STROKE ADVISORY COUNCIL MEETING MINUTES
May 10, 2022
1 - 2:30 pm

Members/Partners

Present: Wally Ainsworth, NC Office of Emergency Management Services (NCOEMS); Michael Aquino, UNC Nash; Sue Ashcraft, Novant Health; Andrew Asimos, Atrium Health; Pat Aysse, American Heart Association (AHA); Robert Barefoot, Harnett County EMS; Sharon Biby, Cone Health; Aleasia Brown, DPH Cancer Prevention & Control Branch (DPH CPCB); Anna Bess Brown, Justus-Warren Heart Disease and Stroke Prevention Task Force (JWTF); Katie Buck, CarolinaEast Health; Tory Cairns, WakeMed; Amber Carter, Cone Health; Shannon Chesney, Duke; Alicia Clark, DPH Community and Clinical Connections for Prevention and Health (DPH CCCPH); Sylvia Coleman, RN; Ron Cromartie, Innovative Healthcare Consulting; Tom Curley, NHRMC; Dana Davis, UNC ; Rizza de la Guerra, Johnson & Johnson; Michael Erwin, BELIEVE Stroke Recovery Foundation; Meg Fenu, WakeMed; Heather Forrest, Duke; Melissa Freeman, Duke; Michelle Gerolemon, WakeMed; Emily Gobble, UNC Health; Amy Guzik, AHWFB; Lindsey Haynes-Maslow, JWTF member, NCSU; Ed Jauch, MAHEC; Joanna Keeter, Vidant Health; Sarah Lycan, AHWFB; Brian Mac Grory, Duke; Ruth Marescalco, NHRMC; Megan McKinney, Mission HCA; Desiree Metzger-Cihelka, Mission HCA; Catherine Michael, AHWFB; Jamila Minga, Duke; Terri Moore, DPH, CCCPH, Coverdell Stroke Program; Margaret Murchison, WFJA Radio, JWTF member; Kathy Nadareski, WakeMed; Peg O'Connell, Stroke Advisory Council (SAC) chair; Amanda Orfitelli, DPH, CCCPH, Coverdell Stroke Program; Gaurang Palikh, NC Medical Society; Diane Perkins, Atrium Health; Joey Propst, JWTF member; Christina Roels, Novant; Birtha Shaw, Diabetic Supply; Tish Singletary, DPH, CCCPH; Alan Skipper, NC Medical Society; Chuck Tegeler, AWFB, SAC vice chair; Sarah Van Horn, UNC Health Blue Ridge; Andrea Ward, Atrium Health High Point; Gwendolyn Wise-Blackman, Minority Women Health Alliance; Erica Yourkiewicz, NHRMC

Welcome

Peg O'Connell, Chair

Peg welcomed everyone and stated that Dr. Chuck Tegeler, vice chair, was also on the webinar. Peg thanked everyone for joining- especially stroke survivors and stakeholders who are joining us in our work in preventing stroke and improving stroke care in North Carolina. Peg also welcomed new Council board member Dr. Gaurang Palikh. Dr Palikh was appointed by the NC Medical Society since our last meeting in February of this year. Dr. Palikh is a neurologist practicing in Shelby and is past President of the NC Neurological Society.

Peg noted that the agenda for today's meeting is posted on Start with Your Heart.com and that the meeting is being recorded. All slides and the recording will also be posted on the website.

Peg called for the approval of the minutes from the last Stroke Advisory Council (SAC) meeting February 15, 2022. She reminded participants they had received an email with the minutes in advance of this meeting. The minutes were approved by acclamation with no corrections noted.

Peg reminded all of the upcoming **Step Out with Stroke Warriors** event to promote independence and offer resources for stroke survivors and their caregivers. The event will be held on May 14 from 11-3 at E. Carroll Joyner Park, 701 Harris Road, Wake Forest, NC 27587, JoynerPark.com. There will be food, fun, games, and multiple vendors. More details are available under events at **www.believesrf.org**.

