

# The Orange County Stroke-Neurology System

Orange County EMS Agency





# Objectives

- \* Present an overview of the Orange County Stroke Neurology System
- \* Review system performance statistics



# Orange County

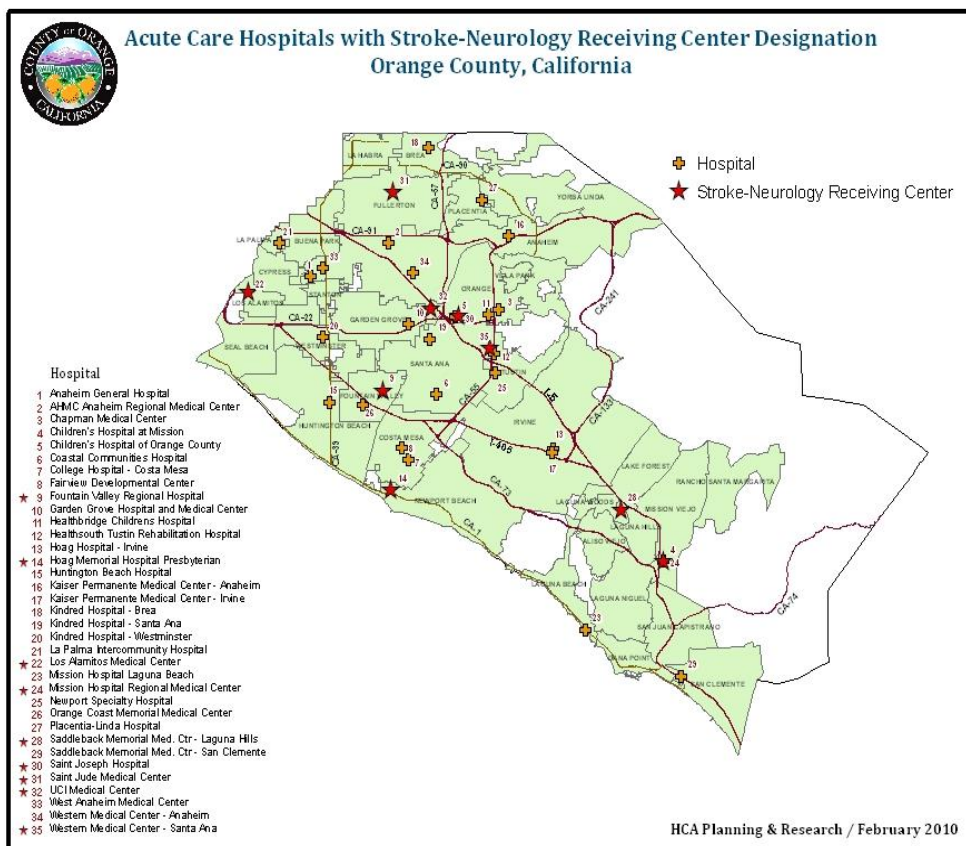
- \* 24 Acute Care Hospitals
- \* 9 Designated Stroke-Neurology Centers:
  - \* St. Jude Medical Center
  - \* Los Alamitos MC
  - \* UCI Medical Center
  - \* Fountain Valley RH
  - \* Hoag Memorial
  - \* St Joseph
  - \* OC Global MC
  - \* Saddleback Memorial
  - \* Mission Hospital



