UNC REX Stroke Program PI Work

Dysphagia Screening

Risk Factor Education

Erin Lewis, MSN, RN, CNRN



About UNC REX- A Community Hospital

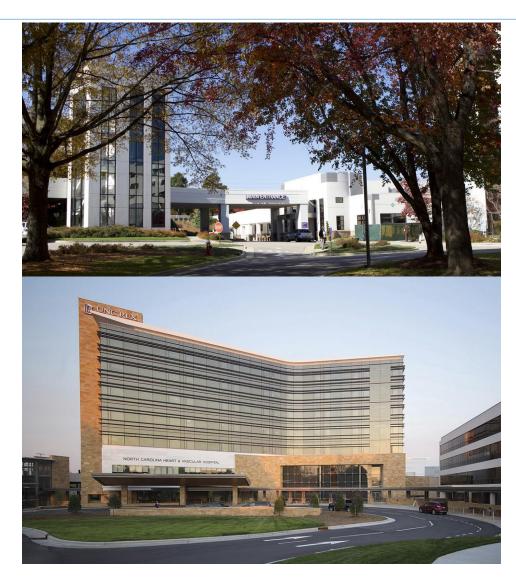
Location: Wake County, NC

Facilities:

- 2 Acute care hospitals- Raleigh and Holly Springs
- 5 Wellness centers
- 2 Skilled nursing facilities
- 2 Comprehensive health campuses
- Suburban limited scope sites

Number of beds: 665 total

- 439 general acute care beds
- 62 ICU/critical care beds
- 21 NICU/intermediate care nursery beds
- 227 skilled nursing



About UNC REX- A Community Hospital

REX Raleigh Stroke Program

DNV Certified Comprehensive Stroke Center

Average 750-800 stroke patients/year (Primary dx)

Stroke Program Medical Director

Dr. Omar Kass Hout

Director of Interventional Radiology and Neurovascular

Ceria Sullivan, MBA, BSN, CNML

Stroke Coordinators

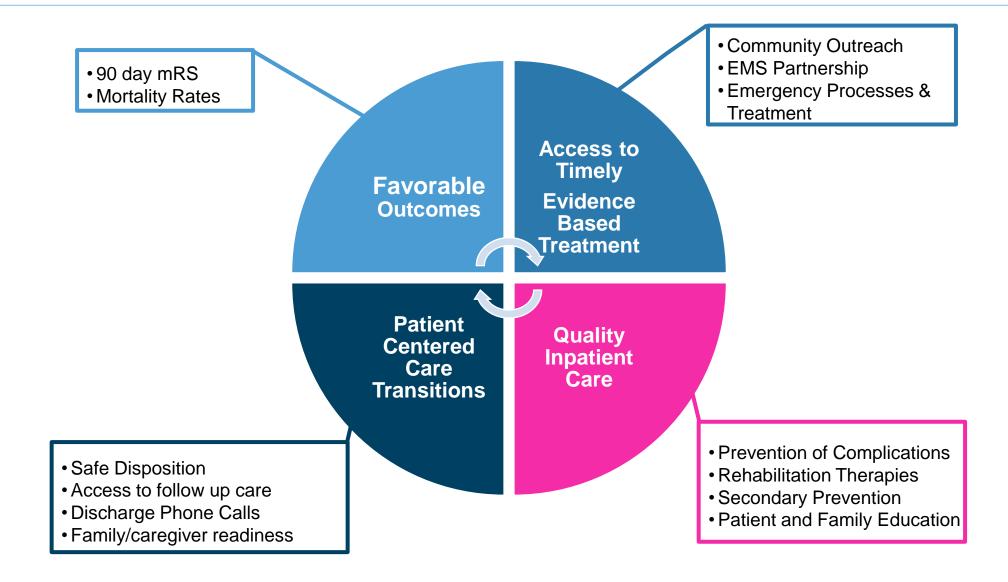
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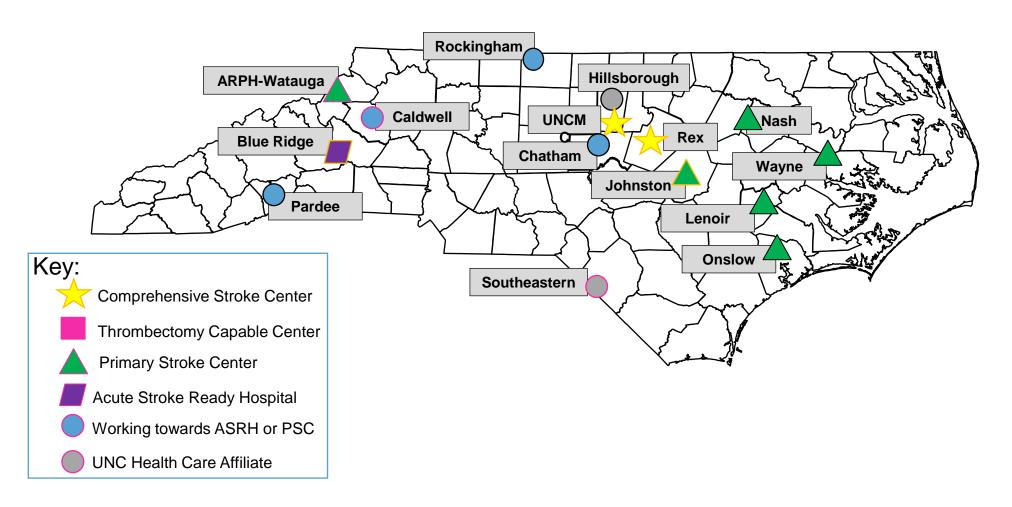




