her head?
  - Speech- Say "The early bird catches the worm"  
---Any slurred or Garbled speech?
  - Time- What Time did these symptoms Start
  - History Ever had a Stroke before ?

# Stroke Diagnostic

1. We need to do a **quick test** on her/him for the medics **before** they arrive. I want you to get **close enough** to ask her/him to do **three things**. **Tell me** when you're **ready**.
2. **(Ready)** Ask her/him to **smile**.
  - a. **(Wait)** Was the smile **equal** on **both sides** of her/his mouth?
 

Normal smile _____	0
Slight difference in smile (possible difference) _____	1
Only one side of mouth or face shows a smile (obvious difference) _____	3
Cannot complete request at all	
3. Ask her/him to **raise both arms above her/his head**.
  - a. **(Wait)** What was s/he **able to do**?
 

Both arms raised equally _____	0
One arm higher than other (both raised, but unequally) _____	1
Only one arm raised _____	3
Cannot complete request at all	
4. Ask her/him to **say**, "The early bird catches the worm."
  - a. **(Wait)** Was s/he able to **repeat it correctly**?
    - i. **(Clarify)** Was it **slurred, garbled, or not understandable**?
 

Said correctly _____	0
Slurred speech _____	3
Garbled or not understandable speech _____	3
Cannot complete request at all	

\* Consider **notification** of the **appropriate Stroke Center** for patients with **clear, strong, or partial** evidence of stroke.

## FORMULA FOR DETERMINING WEIGHTED EVIDENCE OF STROKE

\* Add up the scores that are assigned to each answer in the **SCORE** column:

- $\geq 3$  = **Clear evidence of stroke**  
 2 = **Strong evidence of stroke**  
 1 = **Partial evidence of stroke**  
 0 = **No test evidence of stroke**



