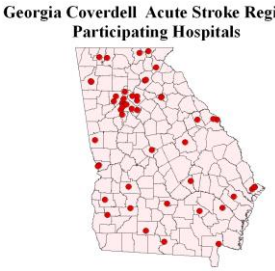
Georgia Coverdell Acute Stroke Registry Quarterly Newsletter



FALL 2015

Coverdell Partners:

Georgia Department of Public Health (DPH)

Emory University School of Medicine

Alliant Health Solutions-Georgia Medical Care Foundation (GMCF)

American Stroke Association (ASA)

Georgia Hospital Association (GHA)

If you have anything you would like included in an upcoming newsletter or have achieved recent recognition in the area of stroke, contact:

Kerrie Krompf
kkrompf@emory.edu
or
770-380-8998

Georgia Department of Public Health

Important Reminder: Help Your Patients Quit Smoking Today

We are featuring this article once again as part of the "Million Hearts" Endeavor. All of us at Coverdell, would like each and every hospital to begin referring their stroke patients to the Georgia Quitline. Approximately, one in five patients smoke. By referring your patients to this quitline, stroke survivors will have additional incentives to stop smoking.

A health care provider's advice to quit tobacco use is an important motivator for tobacco users. In 5 minutes *or less*, you can execute the Georgia cAARds (Ask, Advise, and Refer) program and ensure your patients receive evidence based, best practice tobacco cessation counseling.

- **Ask** all patients about tobacco use during each visit
- **Advise** them about the benefits of tobacco cessation
- ***Refer*** them to the Georgia Tobacco Quit Line for a free "Quit Kit", individualized plan and behavioral counseling : *1-877-270- STOP*
- **Complete** the Georgia Tobacco Quit Line fax Referral Form with the patient *GTQL Fax Referral Form can be downloaded from DPH's website*

  https://dph.georgia.gov/sites/dph.georgia.gov/files/related_files/site_page/GTQL%20Fax%20Referral%20Form_Revised%2003-2014ERPCM.pdf

  5 Sections to Complete:

  a. Healthcare Center/ Clinic/ Physician Office/ Hospital Information
  Ex. Grady/ Stroke Registry