Stroke Program Continuum of Care



The UNC Stroke Health Care System



Dysphagia Screening PI

Stroke Program Quality and Performance Structure



Dysphagia Project Background

- Dysphagia screening is recommended for acute stroke patients by the American Heart/American Stroke Association (Powers, et al., 2019); "early screening can be effective to identify patients at higher risk for aspiration, which is associated with greater risk of pneumonia".
- Validated Tool at UNC Health is a hybrid of several tools
 - Barnes-Jewish Dysphagia Tool (Edmiaston, et al., 2010)
 - Mann Assessment of Swallowing ability (HTS, 2018; Mann, et al., 2001)
 - Toronto Bedside Swallowing (Martino, et al., 2009)
 - Yale Dysphagia Screening (Leder & Suiter, 2014)
- Tool includes pre-evaluation screening questions followed by a water test evaluation if the initial pre-screen is passed
 - Must pass the pre-evaluation AND the water test evaluation to be given PO

Dysphagia Screening Improvement Project

Problem Statement: The dysphagia screening process is not correctly completed at an acceptable rate and this can potentially adversely impact patient outcomes related to dysphagia.

Phase 1

- Establish Baseline
- Set Goals
- Name Key Stakeholders
- Develop Interventions

Phase 2

- Operationalize Remedies
- Test Remedies
- Analyze Data
- Repeat

Phase 3

- Sustained Compliance
- Analyze Data
- Optimization of Workflow

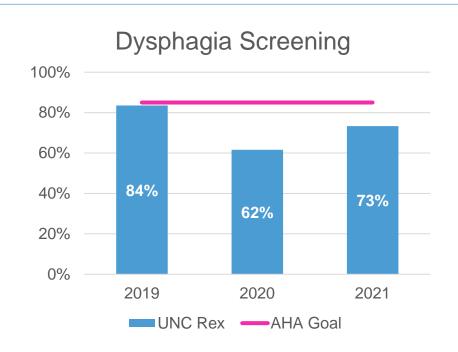


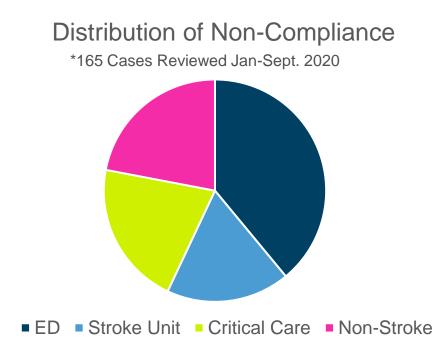






Phase 1- Baseline Data, Goals, Remedies





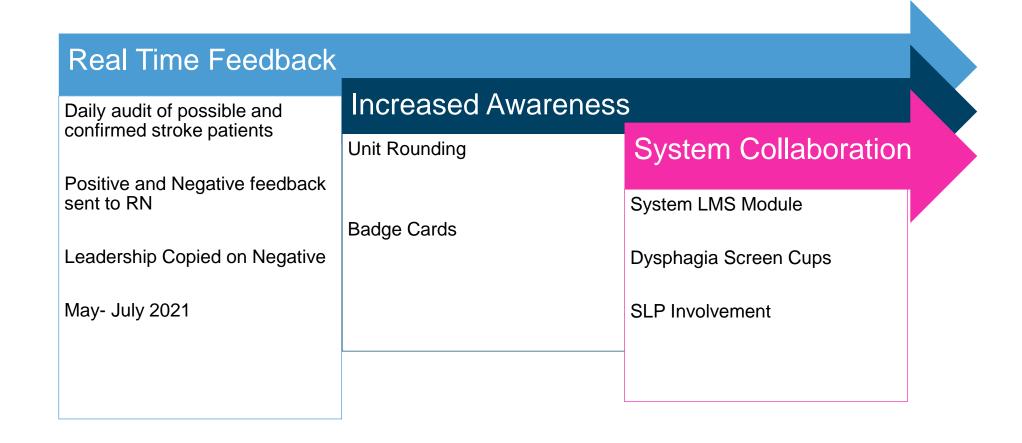
Objectives

- 1. The purpose of this project is to improve the rate of dysphagia screening at UNC Rex (75%).
- 2. A secondary goal is to publish inform the stroke care community of the efficacy of a quality improvement project to improve the rate of dysphagia screening in an acute care hospital.

Plan:

1. Provide Intensive real time feedback on swallow screen practices in conjunction with additional phased interventions to support sustained compliance.

Phase 2- Operationalize Remedies



Real time Feedback- It's A LOT (81 charts)



This recent patient had a correct dysphagia screen prior to any PO intake.

MRN Date of Arrival: 6/2/2021 Patient Location: ED

Please <u>click here</u> for a brief response survey. We appreciate your participation and feedback.

