

# CarolinaEast improving stroke care with teleNeurology

CarolinaEast Medical Center is a 350-bed acute care hospital in New Bern, North Carolina. When the hospital partnered with SOC Teled to provide teleNeurology for the tri-county community, the rate of lifesaving Alteplase administration improved, as well as the retention of those patients. This resulted in better treatment for stroke patients and families, with the added benefit of allowing patients to stay in their local communities.



teleNeurology

## The Challenge

A lot has changed in the ten years since CarolinaEast Medical Center first partnered with SOC Teled to bring the expertise of remote neurologists from around the country to New Bern, North Carolina.

The number of stroke patients arriving at CarolinaEast Medical Center has steadily increased each year. When CarolinaEast first engaged SOC Teled, they saw roughly 200 stroke patients annually, all of whom required inpatient follow-up. Many patients were ultimately transferred to other hospitals with inpatient capabilities due to the risk of intracranial hemorrhage (ICH).

As the number of stroke patients arriving at CarolinaEast continued to rise, the need for inpatient services became apparent. For CarolinaEast, providing trustworthy care in the heart of America's "stroke belt" meant expanding stroke care capabilities to match the rising need in the community.

## The Solution

CarolinaEast has now been using SOC's emergency teleNeurology services for over a decade. SOC teleNeurologists provide emergency neurology consultations to critical patients who enter the emergency department, including those experiencing a stroke. The SOC physicians virtually review images, assess the patient, and make recommendations to the onsite staff such as administering Alteplase or transferring to a more advanced facility for endovascular surgery.

In 2016, CarolinaEast expanded its partnership with SOC and began to offer inpatient teleNeurology, available on hospital floors outside the emergency department. SOC's inpatient services provide on-demand and scheduled consults for admitted patients or patients in observation status.

SOC teleNeurologists serve as the hospital's primary provider of stroke care expertise. Assessments are conducted rapidly, consent for critical medicine like Alteplase is sought quickly, and lifesaving medicines are administered promptly and accurately.

By offering SOC teleNeurology to assess strokes, guide onsite clinicians in drug administration, and consult with families on the need for consent, the number of strokes treated onsite at CarolinaEast grew exponentially and transfer rates decreased

# Case Study:

## CarolinaEast Medical Center

significantly. Most importantly, patient care improved by the two teams working together on a more effective process.

By 2018 the hospital was firmly established in the community as providing high-quality evidence-based stroke care. CarolinaEast Medical Center is the closest hospital for some surrounding counties that has CT and thrombolytic administration capabilities. The hospital is today a regional leader in stroke care, delivering impactful programs and administering critical treatments.

### The Results

#### Establishment of both emergency and inpatient stroke programs

By partnering with SOC Telemed, CarolinaEast is able to provide high-quality stroke care improving the outcomes and quality of life for the community. The capability meant 470 stroke patients in 2018 were seen and treated on site by a combination of emergency physicians and teleNeurologists.



#### Trust in the Alteplase administration process

Prior to partnering with SOC Telemed, the hospital transferred all patients after they received Alteplase (tPA). Furthermore, the hospital reports that until teleNeurologists began consulting families on the potential risks and benefits present with the drug, it was difficult to gain consent from families. In 2018, CarolinaEast administered the lifesaving drug in 34 Alteplase (tPA) eligible cases and retained 82% of those patients, up from 0 in 2009.



#### Reduced transfer rate

After institution of the teleNeurology program, the number of stroke patients transferred from CarolinaEast to other hospitals dropped significantly. With fewer stroke patients transferred, and more stroke patients seeking CarolinaEast, the hospital's stroke care program is today a profit center for the hospital. With a net financial benefit that is 2.3x greater than the cost of implementation, CarolinaEast realized a 227% return on investment through its partnership with SOC.



**"With every stroke, time is of the essence. By partnering with SOC, our stroke care has fundamentally changed. From the time a patient is inbound on an ambulance, we're making care determinations, mixing tPA and working to reassure families. SOC has been a game changer, and a lifesaver."**

*Dr. Michael Somers, MD,  
FACEP Medical Director*



*SOC Telemed is the first provider of acute clinical telemedicine services to earn The Joint Commission's Gold Seal of Approval.*

$$\text{ROI} = \frac{(\text{BENEFIT IN PROFIT DOLLAR} - \text{INVESTMENT DOLLAR})}{\text{INVESTMENT DOLLAR}} = \frac{\text{NET BENEFIT}}{\text{INVESTMENT}}$$