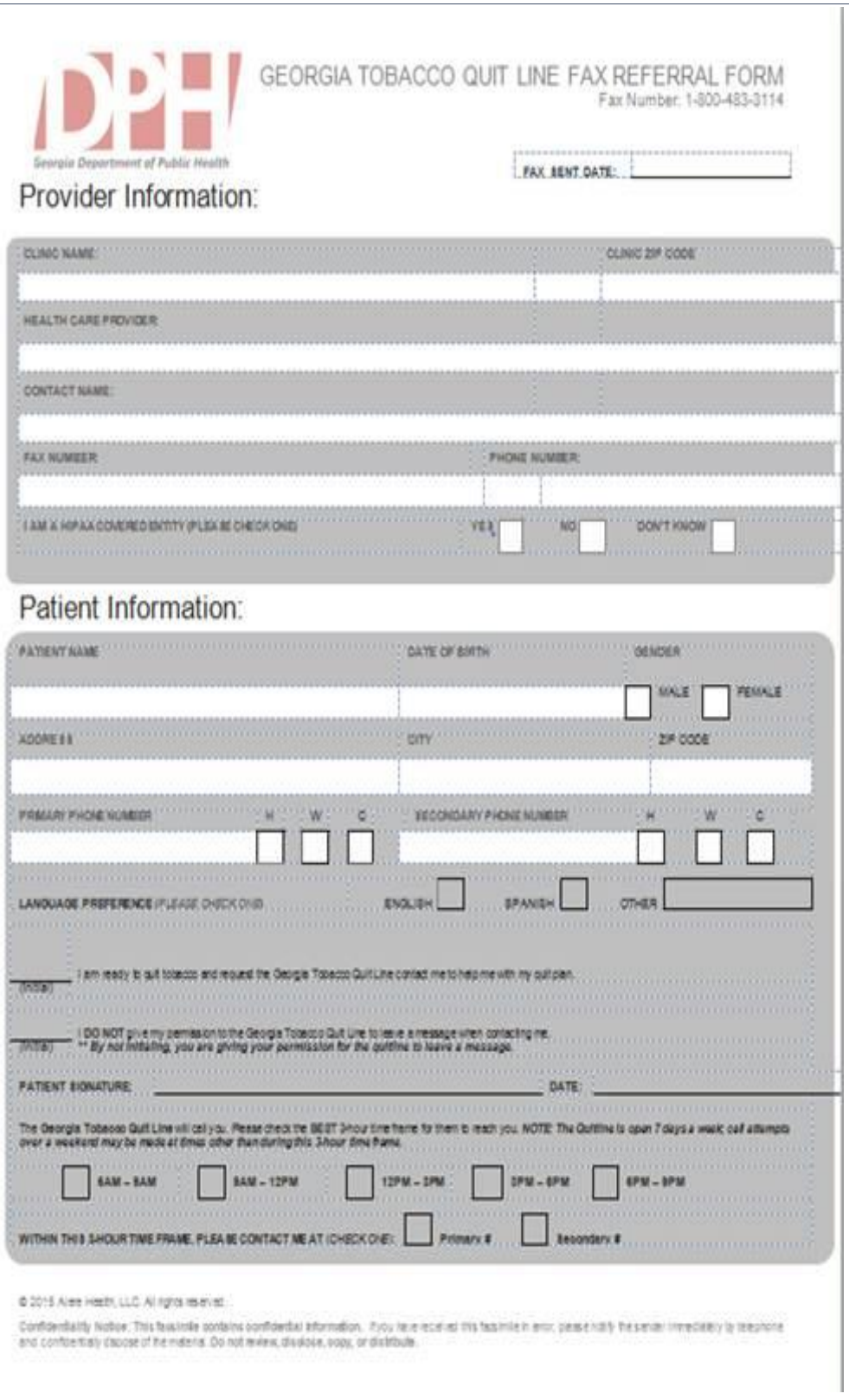
  b. Select Tobacco Cessation Treatment Given: Ask, Advise , & Refer with Follow-up

  c. Identify Professional Designation & Contact information Ex. Stroke Coordinator's information

  d. HIPAA Status & Request for Patient Outcome Report

  e. Patient/ Client Information & Consent to release participation information

- **Inform** the patient they will be contacted by a Georgia Tobacco Quit Like staff member within 48 hours or less



GEORGIA TOBACCO QUIT LINE FAX REFERRAL FORM

Fax Number: 1-800-483-3114

Georgia Department of Public Health

FAX SENT DATE: _____

Provider Information:

CLINIC NAME: | CLINIC ZIP CODE:

HEALTH CARE PROVIDER:

CONTACT NAME:

FAX NUMBER: | PHONE NUMBER:

I AM A HIPAA COVERED ENTITY (PLEASE CHECK ONE) YES ☐ NO ☐ DON'T KNOW ☐

Patient Information:

PATIENT NAME: | DATE OF BIRTH: | GENDER: ☐ MALE ☐ FEMALE

ADDRESS: | CITY: | ZIP CODE:

PRIMARY PHONE NUMBER: H ☐ W ☐ C ☐ | SECONDARY PHONE NUMBER: H ☐ W ☐ C ☐

LANGUAGE PREFERENCE (PLEASE CHECK ONE) ENGLISH ☐ SPANISH ☐ OTHER ☐

_____ (Initial) I am ready to quit tobacco and request the Georgia Tobacco Quit Line contact me to help me with my quit plan.

_____ (Initial) I DO NOT give my permission to the Georgia Tobacco Quit Line to leave a message when contacting me.
** By not initialing, you are giving your permission for the quitline to leave a message.