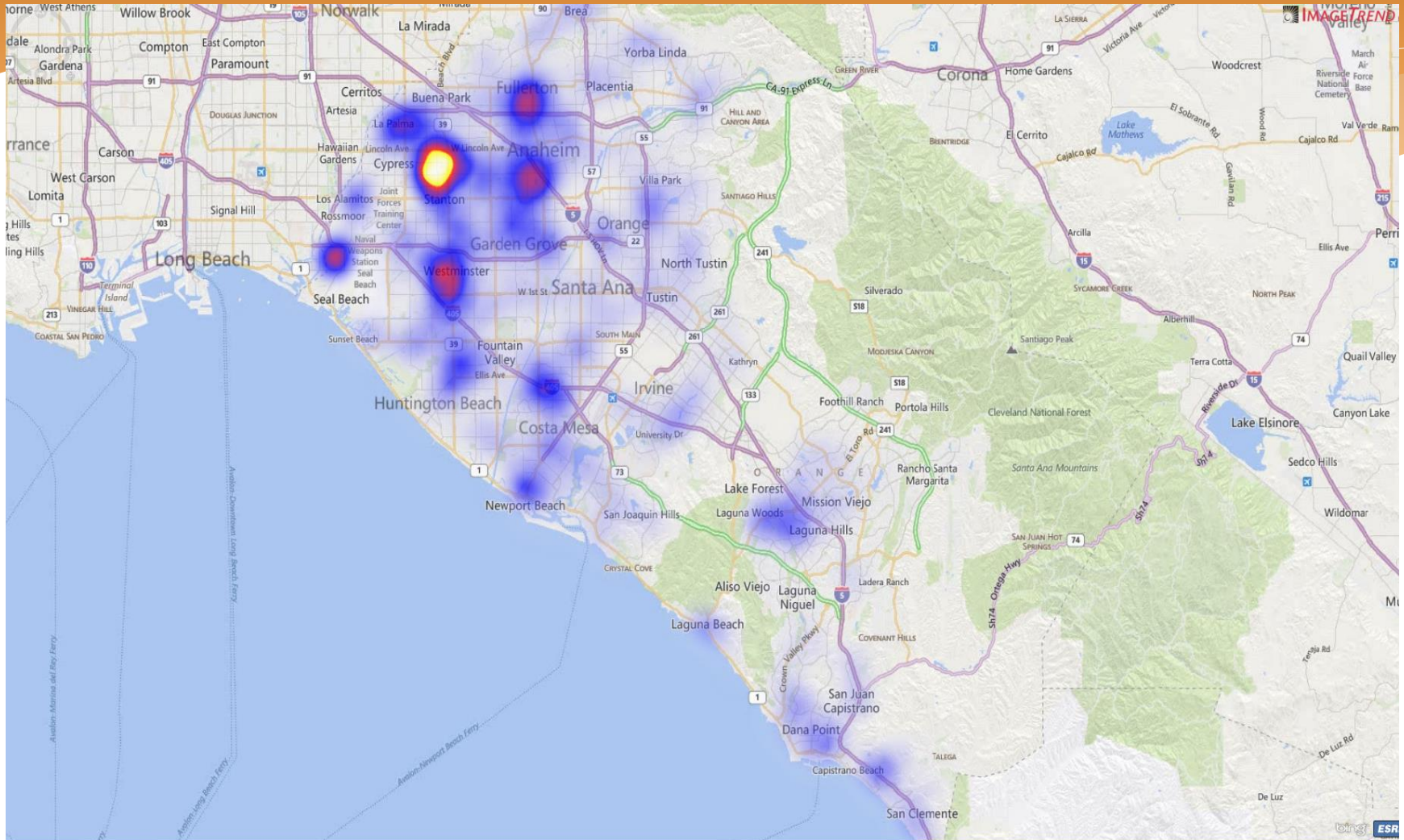


# Orange County Stroke System Organization

- \* Single Tiered Comprehensive Center Program, including:
  - \* Primary Stroke Care
  - \* Interventional Radiology
  - \* Neurosurgery
  - \* Stroke Rehabilitation
  - \* Stroke Focused Nursing
- \* Integrated Spoke-Hub system