Peg provided an update from the April **Justus-Warren Heart Disease and Stroke Prevention Task Force (Task Force)** meeting and from the NC legislature. She shared that SAC was created, in statute, through the work of the Task Force. The SAC reports to the Task Force with recommendations for action. At the April Task Force meeting, members voted to add recommendations for a comprehensive Tobacco 21 law (T21) to the Task Force Action Agenda. You'll remember that at our last SAC meeting Jim Martin, Morgan Wittman-Gramann and Anna Stein shared information about the interagency group that has been meeting about details for a comprehensive NC T21 law. In 2019 a T21 federal law passed requiring people to be 21 years of age to purchase any tobacco/vaping products. At

the December Task Force meeting, members asked SAC leadership to examine this issue and bring recommendations to the Task Force Action Agenda. NC's law would reduce the disparity between NC's current legal age to purchase tobacco (18) and the legal age of 21 in the federal law. The higher the legal age to purchase tobacco and/or vaping products, the more likely younger kids may be able avoid addiction over their lifetime. The Task Force approved, and fine tuning continues on the wording of the bill.

In the upcoming short session, we'll hear more on Action Agenda items, including closing the coverage gap with Medicaid expansion.

Coverdell Stroke Program Update
Anna Bess Brown, Executive Director, Justus-Warren Heart Disease & Stroke Prevention Task Force
Terri Moore, Program Coordinator for the Coverdell Stroke Program

1. The NC Coverdell Stroke Program welcomes new staff member Amanda Orfitelli as evaluator. Amanda is a registered dietician and also has training and experience in communication. She brings a lot of great experience and skills to the program. She also volunteers with the American Heart Association and is passionate about our cause. Welcome, Amanda!
2. Last month the HIE shared a first look at the long-awaited stroke registry. The Stroke Registry work group gave feedback. Later this week we will see further progress on the registry so that we can capture the data that will help us see a more complete picture of stroke in NC and gain insight into strengthening the stroke system of care. The HIE is on track to meet the delivery goals for this quarter which ends this June.
3. We've been working with the AHA to turn on the Coverdell layer in Get With the Guidelines (GWTG) Stroke. Eighty hospitals in NC currently use GWTG Stroke, and most have agreed to sign on to the Coverdell layer. This allows us to track and compare Coverdell stroke program data being collected with other states. All hospitals are strongly encouraged to support the program by signing up for the Coverdell layer.
4. Year 1 QI projects include a contract with Cape Fear Valley Health System training EMS staff on emergency stroke response and transitions of care throughout their system. The contract with Mission Health is testing 2 types of blood pressure measurement. Both Year 1 contracts are going well. These contracts began April 1, 2022 and will end June 30, 2022. The first monthly report with data submission is due soon, and we are looking forward to receiving them and confirming the progress being made.
5. Year 2 of the program will fund 4 projects. Applications have been received and reviewed. These 4 new contracts will begin August 1, 2022 and run through June 29, 2023. These contracts will monitor healthcare disparities for individuals at risk for stroke and they span the state in coverage.
   A. Mission Health will continue as a contractor expanding their year 1 goals and will partner with Cone Health on their quality improvement project to broaden their reach. They will also partner with Yancey County Community Paramedics program to deliver a proactive approach to follow-up stroke care in one of the most rural areas of our state where the majority of citizens do not have access to a hospital or quality healthcare.
   B. Northern Regional Hospital will establish a protocol to identify patients with elevated stroke risk and health disparities so they will be able to monitor them. They will also work with Surry County EMS in an ongoing QI process to identify and fill performance gaps within the hospital setting and to improve transitions of care.
   C. Novant Health will develop a screening report to identify patients at most risk for stroke. Their report will also include social determinants of health metrics. They will also implement a QI project by branching out to the Greater Charlotte area and the Coastal Markets through ASLS training for EMS personnel across that span of NC to help increase EMS confidence in identifying stroke out in the field and to improve patient outcomes.
   D. Vidant Health will review and update their current protocol for identifying populations at highest risk for stroke events and monitoring health disparities in identification of stroke risk factors, stroke care, and provision of referrals throughout the stroke system of care. Vidant Medical Center will also partner with their community hospitals and public school systems within the 9 counties where the community

hospitals are located. They will develop and implement their "Stroke Awareness and Management (SAM) Initiative" to provide stroke education to young people to promote prevention and increase awareness of stroke symptoms in those with whom they live and in their communities.