STROKE Dx



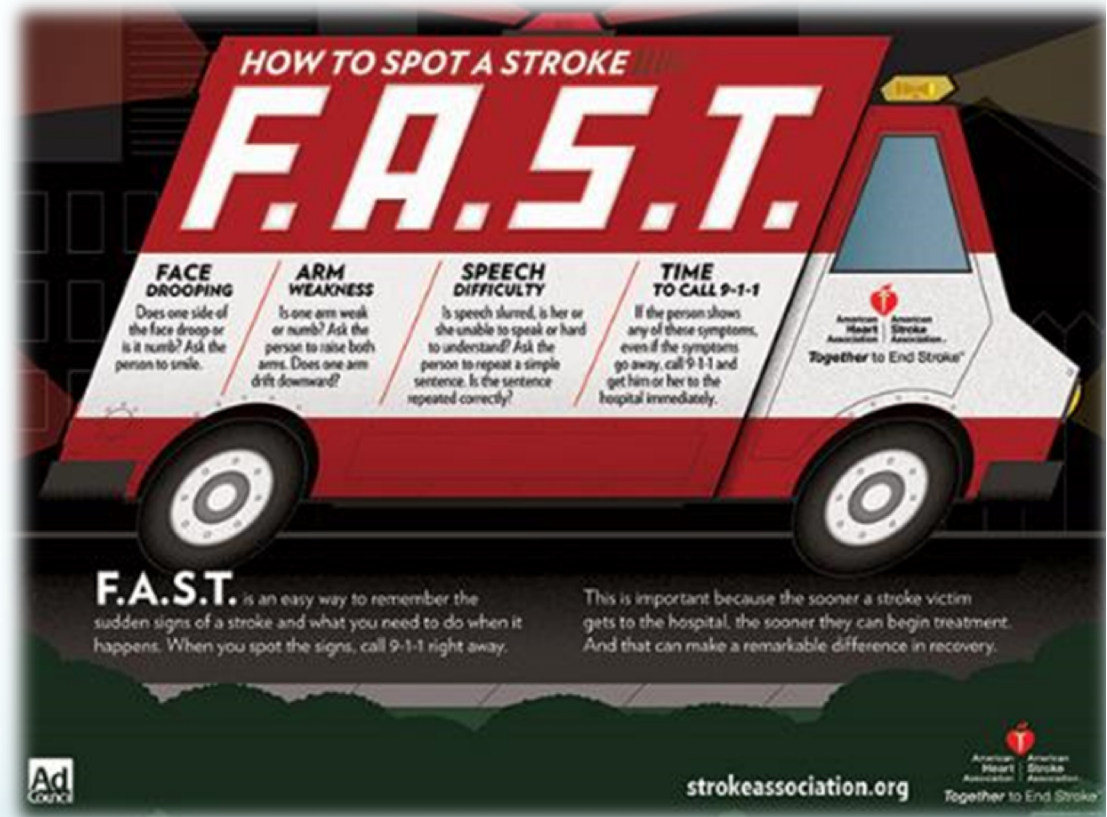
# Fire and EMS Messaging

- If Stroke score is greater than 2...
- Dispatch message:  
“Dispatch has confirmed Positive Stroke Score- Initiate rapid assessment, Stroke Center Notification & rapid transit if Stroke Alert Criteria are met“



# First On Scene

- **FAST** Stroke Assessment
- Last Known Well time=  
Less than 6 hrs?
- Blood Glucose (60-600)
- Oxygen only if  $\text{SaO}_2 < 94\%$
- Nothing By Mouth
- **Plan for rapid extrication**