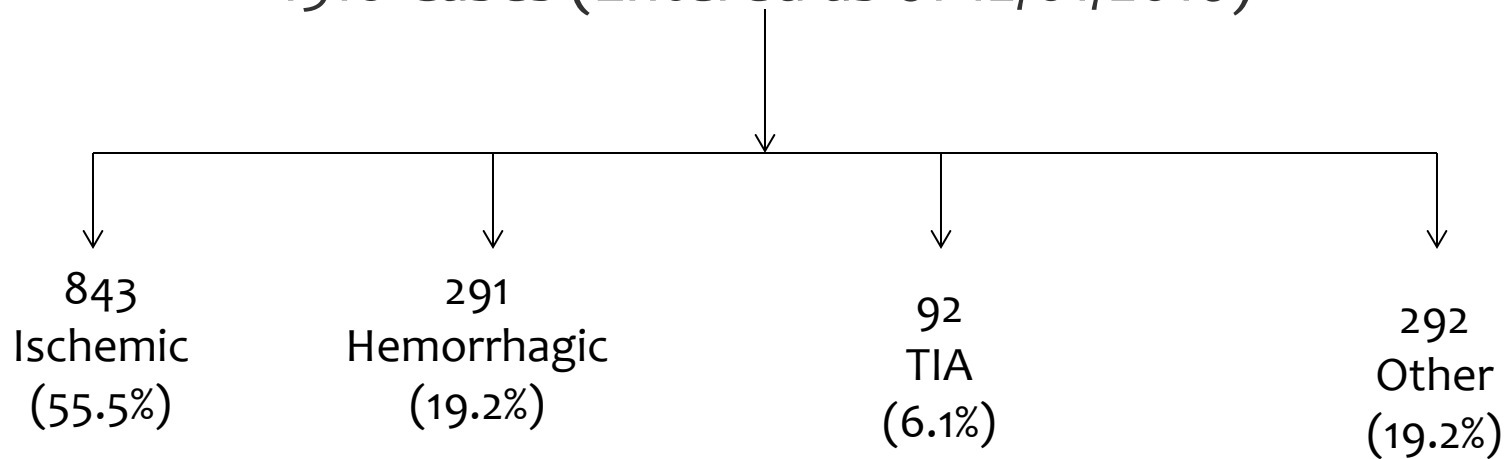


# Ischemic and Hemorrhagic Stroke Distribution: 2016



# CASE CATEGORIES

1518 Cases (Entered as of 12/01/2016)



# SNRC Process Performance

- \* Ischemic Stroke Intervention Rates:

843 total cases (55.5% of database entries)

IV TPA only: 187 (22.2%)

IV TPA + Mechanical: 49 ( 5.8%)

IV TPA + IA TPA: 6 ( 0.1%)

Mechanical primary: 34 ( 4.0%)

Intra-arterial TPA: 2 ( 0.1%)

Total Intervention Rate: 33.0%

Neurovascular Intervention Rate: 10.8%

# National Institutes of Medicine Stroke Score

- \* The National Institutes of Health **Stroke Scale**, or **NIH Stroke Scale (NIHSS)** is a tool used by healthcare providers to objectively quantify the impairment caused by a **stroke**. The **NIHSS** is composed of 11 items, each of which scores a specific ability between a 0 and 4.
- \* The lower the score, the less impairment from a stroke. A score in the range of 12-13 or above is significantly impaired.



# SNRC outcome Performance: NIH Stroke Score

- \* Total Ischemic Cases (843)

## Arrival NIHSS

Median = 5

(quartiles: 25% = 2; 75% = 13)

Average = 9.0

(95% CI: 8.0, 10.0)

## Discharge NIHSS

Median = 3

(quartiles: 25% = 1; 75% = 8)

Average = 6.7

(95% CI: 5.8, 7.6)



# SNRC Outcome Performance:

## NIH STROKE SCORES FOR MOST SERIOUS STROKE CASES RECEIVING A MEDICAL INTERVENTION

Admit NIH  $\geq 13$

Received intervention (IV TPA, IA TPA, Clot Removal)

74 cases thus far in 2016:

	Admit	D/C
Median NIH Score	<b>24</b> (23, 27)	<b>16</b> (8, 24)
(Q 25/75)		
Median (95% CI)	<b>25.1</b> (24.0, 26.2)	<b>15.6</b> (13.5, 17.7)