FACTS
Telestroke: Connecting Patients to Quality Treatment

OVERVIEW
Stroke is the nation’s No. 5 killer and a leading cause of serious long-term disability, with nearly 800,000 strokes and approximately 133,000 deaths occurring per year. About 66 percent of the total hospitalizations for stroke occur among adults age 65 and older, and approximately 94 percent of strokes occur in an urban or suburban area. By 2030, stroke-related costs are expected to nearly triple to $184 billion.

As these statistics demonstrate, the social and economic impact of stroke is devastating. Significant barriers prevent or slow treatment for a large number of patients with stroke, including: long travel times to stroke center hospitals, patients not arriving at the hospital within the treatment window, and the lack of availability of stroke specialists who can evaluate the patient and determine if he or she is a candidate for treatment.

The good news is that timely access to the latest therapies through expanded use of telestroke can greatly improve the quality of care and reduce disability from stroke. Telestroke provides an urgent and compelling alternative to having a stroke neurologist present at the bedside for treatment.

TELESTROKE DEFINED
Telestroke is the use of interactive video-conferencing in the delivery of acute stroke care. Specialists are provided with timely data to assist clinicians at the bedside in stroke-related decision making for patients presenting at distant facilities that do not have a stroke neurologist available around the clock.

TELESTROKE AND tPA
Tissue Plasminogen Activator (tPA) (alteplase) is a clot-busting drug that helps reverse disability from the most common type of stroke if given within the first 3 to 4-1/2 hours of symptom onset. The faster a patient receives treatment for stroke, the better the chances for recovery with minimal or no disability. A “door-to-needle” time of less than 60 minutes is associated with an 11% decrease in stroke mortality and a 14% increase in the likelihood of being discharged home.

However, about one-third of Americans live more than an hour from a primary stroke center, and only about 27 percent of stroke patients arrive at the hospital within 3.5 hours of symptom onset. Additionally, there are currently only 4 neurologists per 100,000 persons in the US, meaning that even emergency departments in urban and suburban areas are not able to have stroke neurologists readily available. As a result of these barriers, only 3 to 6 percent of patients receive tPA. Telestroke can help fill the void.

TELESTROKE: CONNECTING THE EVIDENCE
Telestroke programs are supported by evidence-based research. According to research, telestroke networks lead to the following benefits:

- Telemedicine has proven to be very effective in the evaluation and treatment of acute stroke, including significantly increasing the use of tPA, in rural and neurologically-underserved areas.
- Telestroke has also proven effective in increasing the use of tPA in urban areas. One recent study of 4 urban hospitals in Illinois found that their utilization of tPA increased by two to six times after telestroke was implemented.
- Telestroke can increase tPA administration in community hospitals by 55%. Telestroke can reduce the geographic and racial disparities in stroke treatment.
- Telestroke networks can contribute to advancing science by improving recruitment into stroke clinical trials.

TELESTROKE SAVES MONEY
Finally, telestroke can save Medicare and Medicaid money by reducing stroke-related disability and the
need for costly inpatient rehabilitation and nursing home care. Stroke is currently the leading cause of Medicare admissions to inpatient rehabilitation facilities (IRFs), accounting for 21% percent of all such admissions. Research has shown that telestroke networks can save hospitals over $350,000 per year and $2,227 per patient in nursing home costs, after accounting for the increased costs of setting up and maintaining the network and providing tPA.

![Fact Sheet: Telestroke](http://www.cdc.gov/nchs/data/databriefs/db95.pdf)

The American Stroke Association, a division of the American Heart Association, urges policymakers to support the following policy recommendations for telestroke:

- Access to Stroke Telemedicine (FAST) Act (S.431/H.R. 1148), which would remove a reimbursement barrier to telestroke, specifically Medicare’s rural originating site requirement.

- A mechanism for streamlining licensure for physicians providing telestroke consultations across state lines should be adopted by state medical boards.

1 Centers for Disease Control and Prevention. NCHS Data Brief: Mortality in the US, 2013. NVSR. Volume 64, Number 178.
2 2017 Stat Update.
4 Based on 2013 CDC survey data which reported the prevalence of stroke was 2.4% for adults living within a MSA and 3.2% for adults living outside a MSA. Using US Census Bureau