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Using Cutting-Edge Technology to Reinforce Best Practice Stroke Care: Real Results Demonstrate Success

By Susan Heck

In today's healthcare environment, the need for reliable data has leapt to the forefront of program requirements. Evolving technology continually changes how care is delivered, and taking advantage of the latest offerings as a means to improve program performance has never been more important to clinical, operational, and financial success. Within the complex and diverse spectrum of the neuroscience continuum, the stroke specialty has moved into the spotlight as an area just beginning to mature in terms of service line organization and data collection and reporting for quality improvement.

The nationwide statistics on Stroke are concerning… Not only is Stroke the fifth-leading cause of death and the #1 leading cause of disability, there are approximately 800,000 annually, costing the country a staggering $34 Billion. And despite (or perhaps because of) this large and prevalent patient population, programs across the country are largely unable to effectively treat stroke, mostly due to a lack of clinical infrastructure, accurate data to drive practice improvement, or on-site staff to manage the care continuum from pre-admission through post-discharge.

Only **5% - 40%** of **eligible patients** receive t-PA – a large range to consider, but even at the maximum end, giving patients the right treatment only an average of 40% of the time poses a serious risk to outcomes. Further, approximately **78,000 additional patients per year** with ischemic stroke could benefit from neurointervention. Again, this is a large group of patients who **could** receive appropriate care, but don't.

And, as regulations continue to evolve, programs must strategically consider how to deal with an ever-growing stroke population, the care of which will only become more complex and/or less profitable, especially as bundled payment is adopted across more and more DRGs within varying specialties. And adding further complexity is the increased emphasis on quality across all aspects of the healthcare industry. As payment models evolve from a fee-for-service approach to an outcomes-based approach, accurate data and effective tracking and reporting of outcomes will be increasingly necessary. In fact, these shifts are placing greater demands on specialty programs and the IT systems used within them—the goal is no longer to collect information retrospectively for discussion and eventual process change, but rather to obtain real-time outcomes and adjust care for the next patient.

Based on national experience, Corazon has seen outcomes data increasingly used to identify gaps or deficiencies in care, serve as a means to guide best practices, and provide a platform for efficient and effective data collection and reporting. And, using a software solution designed specifically for a particular patient population can reinforce that a program follows very precise best-practice standards.

Corazon's CEREBROS™ software drives care to BEAT THE CLOCK for stroke patients – the system provides a documentation template for the required neurological assessments and specific evaluations for a known/suspected stroke, while performing concurrent data collection to be used for real-time process improvement. CEREBROS™ dictates care along a prescribed path quickly, efficiently, and consistently while also identifying any gaps or deficiencies in care vs. the accepted standard. Through the use of this cutting-edge technology, **clients are able to positively affect patient outcomes, thereby improving the overall health of communities across the country.**

> *"There have been incredible developments in stroke care in recent years. Many clinical trials have demonstrated the need for rapid intervention for optimal patient outcomes. CEREBROS™ supports a hospital's ability to administer these treatments and will play a key role as stroke care is completely transformed over the next several years."*
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> Dr. Thomas Devlin
> Director of the Erlanger Neuroscience Institute /
> Founder & Co-Director at the Erlanger Southeast Regional Stroke Center, Chattanooga, TN.

This cloud-based system employs a methodology **developed by clinicians for clinicians** to ensure that a patient receives all components of the appropriate evaluation and subsequent care; if supporting data is not entered within a specific timeframe, a prompt appears to notify the clinician that an important component of care was missed. Just consider the possibilities if numerous care paths were motivated and tracked and by standardized "steps" – the right patient receives the right care at the right time…EVERY TIME. And since "time is brain," the longer care is delayed, the worse the negative impact could be. And there's no hardware to purchase – the system resides in the cloud with data stored on remote servers with full back-up redundancy and support.

As part of a CEREBROS™ installation, the project team reviews existing documentation templates and additional hospital-specific clinical quality metrics, which can be easily incorporated into the individualized workflow, maximizing the potential for the system to improve care on a site-by-site basis.

CEREBROS™ was built to follow a stroke patient through the care continuum. The optimal design not only clearly guides the clinician through documentation, but also provides for an audit via an exception report specifically designed for the appropriate clinical quality metrics of a stroke patient. Any system that works on a real-time basis (rather than retrospective) can amplify opportunities for quality improvement; flaws in policies/procedures, care standards, or any number of other program components can be fixed quickly and efficiently, vs. addressing a problem months later after waiting for formal data registry reports.

The healthcare landscape of today no doubt proves that the trend of increasing IT use in all facets of care delivery will remain for years to come. Technology has long been a shifting frontier for hospitals, and surely the opinions, requirements, and standards will continue to change… But, Corazon believes that as hospitals and health systems continue to integrate information systems, there will be ever increasing opportunities to enhance practice and ensure best practice care.

Clients have realized enhanced program efficiency, better decision-making as a product of real results, and improved patient outcomes while using CEREBROS™. More specifically, clients report the below improvements as compared to national benchmarks:

- **30% reduction in ALOS** compared to 2017 CMS Weighted Average AMLOS
- **78% of t-PA administered** to eligible patients within 60 minutes of presentation
- **3-5% higher t-PA administration rates for eligible patients** at comparable facilities
- **4% more discharges to home** and **7% fewer discharges to other healthcare facilities** compared to AHRQ HCUP benchmark
- **50% or more reduction in abstraction times** (reduced time up to 1 hour per record)

Results have shown that even hospitals with just **400 strokes per year can save over $300,000 annually** with increased t-PA utilization, reduced LOS, and fewer staff hours dedicated to data collection due to one-time information entry. The intent of Cerebros is to capture data once, at the point of care. Discrete fields can then push or pull between interfaced systems to maximize the utility of data without requiring duplicative entry.

Given these and other impressive results at REAL client sites, hospitals cannot afford to remain at the status quo for stroke care. CEREBROS™ can take your stroke program to the next level – strategically AND operationally. Corazon's reputation for unparalleled expertise and experience in service line consulting has now translated into a system built for the future of stroke care – act now to be prepared far ahead of the competition for what the future holds.

Susan Heck is a Senior Vice President at Corazon, Inc., a national leader in strategic program development for the heart, vascular, neuroscience, spine, and orthopedic specialties. Corazon offers a full continuum of consulting, software solution, recruitment, and interim management services for hospitals, health systems, and practices of all sizes across the country and in Canada. To learn more about Cerebros, or to schedule a free interactive view of Corazon's software, call 412-364-8200 or visit www.corazoninc.com. To reach the author, email sheck@corazoninc.com.