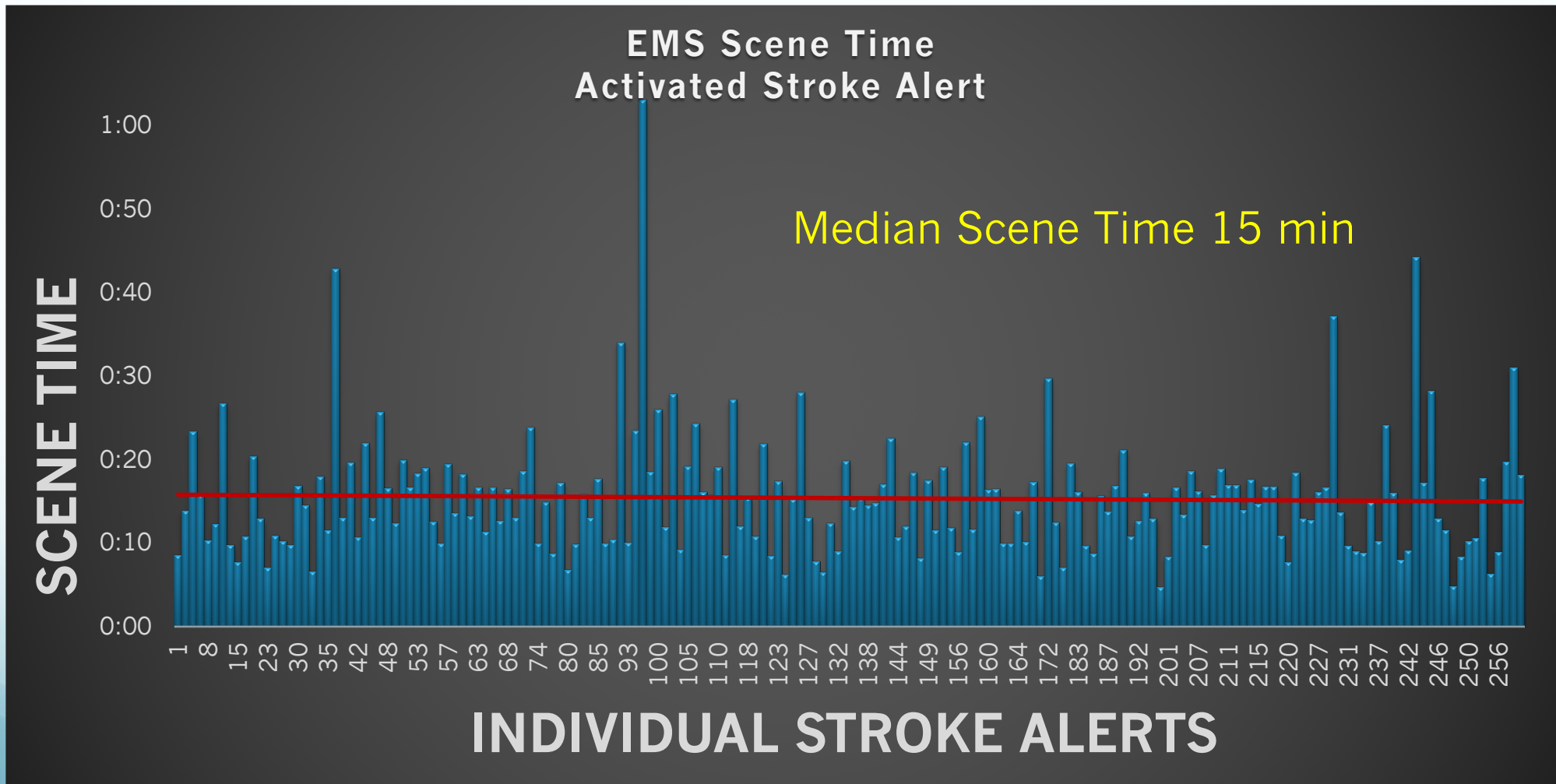


# Medic Unit

- **Bring the Stretcher to the Patient**
- **Platinum 10 Minutes on scene**
- **“ACME General, Medic 24 has a Stroke Alert...onset at 1530 hrs. eta is 12 minutes”**
- **Do everything enroute**



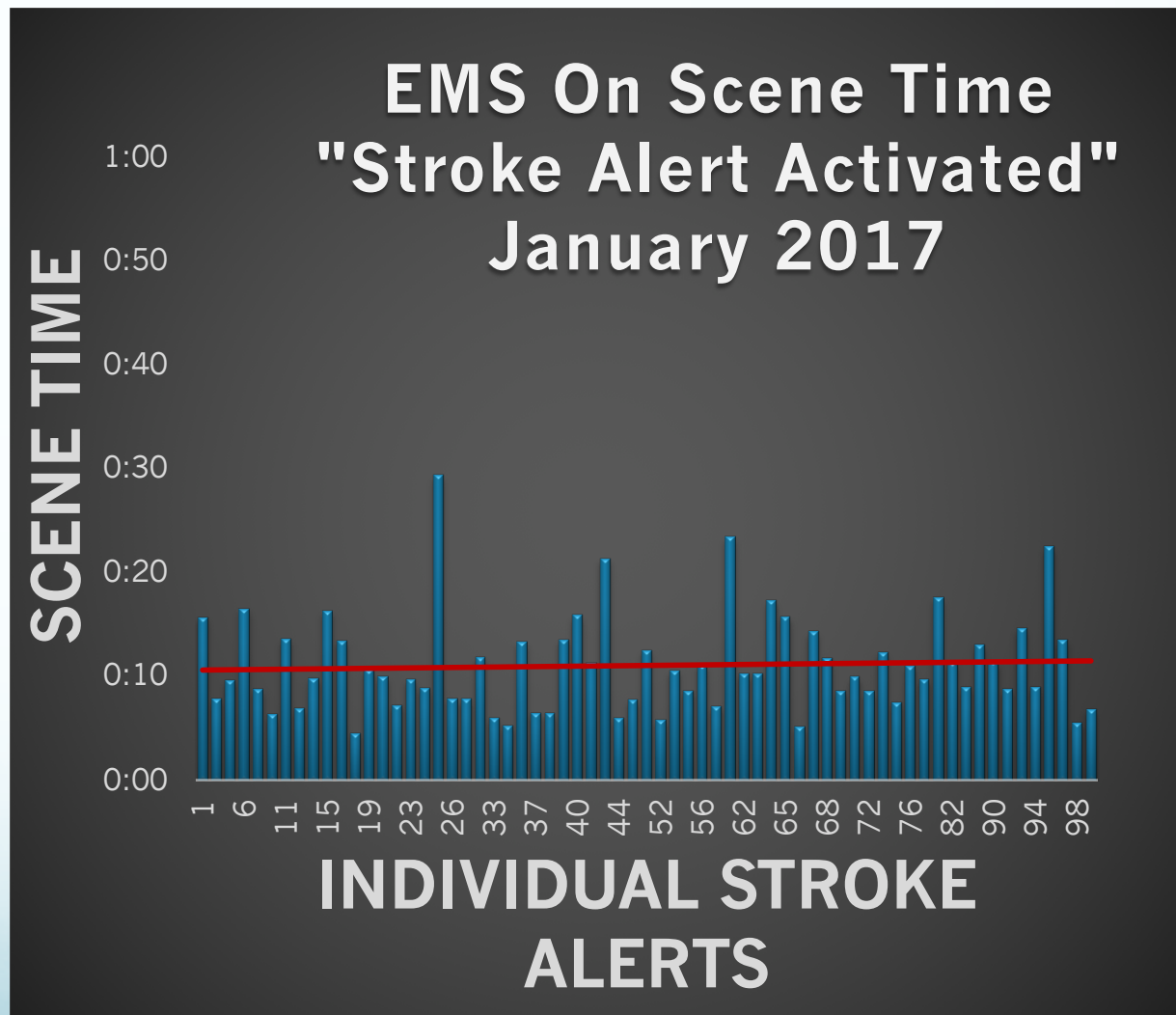
# SAFD Stroke Alert Time Scene Early 2016