For more information about the UNC EPIC two-part Dysphagia Screening and documentation, <u>**click**</u>

here.

Thank you for taking care of our stroke patients and for all of the work that you do to keep them safe!

REMINDER **III**



MRN _____ Date of arrival: 6/1/2021 Patient Location: ___

[Description of failure mode] Water Test Not documented.

Please <u>click here</u> for a brief response survey. We appreciate your participation and feedback.

For more information about the UNC EPIC two-part Dysphagia Screening and documentation, <u>click</u> here.

Thank you for taking care of our stroke patients and for all of the work that you do to keep them safe.

58%

42%

Low Utilization- 14 completed surveys

UNC Rex Dysphagia Screen Feedback
Thank you for keeping our patients safe by performing the Dysphagia Screening and Water Test when needed. Thank you for helping
us meet our quality metrics by properly documenting the nursing assessment (Pre-Evaluation) and water test (Evaluation).
1. Name:
2. UNC Email address:
3. True or false: The nurse must wait for an order or confirmed stroke diagnosis to do the
dysphagia screen?
O True. The dysphagia screen is only for stroke patients with stroke orders.
 False. The dysphagia screen is completed prior to any PO intake for any suspected stroke or TIA patient.
Stroke of 11A patient.
4. In the UNC EPIC two-part Dysphagia screening, the "Pre-evaluation" is the nursing
assessment phase. Patients who fail the "pre-evaluation":
O Are given the 3 oz water test to complete the "evaluation".
O Are kept NPO until seen by SLP (speech language pathologist).
5. In the UNC EPIC two-part Dysphagia Screening, if the patient passes the "Pre-
evaluation", the RN would:
O Give the PO intake as ordered.
 Perform the 3 oz water test, observe for signs of dysphagia, and document to complete the "Evaluation".
complete the Evaluation i
6. If the patient fails the pre-evaluation or the water-test (evaluation), the RN should:
O Give oral medications as ordered.
O Keep the patient NPO and contact the provider to consider alternate medications or
route of administration.
7. I understand the steps to performing the UNC EPIC two-part Dysphagia Screening
(Pre-evaluation) and 3 oz water test (Evaluation).
O Yes.
○ No, I need more information.