PATIENT SIGNATURE: _____ DATE: _____

The Georgia Tobacco Quit Line will call you. Please check the BEST 3-hour time frame for them to reach you. NOTE: The Quitline is open 7 days a week; call attempts over a weekend may be made at times other than during this 3-hour time frame.

☐ 6AM – 9AM ☐ 9AM – 12PM ☐ 12PM – 3PM ☐ 3PM – 6PM ☐ 6PM – 9PM

WITHIN THIS 3-HOUR TIME FRAME, PLEASE CONTACT ME AT (CHECK ONE): ☐ Primary # ☐ Secondary #

Please use the new fax referral form (above). Based on feedback received, the state has revised and simplified the GTQL Fax referral form. The form has been shortened for the provider.

Wellstar Cobb Stroke Program

Wellstar Cobb Hospital Stroke Program had been recertified for another 2 years by the American Heart Association as a Primary stroke center. The program has grown tremendously over the last 2 years and is now being recognized by other facilities in Georgia for innovation and care for the stroke patient. Nursing education has been the catalyst at improving the programs overall function and success. Increasing the education at the bedside created a confidence to provide the care needed to the stroke patient. Our education began with stroke school 101 which gave an oversight to the care of the stroke patient and how to document correctly. We then added stroke school 102 to increase education in regards to brain anatomy and stroke. Staff are now attending Advanced Stroke Life Support (ASLS) classes. Having ASLS certified staff at the bedside caring for the stroke patient has improved our outcomes and consistently demonstrated better care to the stroke patient. American Heart Association has deemed us a Primary stroke Center with Gold Plus Certification in addition to the Target Stroke Honor Roll award. This means that we have met all our core measures at 85% or better over a 2 year period, in addition we have maintained 6 additional measures at 85% or better. The Target Stroke Award is to recognize us for providing tPA to our patients in 60 minutes or less 50% of the time. Our education plans have now been shared with hospitals around the country.

In addition to the wonderful education we provide our staff we have added Music Therapy and Pet Therapy to the care plan of the stroke patient in the acute care setting. Our stroke dogs now visit twice a week and provide additional stimulation to the stroke patient in the acute phase of healing. The dog is placed in the bed with the patient for diversion and stimulation to the affected extremity. The program has created an incredible motivation to the patient to participate in therapy in addition to keeping staff and visitors all smiles for the day. Collaboration with our Chaplain, Physical Therapists and Nurses create a team approach to care while providing good signals to the neurons of the brain for healing.

As the stroke coordinator I am constantly reminded of the wonders of nursing. I see the motivation and determination in saving brain tissue with our most recent stroke getting tPA in 31 minutes. A team approach to care in all aspects of the stroke program is what drives success at Cobb. Exciting changes are ahead as we decrease our times of tPA administration and watch the patient survive stroke before our eyes.

Pictured above: Ron Katis, Volunteer with dog Abbie

Liz Peters, Stroke Coordinator with dog Macie Marie

Submitted by: Elizabeth Peters-Stroke Coordinator-Wellstar Cobb

EMS-Coverdell Hosptials Meeting in Macon

On September 29th, the Georgia Coverdell Acute Stroke Registry hosted a meeting at Navicent Health in Macon for several EMS agencies and the hospitals they service. Thanks to the hard work of all the attendees, the workshop was a success! There were 37 attendees. Forty percent (40%) were EMTs, 30% were nurses, 25% were stroke coordinators, and 3% were EMS clinical coordinators.

All attendees (100%) described the workshop as either very good or excellent. Attendees liked that the workshop encouraged collaboration, knowledge sharing, open discussion, and networking. Participants' recommendation was to have the workshop continue annually or semiannually.

