

## Tightening up Acute Stroke Care in the Stroke Belt with Telestroke

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### Objective:

To evaluate telstroke acute stroke thrombolytic treatment rates in the Stroke Belt.

### Background:

For decades, higher incidence and mortality from strokes in the Southern United States termed the Stroke Belt has been observed. Many variables contribute to the higher mortality rate, one being access to acute stroke care. Residing in more rural locations and the larger black population are considered contributors to the higher mortality rates. Telestroke services have expanded in recent years with the potential to impact access to acute stroke thrombolytics in the Stroke Belt.

### Design/Methods:

Acute stroke consultations seen by TeleSpecialists, LLC physicians in the emergency department in 203 facilities (23 total states with 7 Stroke Belt states) from January 1,2021 through April 30,2021 were extracted from the Telecare<sup>TM</sup> database. The encounters were reviewed for age, sex, last known normal(LKN), arrival time, consult call time, needle time, thrombolytics candidate, premorbid modified Rankin Score (p-mRS), NIHSS, and state. The treatment rates, Door-to-needle (DTN), and treatment metrics were compared for patients in Stroke Belt vs non-Stroke Belt states.

### Results:

The total patients included was 18,783 with 5,397 of them in Stroke Belt states. In the Stroke Belt 445 patients (8.24%) were treated with thrombolytics, a higher rate than non-Stroke Belt states with 935 patients treated (6.98%), ( $p=0.002$ ). The median DTN time was 40 minutes in both groups. There was no difference in age, gender, median NIHSS scores or median p-mRS, but the odds of a patient being Black was 4 times higher in the Stroke Belt than the non-Stroke Belt states. The median LKN to arrival time was longer in the Stroke Belt at 187 minutes compared to 169 minutes in the non-Stroke Belt,  $p=0.01$ .

### Conclusions:

Telestroke acute stroke thrombolytics rates in the Stroke Belt exceeded those in non-Stroke Belt states despite a delay in arrival with equivalent door to needle times.