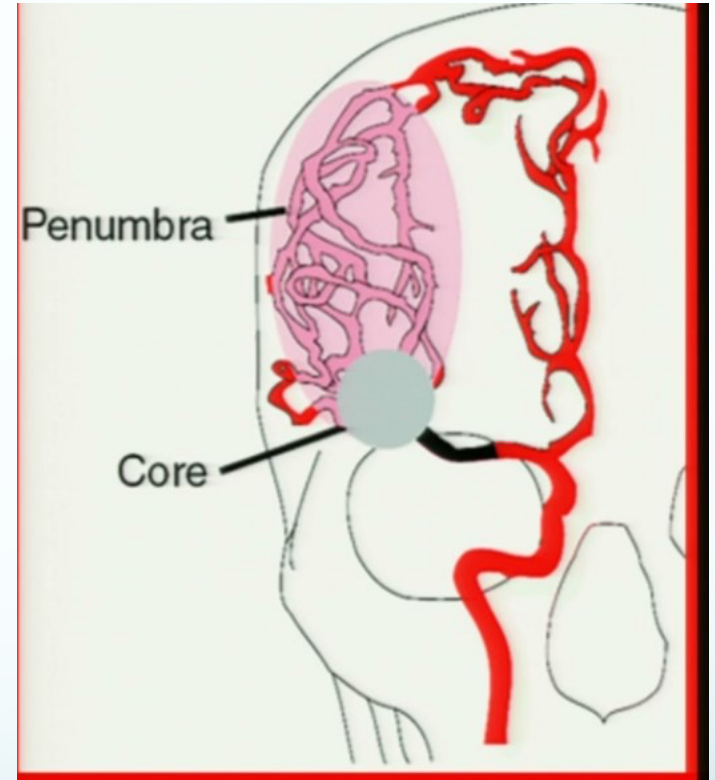
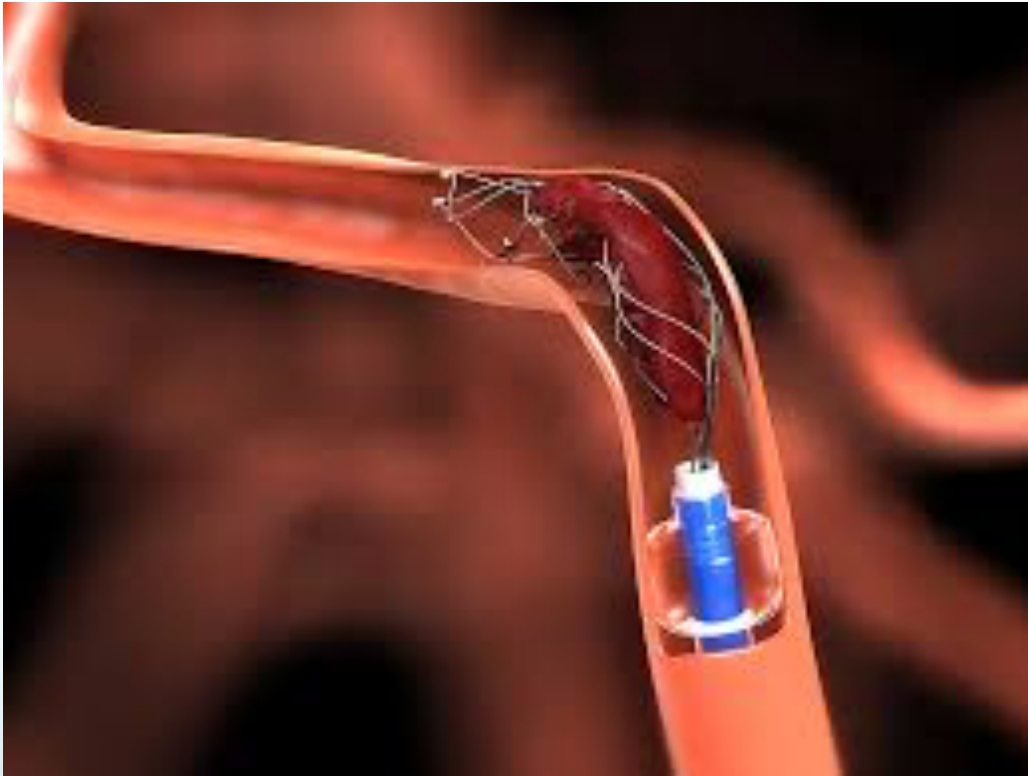