The agencies and hospitals that attended were:

- Clayton County EMS
- Grady Hospital
- Habersham Medical Center
- The Medical Center Navicent
- South GA medical Center
- St. Mary's Hospital
- Rockdale Medical Center
- Wellstar Cobb
- Athens Regional Medical Center
- University Hospital
- Air Evac Lifeteam
- Georgia Regents Medical Center
- Floyd EMS
- Gold Cross EMS
- Habersham EMS
- Houston EMS
- Metro EMS
- National EMS
- Puckett EMS
- South Georgia EMS
- Wellstar Kennestone
- Piedmont Newnan Hospital

We want to take this opportunity to thank the agencies and their hospitals for their very informative presentations. All of us in Georgia are fortunate to see how close the agencies work with the hospitals they service. The relationships are strong and keep getting stronger.

In addition, we'd like to thank Denise Goings at Navicent Health for arranging the logistics of the meeting at her facility.

EMS and Hospital Collaborations

Clayton County Fire and Emergency Services and Southern Regional Medical Center

Clayton County Fire & Emergency Services (CCFES) and Southern Regional Medical Center (SRMC) collaborate for Target: Stroke. To reach the established goals, the following objectives were created: EMS notifies SRMC of code stroke patient during transport; physician assessment occurs within 10 minutes of patient arrival at the hospital; patient stays on EMS stretcher and is escorted to CT; patient outcomes are reported to EMS.

CCFES and SRMC meet regularly to discuss stroke patient outcomes. Many learning points are shared and any missing information can be recovered to promote complete and accurate reporting. Most importantly, EMS and hospital personnel are bridging communications in the best interests of the patients. CCFES and SRMC will continue to progress toward the latest time criteria and improvements in patient outcomes.

Submitted by: Gail Sakai, Clayton County Fire and Emergency Services

Floyd EMS and Floyd Medical Center

The significance of the role played by EMS is easily recognized regarding outcomes for pre-hospital stroke patients. While we can certainly demonstrate that emergency care for strokes has improved since Floyd EMS responded to its first call in 1966, we can also recognize gaps that still need to be bridged. To simplify what we know: good outcomes are more likely when well-trained paramedics respond to a patient soon after stroke symptoms appear and those symptoms prompt EMS to call a stroke center to activate a stroke alert.

The examples of onset-to-tPA times that are under an hour result from careful planning, staff training, public awareness and proximity to an appropriate facility. Policies and protocols are written to provide direct instruction to every component of the stroke management team covering providers from First Responders to EMS to ER staff, radiology, pharmacy and ICU. These plans are reviewed frequently, and clinical staff is required to complete related continuing education annually. Paramedics are trained to the same ASLS standard as the emergency room physicians and nursing staff which makes transition of patient care and communication as seamless as possible.

As with public awareness campaigns, there is a purposeful effort to remind all links in the healthcare chain to treat all potential stroke patients with the utmost urgency. In our case, this includes having the emergency room physician literally meet the EMS crew at the door to begin assessment before the patient is even moved from the EMS stretcher. This step may not appear to be significant regarding time saved, but it does tend to establish for everyone that the stroke patient is the priority in the emergency room at that point. It also has a positive influence on the paramedic by legitimizing the need for a stroke alert. However, when the EMS crew is not met with the expected sense of urgency in the ER it can serve as an indirect negative feedback.

Our paramedics report a very personal interest in the care received by critical patients once the care is transitioned to the rest of the healthcare team. Perhaps this sense is heightened by the fact that they typically establish contact outside of the clinical environment. Therefore, feedback regarding the pre-hospital care provided as well as patient outcomes is important to the EMS providers. While it is important for the EMS provider to know that the patient survived the stroke, it would also be beneficial to be aware of the patient's condition at discharge.

It is essential that positive outcomes are recognized across the entire healthcare team. Likewise, opportunities for improvement should be identified in every case. The quality improvement process at Floyd EMS identifies critical criteria, including a stroke, which initiates an immediate review of the patient care report. This is an internal review of the case designed to identify that key components of the pre-hospital stroke protocol were met. The paramedic can then be given appropriate feedback regarding the assessment, treatment, on-scene time and documentation. The hospital stroke coordinator also has access to the EMS patient care report for review.