Terri offered her email, Terri.Moore@dhhs.nc.gov, if anyone has questions about the projects.

Duke Eye Stroke Center of Excellence

Peg introduced **Dr. Brian Mac Grory from the Duke Eye Stroke Center of Excellence** who shared his work to promote the Management of Central Retinal Artery Occlusion. The AHA published a statement on this topic in 2021 with Dr. Mac Grory as lead author.

Dr. Mac Grory shared the work at Duke on the treatment of eye strokes. Typically, when strokes are talked about, it is usually about a stroke that occurs in the brain which we all recognize as serious and disabling. Just under 1% of strokes affect the eye. The back of the eye is called the retina. It is the part of the eye that receives all the signals from the outside world and brings it to the brain. Technically, the retina is part of the brain connected through the optic nerve. Eye strokes are not well recognized and therefore not treated as well.

Dr. Mac Grory shared a case study of a woman who experienced a sudden loss of vision in one eye. The patient recognized this sudden loss of vision as serious and went to the emergency department. The emergency staff recognized the chance of an eye stroke and engaged the telestroke team. Because she came to the ED immediately, the telestroke team could treat her quickly with clot-busting tPA and then transferred her from Duke Raleigh hospital to Duke University Medical Center in Durham where they administered Hyperbaric Oxygen Therapy. Hyperbaric Oxygen therapy is rarely available; Duke is the only place in NC that offers it. She was admitted to Duke's stroke service, did well, and was discharged. She followed up with the Duke Eye Stroke clinic. Because this woman acted quickly and recognized the need for emergency care, the outcome of her eye stroke was very successful. As in brain stoke, time is critical in the care cycle. Many people call their primary care doctor, eye doctor, or ophthalmologist. The term Eye Stroke isn't really used that often as with typical medical jargon it is known as CRAO which is the acronym for Central Retinal Artery Occlusion. The term eye stroke does point to a Central Nervous System stroke. A team of experts, called together by the AHA, worked to define ischemic stroke more clearly. When a central nervous system suffers an infarction, that infarction could be in the brain, the spinal cord, or the retina. While eye strokes are not usually life threatening, it can be a disabling form of ischemic stroke that causes sudden permanent blindness if not treated quickly and can be a sentinel of future stroke or heart attack. Fortunately, eye stroke is treatable; and tools to treat and fix it already exist. Lots of treatments for eye stroke have been explored, and not many are effective. tPA seems to have the most evidence for successful treatment.

Eye strokes can also tell you if something else is wrong. A study Duke conducted in 2021 that examined the heart rate of patients with eye strokes and brain strokes and compared them to patients of the same age, sex and overall health without any type of stroke determined that one with an eye stroke was much more likely to develop a heart problem. Potentially, atrial fibrillation or other heart problems may have caused the eye stroke.

A joint statement with AHA reviewed and updated guidance on eye strokes. It updated the stroke awareness mnemonic from FAST (FACE ARM SPEECH TIME) to BEFAST (BALANCE EYES FACE ARM SPEECH TIME). Eye stroke symptoms usually present as sudden, painless darkening of vision in one eye. The AHA scientific statement indicates that anyone with eye stroke symptoms should report to the emergency department right away. The ED would then treat a patient with sudden, painless darkening of vision in one eye as a stroke patient: call a code stroke, have an ophthalmological evaluation, then continue timely stroke treatment protocol with evaluation of tPa as a first line of treatment within the approved time frame. Hyperbaric oxygen therapy, a higher pressure of oxygen delivery, is considered as course of treatment to salvage the vision in the retina and hopefully restore sight.

The Duke Center of Excellence has two programs for eye stroke care. An acute program pulls together a team of six specialists to evaluate the patient and initiate treatment as soon as diagnosed with an eye stroke using high pressure oxygen, clot-busting meds and admission to a stroke unit for further care. The outpatient program works through a multidisciplinary clinic where patients having experienced an eye stroke are further evaluated to prevent future

events. The Multidisciplinary Clinic has proved successful and is rated highly by the patients as well. Duke also has a telestroke network; we transfer eye stroke patients to Duke for hyperbaric treatment.

