Evolution of an Organized System of Care Positively Impacts Regional Stroke Treatment

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**Background:** The Southwest Texas Regional Advisory Council (STRAC) Stroke Systems of Care Committee is comprised of hospital, physician, and EMS leaders who meet regularly to discuss process improvement and system development with a commitment to improve stroke recognition, response, and treatment. Over a seven year period, this community with a population of 1.5 million people progressed from no organized approach for stroke care to an organized system which includes 12 Primary Centers, 2 Comprehensive Centers, and over 40 EMS agencies.

**Purpose:** To evaluate how an organized system has impacted stroke care in Southwest Texas over the past 5 years.

**Methods:** A retrospective review of Get With The Guidelines® Stroke Data from the STRAC region was conducted. Specific data points reviewed include diagnosis, mode of arrival, STK 4-IV-tPA measure compliance, IV tPA door to needle (D2N) times and discharge disposition.

**Results:**

- **Discharge Diagnosis:** Stroke; 2010-2015 (n=19,080)
- **Mode of Arrival:** EMS vs. WALK IN; 2010-2015
- **tPA Treatment Rates:** 2010-2015

A total of 20,175 patients were entered between 2010 and 2015 of which 95% (n=19,080) were discharged with stroke diagnosis.

76% (n=14,540) of the stroke patients arrived via EMS or walk-in. EMS arrivals ranged from 61% (n=1,110) in 2010 to 54% (n=2,015) in 2015.

IV tPA treatment rates ranged from a low of 9.6% in 2012 to >12% in 2014, 2015, and 2016.

**Conclusions:** Development of an organized system of care has impacted regional stroke treatment as demonstrated by the upward trend and stabilization of compliance of the STK 4 measure, IV tPA treatment rates, and percentage of patients discharged home. Despite improvement there is opportunity to provide community education emphasizing the importance of calling 911 when stroke is suspected. Current performance improvement initiatives include the formation of a regional public education committee and the provision of an annual regional stroke conference. The next focus is to engage area hospitals and EMS in the commitment to advance and improve stroke care.