Increased Awareness- Front and Center



April 2021 – SLP Unit Rounding and Video



•Dysphagia video was recorded and sent to all ICU leadership in the "Weekly Education Huddle Updates 4/27/21"

April 2021 – Dysphagia Screen Badge Tags

How to Perform the Dysphagia Screen
Step 1: Perform Chart Review
If patient presents with any of the following stop the screen, make the patient NPO.

- · PEG or NGT
- Impaired level of arousal maintain alertness indep 5 minutes)

and order a SLP consult

- History of dysphagia (thi puree foods, PEG tube)
- Poor secretion managem or using suction to remo mouth)
- Vocal quality changes (w quality, whispered vocal hoarseness, breathy qua
- · Slurred Speech
- Facial asymmetry (okay paralysis is present)
- Absent or weak cough
- Tracheostomy

Step 2: 3 oz. Water Test Administration

If swallow difficulties are present make patient NPO and order SLP consult

- Sit the patient upright at 90 degrees or as high as tolerated
- Give the patient a cup with 3 oz. (90 ml) of water
- Instruct patient to drink from the cup until it is finished
- . Stop immediately if coughing is p
- Observe the patient for one full market for any signs of coughing, throat clearing, respiratory change or security management problems
- If no signs of swallow difficulties are present then place diet order per MD.

May 2021 – Stroke Awareness Posters

Stroke Facts -

Dysphagia Screening

Stroke is the leading neurological cause of

- dysphagia (difficulty swallowing), with
 42% to 67% of stroke patients present with
- dysphagia within the first 3 days.

 50% of these patients aspirate, and
- 50% of these patients aspirate, and
 33% who aspirate develop pneumoni
- Swallowing abnormality is associated higher mortality rate, largely due to

Dysphagia screening is a pas procedure to identify who man an assessment by speech the

Patients who fail a dysphagi or water test should be kep

until they pass a more compl assessment by speech therap

https://www.ahajournals.org/doi/10.1161/str.0b013e3182877f57 https://www.verywellhealth.com/dysphagia-in-multiple-scierpsis-244

Nursing Bedside Dysphagia Screening EPIC

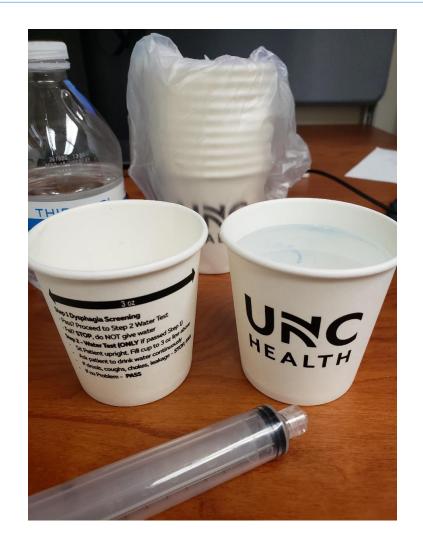
PRE-EVALUATION	PASS	FAIL			
Present Feeding Status	No history of feeding difficulty	PEG or NG Tube			
Consciousness	Awake and Alert	Unresponsive Tactile / repeat stimulation			
History of Aspiration/Dysphagia	No	Yes			
Control of Secretions	No difficulty	Drools, Coughs or Requires suction			
Voice Quality	Clear	Wet, Gurgly, no voice			
Speech	Clear	Slurred -PLEASE NOTE SLURRED SPEECH FAILS			
Spontaneous Cough	Effective cough	Absent or decreased			
Tracheostomy	Not Present	Present Partial or complete paralysis one or both sides			
Facial Symmetry	Normal OR Minor (mild facial droop)				
th Pre-eval and ater Test must done to "Pass"	Pass Perform 30 ml water test	Any of the Above Fail STOP! NO water test			
"EVALUATION"	WATER TEST PASS	WATER TEST FAIL			
Assessment Findings	No Difficulties Noted	Choking, coughing, wet sounding voice, pocketing or holding, throat clearing, leakage or spillage			
Pass or Fail Screening Results	WATER TEST PASS Give oral med or diet	WATER TEST FAIL STRICT NPO			