Floyd EMS is involved in better outcomes for stroke patients beyond the emergency request for service. Community awareness and education is identified as a weakness due to the fact that approximately 40% of stroke cases in our hospital are arriving at the emergency room door by means other than EMS. Floyd EMS routinely partners with the neurosciences department to conduct stroke awareness and risk factor screenings in the community. These opportunities are used to educate the public about warning signs and risk factors as well as signs and symptoms of stroke. Furthermore, we conduct a risk assessment which includes an EKG screening for atrial fibrillation and blood pressure check.

Our experience with changes in the emergency treatment of strokes points to better outcomes through consistency in provider education, quality improvement measures, feedback to our EMS crews and community education. However, there are still countless opportunities for breakdowns in the process that can lead to missed windows for optimum treatment. We will continue to reinforce with our staff the difference that they can make in the quality of life for the patient following a stroke.

Submitted by: Rick Cobb, Floyd EMS

National EMS and Athens Regional Medical Center, Grady Memorial Hospital, Rockdale Medical Center and St. Mary's Hospital

National EMS, which serves four counties in the North Georgia area, has always maintained a close partnership with the hospitals in our service area to address performance initiatives which will have a more positive effect on patient outcome. Over 95% of the population in our urban, suburban, and rural areas are within 45 minutes of one of our three Primary Stoke Centers.

In 2014, we began a new initiative with the Georgia Coverdell Stroke Registry as a Collaborative Pilot Project, working with the Stroke Coordinators from Athens Regional Medical Center, Grady Memorial Hospital, Rockdale Medical Center, and St. Mary's Hospital, as well as with our Regional EMS Program Director. This project shifted our focus from looking at the Pre-Hospital and Hospital components separately, to focusing directly on effective Stroke patient care from first-medical-contact until discharge from the hospital as a seamless continuum.

As we understood the issue:

- TPA is most effective if provided during the first 90 minutes after onset of symptoms, although the window of opportunity is 3 to 4.5 hours from Last Known Well (LKW).
- Medics in Georgia called "Stroke Alerts" in 63% of the Stroke patients they transported during 2013.
- When EMS providers call a "Stroke Alert," the patient received their CT an average of 15 minutes faster and received tPA an average of 10 minutes sooner than patients without a "Stroke Alert" called.
- National EMS has Stroke standing-orders in place that address initial assessment criteria, load-&-go criteria, calling Stroke alerts, and continuing assessment/treatment guidelines during transit.
- Our task was to look at field components and the hospital ED flow to enhance treatment for Stroke patients during the acute care phase.

As we looked into the process, we realized that not only did some hospitals have different criteria for "Stroke Alerts", but also that some physicians at the same facility differ in their interpretation of these Stroke patients. We also determined that EMS may not actively pursue documentation of the Last Known Well (LKW) time for their patients, since the Patient Care Report is not currently formatted to specifically delineate CPSS exam findings, LKW time, nor Stroke Alert times.

Therefore, our plan was to:

1) Clarify/review the Last-Known-Well (LKW) time.
2) Standardize Stroke Alert Criteria for all of our hospitals.
3) Normalize our Medic documentation of LKW, CPSS, & Stroke Alert times.

Our group agreed that the Stroke Alert criteria will be a sudden onset of deficits in the CPSS exam, understanding that reliance on that information only would exclude posterior circulation strokes and subarachnoid bleeds. The consensus was to include the clinical impression of the medic as a valued opinion, and if potential contraindications exist (i.e. last known well 24 hrs. ago), that information should be front-loaded in the radio report transmitted to the Emergency Department to determine their own process for this particular Stroke Alert patient. The group also specified where to document LKW, CPSS, and Stroke Alert times on our PCR.