# And the Results are in ....

- Dispatch to door 26:49
- Dec 2017 Dispatch QA
  - 164 calls Dispatched Stroke
  - 54 Positive Stroke Score 33%
- Stroke Alert Accuracy with protocol 86%



# So what is next?



Are all strokes the same?

# VAN Assessment

## LVO vs SVO

## Brain lab Intervention Vs Thrombolysis



strac.org/stroke

If patient has any weakness PLUS one or more of the below:

**VISUAL DISTURBANCE | APHASIA | NEGLECT**

**PATIENT IS VAN POSITIVE**

This is likely a large arterial clot (cortical symptoms)

**LARGE ARTERY STROKE SCREENING GUIDE**  
FOR THE REGIONAL EMERGENCY HEALTHCARE SYSTEM



### 1. How weak is patient on one side of body?

- ☐ MILD (Minor Drift) Hold both arms up for 10 sec
- ☐ MODERATE (Severe Drift) Touches or nearly touches ground
- ☐ SEVERE (Flaccid) No Antigravity

**If patient shows no weakness then CTA not urgent. [ VAN Negative ]**

Exceptions are confused or comatose pts with dizziness, focal findings or no reason for their altered mental status then Basilar artery thrombus must be considered, CTA is warranted



### 2. Visual Disturbance?

- ☐ FIELD CUT (Which Side) 4 Quadrants
- ☐ DOUBLE VISION (Ask PT to look right then left) Evaluate for uneven eyes
- ☐ BLIND (New Onset)
- ☐ NONE



### 3. Aphasia?

- ☐ EXPRESSIVE (Inability to speak or errors) Don't count slurring  
Repeat and name 2 objects
- ☐ RECEPTIVE (Not understanding or following commands)  
Close eyes, make fist
- ☐ MIXED
- ☐ NONE