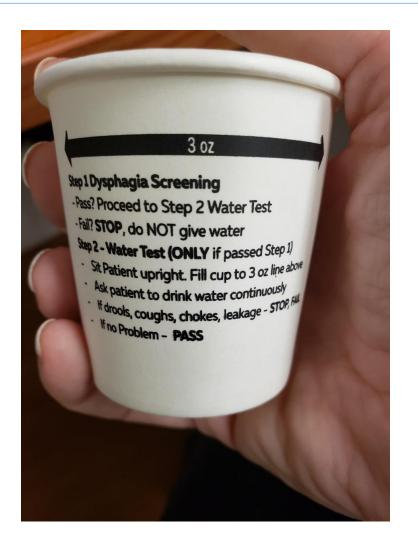
as ordered

until seen by Speech Notify Provider



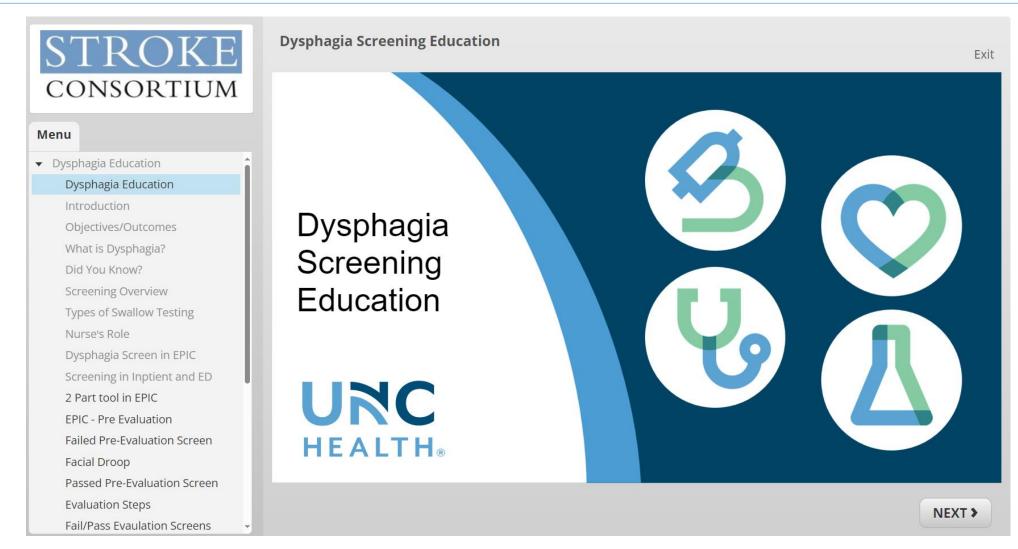
System Collaboration- Dysphagia Cups











Summary of PI Activities in 2021

Background- In 2020 UNC REX Dysphagia Screening Compliance dropped below **65%**

2021 Dysphagia Screening Project

Objectives: The purpose of this project is to improve the rate of dysphagia screening at UNC Rex to 75%.

Plan: Provide Intensive real time feedback on swallow screen practices in conjunction with additional phased interventions to support sustained compliance.

Outcomes: 2021 Dysphagia Screen- 76%

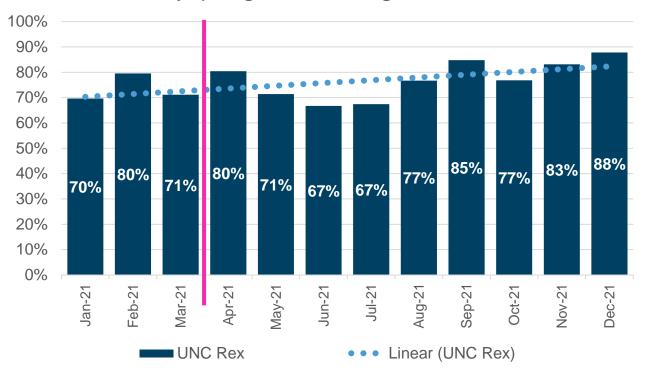
Successes:

- Dysphagia Screening Cups
- Daily audit and email feedback to staff
- Online Learning Module

Lessons Learned:

- Daily audits unsustainable
- Survey Tool not used

Dysphagia Screening



NEW GOAL 2022-85%



Phase 2- Sustained Compliance And Workflow Optimization

Gap Identified: Data from GWTG is provided in retrospect and can make it difficult for leaders to address barriers with staff in a timely manner but intensive real time feedback is not sustainable