After successfully training our EMS and Hospital personnel on this information, we looked at collaborative data from all of our Hospitals for Stroke Patients who received TPA, with the following remarkable results:

- Pre-education Door-to-Needle Time: 76 minutes
- Post-education Door-to-needle Time: 69 minutes
- Pre-education Stroke Alert Notification: 58%
- Post-education Stroke Alert Notification: 83%
  (89% after correction for patient not meeting criteria)

- Pre-Education First-Medical-Contact-to-Needle Time in Minutes: 99 minutes
- Post-Education First-Medical-Contact-to-Needle Time in Minutes: 80 minutes

The opportunities that the National EMS Partners will focus on, will be:

1. The EMS role in documenting the Last Known Well (LKW) time on the Pre-Hospital Care Report, as well as providing complete and accurate patient information in a realistic time period.

2. Review all Stroke Alerts which were called in by EMS, rather than only the Stroke Alerts where tPA was administered in the ED.

Submitted by: David Briscoe, National EMS

South Georgia EMS and So. GA Medical Center

South Georgia Medical Center participated in the Coverdell EMS/Hospital Meeting September 29, 2015 in Macon, Georgia. Our EMS has worked diligently with the Stroke Team and ED personnel to promote better stroke care in Lowndes and surrounding counties. Some of the procedures put in place to help achieve faster and better care are:

- Stroke alert called to ED staff while on scene
- Last Known Well acquired and relayed to ED staff prior to arrival
- Pre-registration is completed while en-route to ED via phone
- Blood work drawn during transport and handed off to ED staff
- Patient weighed immediately upon arrival to ED
- Patient taken directly to CT scan after weight obtained
- ED nurse meets EMS at CT bedside for hand off report
- Real time feedback from SGMC Stroke Team to EMS

Additionally, SGMC agreed to participate in a pilot project with ImageTrend, Georgia State EMS database vendor in July 2015, to assess the feasibility of linking pre-hospital care information with the Stroke information entered into the American Heart Association/American Stroke Association Get With The Guidelines performance improvement program. This pilot started by the Georgia Department of Public Health/Georgia Coverdell Acute Stroke Registry to fulfill the Centers for Disease Control and Prevention (CDC)/Paul Coverdell National Acute Stroke Registry new five-years pre-Hospital Quality Improvement data element requirements.

Submitted by: Judy Warren, Stroke CNL, South Georgia Medical Center

Rabun EMS Key to Stroke Victim's Survival

Reprinted in the Clayton Tribune (October 8, 2015) and written by: Mat Payne

Surviving a stroke at sunrise, surgery and speech by sunset

Even on vacation, Jerry Wellborn couldn't slip out of his morning routine. Up with the sun, Wellborn left his sleeping wife where she lay in the Dillard house his family rented for a weekend getaway. He walked upstairs to watch TV in peace. With remote in hand and the soft glow of the screen lighting the room, Wellborn sensed something just didn't feel right. "I noticed my right arm was kind of moving to the side and doing it's own thing and wasn't participating," Wellborn said. "I just sat there and stared." And then Wellborn did something he usually never does — he got out of his chair, curled up and went to sleep.

An hour and a half passed and Wellborn awoke to the sound of his family coming upstairs at 7:30 a.m. Surprised to see that everyone was out of bed at such a time on a Saturday morning, he was greeted by a grandson jumping into his lap and demanding his attention. But when Wellborn opened his mouth to speak, the words just wouldn't come out. It wasn't that his words had left him. His ability to speak had. The muting of his voice was the result of a stroke. Rather than panic, Wellborn got up and poured himself some lemonade. Wellborn's wife was the first to recognize the signs. Soon after, his son Don was on the phone with Rabun County 911 dispatchers.

At the ambulance station, Brian Panell and Josh Hickox were 15 minutes into their 24-hour shift when a call came over the scanner to respond to a possible stroke in Dillard. It was June 6, Hickox's first day back on the job after an injury sidelined him for several months. Before they knew it, they were en route to the call for help. While his son was still on the phone, it occurred to Jerry that if he were to be leaving the house, he should dress properly. Unable to communicate with his family, he navigated the stairs, dressed himself and returned just in time to lose virtually all control over his body.