Questions for Dr. Mac Grory

1. **What is the treatment window for hyperbaric treatment?** We will treat within 48 hours of symptom onset. The sooner the better. If the time window is nearly passed, they will apply at least one of the 10 usual hyperbaric treatments.
2. **What dose of Alteplase (t-PA) do you recommend; and now that many treatment centers are switching to Tenecteplase (TNK), what dose do you recommend?** The standard dose of Alteplase is usually given. There has been some discussion about using a smaller dose due to the size of the artery, but nothing has been determined as it has not been tested. There is not a lot of data on Tenecteplase for treatment of eye stroke. Norway is currently conducting a clinical trial on use of Tenecteplase for eye stroke. Evidence shows less bleeding with an eye stroke than a brain stroke. Dr. Mac Grory recommends a treatment center follow their current protocol for brain stroke when treating eye stroke.
3. **As eye strokes are rare, could the numbers for NC be higher than they appear?** Yes, the numbers could be underestimated. Patients with vision issues such as cataracts or glaucoma may not recognize what is happening when an eye stroke happens which could cause a later diagnosis. While eye stroke is rare compared to brain stroke, eye stroke is more common that other neurological conditions such as myasthenia gravis and bacterial meningitis. Underdiagnosis is likely a problem too.
4. **Does eye stroke affect a certain age group more than others?** It can affect any age group but like brain stroke it increases in incidence with age. The annual incidence of eye stroke is about 2 per one hundred thousand patients; in those over the age of 80, it is over 10 per one hundred thousand patients. Incidence is probably higher in patients with high blood pressure, high cholesterol or other vascular problems. It can happen those below age 18 but is rarer and probably includes other clotting problems or other inflammation issues with the eye. Eye stroke is a disease that is more associated with age.
5. **After a person has an eye stroke, are there other rehabilitation therapies for someone who has lost some vision?** Typically, there isn't a huge amount of improvement without treatment, but they can have low vision rehabilitation in the clinic or see an occupational therapist who specializes in low vision. There are numerous means of compensating with loss of vision in one eye and maximize vision in the other eye. The goal of rehabilitation is to maximize function and quality of life.
6. **Does it also increase the risk for somebody who has already had a stroke?** There haven't been any studies that look to brain stroke as a predictor of having any eye stroke, but the reverse has been studied. One who has had an eye stroke is more likely to experience a brain stroke. About one in three experience them at the same time. Risk for a brain stroke can appear a couple of weeks before an eye stroke or a couple of weeks after and persist for some time after.
7. **What education is being done with eye care offices?** Duke is reaching out through written materials and presentations to ophthalmology and optometry offices encouraging awareness of the cardinal signs of eye stroke and to send patients with symptoms to the emergency department and not scheduling a future office evaluation. Time is essential to rescue eyesight.
   Dr. Tegeler mentioned the value of visual evaluation in diagnosing a problem in the ER. Visual evaluation is not always done correctly. He encouraged all on the call who do evaluations to pay close attention. He has seen many variables in the way it is done. Get the visual field assessment done correctly to avoid errors.
8. **What education has been pushed out to EMS?** Healthcare facilities and EDs were the first to be educated, followed by eye care specialists, and we are now educating EMS agencies/staff. Dr. Mac Grory thanked Melissa Freeman for her work on this education effort.

Peg added that SAC can consider how to educate EMS and healthcare providers on the issue of eye stroke. The recording of this presentation and the slides will be posted on our website startwithyourheart.com

Dr. Mac Grory welcomed more questions and further conversation on the topic of eye stroke, the process of referring

patients to his clinic, how one can start this at their own institution (brian.mac.grory@duke.edu).

Peg thanked Dr. Mac Grory for his presentation and invited him to participate regularly in SAC meetings/activities. She thanked all for attending/participating in today's meeting.

Peg said that we hope to hold the next meeting in a hybrid format. The **next SAC meeting date has been changed to September 9** from 1-2:30. We will meet in person on the DPH campus and offer a link to an MS Teams meeting.

Peg adjourned the meeting saying we look forward to being able to meet in person before long. Until then, stay safe and healthy.

Stroke Advisory Council Meetings
Sept. 9
Nov. 15
All meetings are Tuesdays 1-2:30