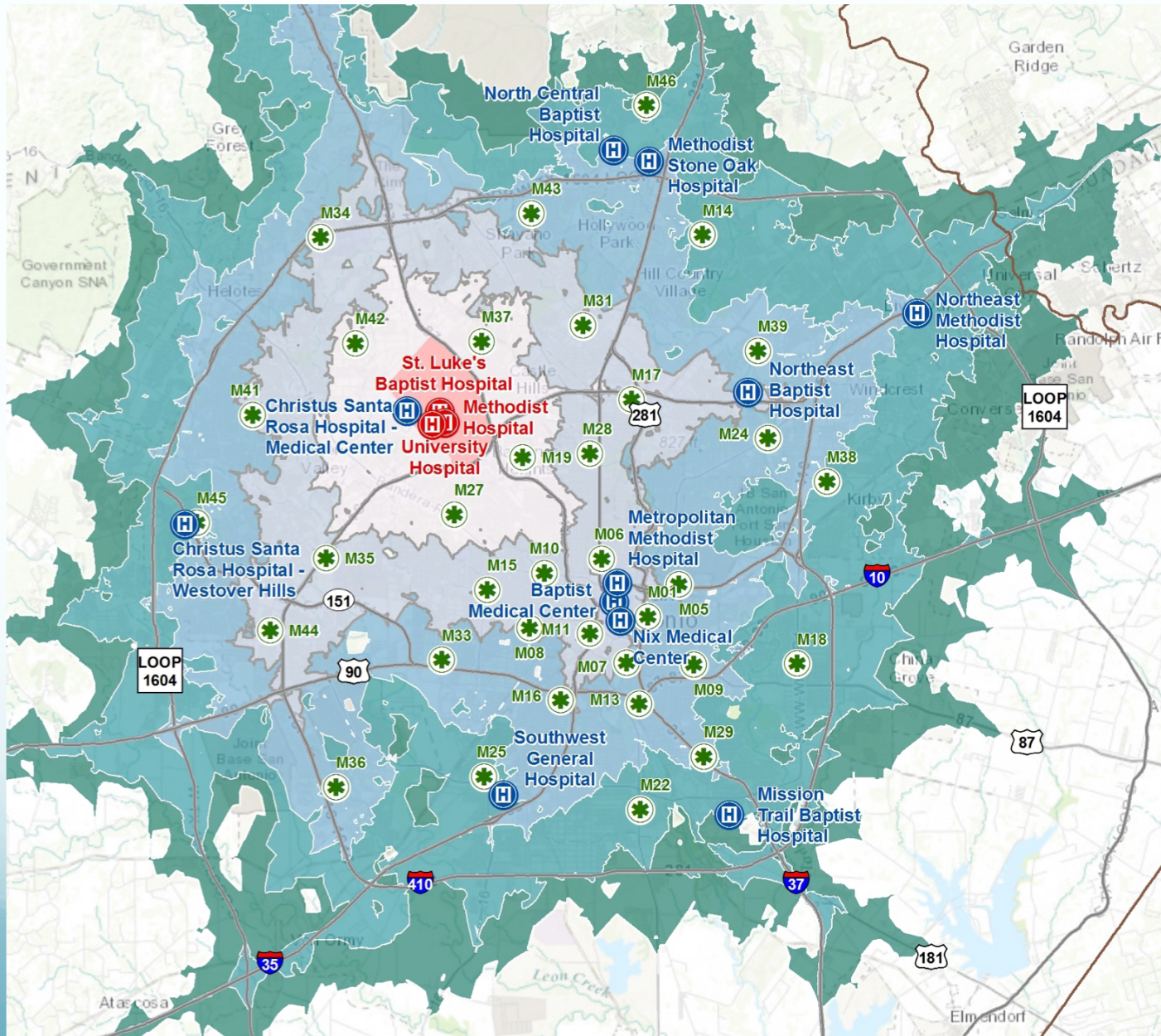
### 4. Neglect?

- ☐ FORCED GAZE or inability to track to one side
- ☐ UNABLE TO FEEL BOTH SIDES AT SAME TIME,  
or unable to identify own arm
- ☐ IGNORING ONE SIDE (New Onset)
- ☐ NONE





# Drive time to Medical Center





# Thank You



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