Backed with two decades of service with EMS, Panell knew the signs of a stroke victim.
"He was not speaking, had paralysis on one side, and had a gaze," Panell said. "It was pretty evident that there was a significant stroke injury that was present." In the world of emergency services, small pieces of information regarding a patient's condition can mean the difference between life, death or the state of paralysis many stroke victims live in. Paramedics with Rabun County EMS are trained to identify strokes and to perform a series of tests allowing them to provide doctors as much information as possible before they even hit the emergency room doors. Although he spent months off the job, Hickox knew Jerry's best chance for survival was to be airlifted to WellStar Kennestone Regional Medical Center in Marietta. Hailing from the Greenville, South Carolina, area, Jerry said he wasn't sure where he was being taken as he was loaded into the ambulance. He does remember hearing the word "airlifted." "I could see my family in the car behind me," Jerry said. "This feeling come over me that I was alone, that now nobody's with you. Then this other feeling came over me and a peace came over me."

Soon after the 14-minute ambulance ride ended in the parking lot of Beck Funeral Home, the thud of helicopter blades signaled the next leg of Jerry's journey. He soon found himself staring at the ceiling of the chopper, still without a clue of where he was being taken.
"The EMS had done everything to me that needed to be done because the helicopter crew, all they did was talk to me and monitor me," Jerry said. The helicopter landed and Jerry was rushed through a series of tests. As he submitted to an MRI scan, he still had no idea what had happened to him. "I heard my family behind me crying, then all of a sudden I'm gone into an operating room," Jerry said. "This man said, 'Do you know where you are? You're in surgery.'" Jerry awoke for a third time June 6 in an elevator, dazed and confused.
"The elevator door had stopped and it opened and there was my complete family, plus the music director from my church and I recognized every one of them," Jerry said. "They didn't tell me I just had brain surgery."

Rabun County EMS Capt. Trampes Stancil said Jerry underwent a thrombectomy, a procedure in which a doctor surgically removes the blood clot in the patient's brain causing the stroke. Stancil said Rabun County EMS was one of the first organizations in the area to partner with Kennestone to establish a precedent for its patients to receive the cutting-edge procedure. Jerry's surgeon, Dr. Rishi Gupta, neuro-interventionalist and the director of the Neuro ICU at Kennestone, said Rabun EMS played a key role in saving Jerry's life.
"Emergency stroke care has transitioned from the hospital to the pre-hospital phase," Gupta wrote in an email provided to The Clayton Tribune by Stancil. "Collaboration between stroke providers and EMS to identify severe stroke syndromes and expedite transfer to appropriate level of care is saving lives and preventing disabilities," Gupta added.

Surrounded by his family in the intensive care unit, Jerry listened as a nurse told his loved ones that he might never speak again. "I spoke, and everybody looked real funny," Jerry said. "And she told me 'Do you know who these people are?' I told her this is my son and my wife. and my wife goes 'Yes,' I thought what's wrong with her?" It was only then that Jerry learned of his procedure and those who had come to his aid in an hour of need.
"It was a miracle for me to be there and everything just fell in place," Jerry said. "To go to one of the best hospitals that there is for strokes and blood clots and to have basically the No. 1 surgeon."

Since then, Jerry has returned to the county to thank EMS workers for their part in saving his life and for taking the initiative to partner with Kennestone. "They were very interested in the outcome and what had happened," Jerry said. "I thought that was super nice that they wanted to be that involved. Because I'm going to say most people would have said 'It's over, I'm through,' but they didn't. "They wanted to follow up and know what happened."
Submitted by: Trampes D. Stancil, Captain, Rabu County EMS

Gov. Nathan Deal Proclaims October 29th- World Stroke Day-Stroke Awareness Day in GA

Many of the Coverdell Hospitals participated in a very important moment on October 7th at the capital when Governor Nathan Deal proclaimed October 29th – World Stroke Day – as Stroke Awareness Day in Georgia. The American Heart Association, The Georgia Stroke Professional Alliance, The Georgia Department of Public Health and other public organizations around the state make great contributions and efforts to prevent strokes and to raise public awareness of stroke.

