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

- 843 Ischemic (55.5%)
- 291 Hemorrhagic (19.2%)
- 92 TIA (6.1%)
- 292 Other (19.2%)
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%
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)
NIH STROKE SCORES FOR MOST SERIOUS STROKE CASES RECEIVING A MEDICAL INTERVENTION

Admit NIH ≥ 13
Received intervention (IV TPA, IA TPA, Clot Removal)
74 cases thus far in 2016:

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