We are proud to be part of this movement and to push efforts forward every day to decrease the effects that this disease has on Georgia.

Thank you for all you do - every day, for every patient, in every community.

Submitted by Katja Bryant-Neuroscience Clinical Specialist-Stroke Program Coordinator
Northside Hospital

Coverdell Highlights

August Conference Call

Our August Coverdell call focused on the next 5 years of Coverdell funding and "Where We Go From Here". Thank you to our presenters, Rana Bayakly, PI of the GCASR and James Lugtu, both from DPH.

October Conference Call

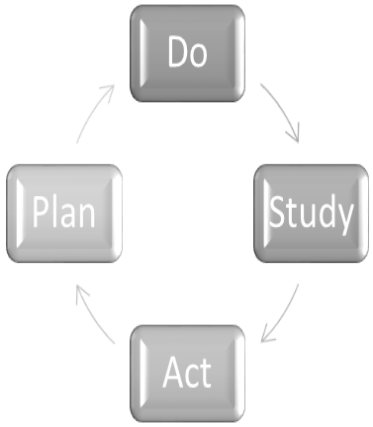
Thank you to Dr. Rishi Gupta, Vascular Neurologist at Wellstar Kennestone Hospital, and Dr. Michael Frankel, Lead Neurologist for the Georgia Coverdell Acute Stroke Registry, for a very informative call providing us with an overview of pre-hospital stroke scales along with a modified version of the FAST scale which is being developed into a smartphone app for possible use in Georgia.

QI Corner

What is the PDSA cycle and how can it be executed to improve the care that we deliver to our stroke patients?

Evidence-based care and judicious implementation of best practices has the ability to significantly impact patient outcomes while concurrently managing expenditures. The Plan-Do-Study-Act (PDSA) cycle is an element of the Institute for Healthcare Improvement Model that is utilized to quickly shift quality initiatives. The phases in the PDSA cycle include:

Phase 1: Plan—Plan the assessment or surveillance (inclusive of data collection)
Phase 2: Do—Perform the test on a small population
Phase 3: Study— Assess the data and evaluate the outcomes
Phase 4: Act—Enhance the change centered on the lessons learnt



PDSA Cycle

The approaches utilized by different institutions to attain various stroke designations differ based on institutional resources and cultural dynamics. The PSDA method delivers a structure for the undertaking of all scopes of quality initiatives.

For example, a Georgia Coverdell Acute Stroke Registry facility identified a need to use the PDSA cycle to address their swallow screening processes and door to CT time. A plan was initiated to assess occurrences of missed opportunities in the emergency department once an individual was identified as a stroke patient. First a small sample of stroke patients was reviewed to determine opportunities to improve the workflow for dysphagia screenings and door to CT time. Next, the data were evaluated, by the stroke coordinator and emergency department director, and analyzed for the outcomes (i.e. dysphagia screening and door to CT time quality improvement initiatives.) The final step was the stroke coordinator taking action on the lessons learned. Some of the lessons learned included a need for the redesign of the stroke toolkit; repositioning of the stroke toolkit and it's placement in the emergency department; and streamlining of the stroke standing orders. This process was repeated four times processes were adjusted until the stroke coordinator's evaluation was completed and changes were successfully implemented.

Submitted by: Sanita Floyd, GCASR QI Consultant

Are you Ready! October 1, 2015 Transformation from ICD-9-CM Codes to ICD-10-CM Codes

Description	ICD-9-CM Codes	ICD-10-CM Codes
Ischemic Stroke	430, 431, 433.01, 433.11, 433.21, 433.31, 433.81, 433.91, 434.01, 434.11, 433.91	I63.000-I63.9
Subarachnoid Hemorrhage	430	I60
Intracerebral Hemorrhage	431	I61
TIA	435	G45.0, G45.1, G45.2, G45.8, G45.9