Past- REACTIVE

- Stroke Quality Metric Failures reviewed in Stroke Committee
- Feedback on opportunities not unit specific
- Feedback delayed 2-3 months
- Lack of Stroke Program Communication



Current-PROACTIVE

- Provide feedback in timely fashion (1-2 months post discharge)
- Provide unit specific feedback prior to stroke committee meeting
- Review best practices in Stroke Committee meeting
- Quarterly Stroke Circular



Dysphagia and Quality Metric Compliance Feedback

Feedback Recipients- Unit Managers, Nursing Directors, Regional Hospitalist Medical Director

Unit ▼[D/C Date	Admission Order Set	ADMIT SERVIC •	VTE Prophylaxis/DVT Prophylaxis	Dysphæia Screen	CSTK-01 NIHSS	Early Antithrombotics	 Smoking Cessation	Stroke Education	Antithrombotics	or	Statin Prescribed at Discharge	Rehabilitation Considered	Intensive Statin	Comments
	1/26/2022	GENERAL IP	HOSPITALIST		X	X									ADMIT AMS VS TIA. NIHSS > 12 HOURS. NOW SWALLOW SCREEN PRIOR TO PO MEDS
	1/2/2022	STROKE	HOSPITALIST		Х										NO WATER TEST PRIOR TO PO MEDS
	2/13/2022	GENERAL IP	HOSPITALIST		Х										NO SWALLOW SCREEN DONE
	2/16/2022	GENERAL IP	HOSPITALIST		X	X									THOUGHT TO BE SEIZURE PT. NO SCREEN BEFORE MEDS. NIHSS > 12 HRS AFTER ARRIVAL
	2/4/2022	STROKE	HOSPITALIST		Х										NO SWALLOW SCREEN PERFORMED
	2/23/2022	GENERAL IP	HOSPITALIST		X										NO SWALLOW SCREEN DONE
	2/1/2022	GENERAL IP	HOSPITALIST		X										ADMIT FOR FALL. MRI SHOWED STROKE. NO SCREEN PRIOR TO MEDS
	2/1/2022	GENERAL IP	HOSPITALIST		Х										THOUGHT TO BE UTI/CONFUSION. NO SCREEN PRIOR TO MEDS
	2/21/2022	STROKE	HOSPITALIST		Χ										NO SCREEN PRIOR TO MEDS



Phase 2- Sustained Compliance and Workflow Optimization

Stroke Circular



February 2023

Hospital Care of Stroke Patients

In stroke patients, rapid diagnosis is essential for treatment. To determine the most appropriate care for a stroke, an emergency team needs to evaluate the type of stroke a person is having and the areas of brain affected. Our emergency department staff and critical response teams move the Code Stroke algorithms along to expedite patient diagnostic testing to facilitate treatment times. "Time is Brain" really does matter when determining the immediate next course of action.

Dysphagia



Dysphagia Screen Compliance

Two step process which includes an <u>Evaluation</u> and a <u>Water Test Pass</u>. Both need to be completed prior to any PO medication administration.

Ways we fail

- Giving PO instead of per tube if patient has feeding tube
- Screening not performed prior to giving po medications
- Screen incomplete: both <u>Evaluation</u> and <u>Water Pass test</u> must be completed before giving medication by mouth
- PO Medications given after a Fail

Ways we succeed

- Holly Springs had ZERO missed dysphagia screens in the last quarter
- Dysphagia cups work! You can call distribution at x1883 at UNC Rex Ask for Dysphagia 3 oz cups- Lawson # 055008
 3 OZ DYSPHAGIA SCREEN 25/SL



Keys to Sustained Compliance

- Increased collaboration with hospitalist admitting team
- Increased engagement with individual units and nursing staff
- Heightened awareness of stroke quality and achievement metrics
- Individualized and targeted education for each unit
- Quarterly communication and education focused on areas of opportunity





Pre-implementation Phase

- Gather Data
- Define the Problem
- Brainstorm Solutions
- Engage Key Stakeholders
- Develop Timeline

Phase 1

- Increase awareness
- Innovative Solutions

Wins:

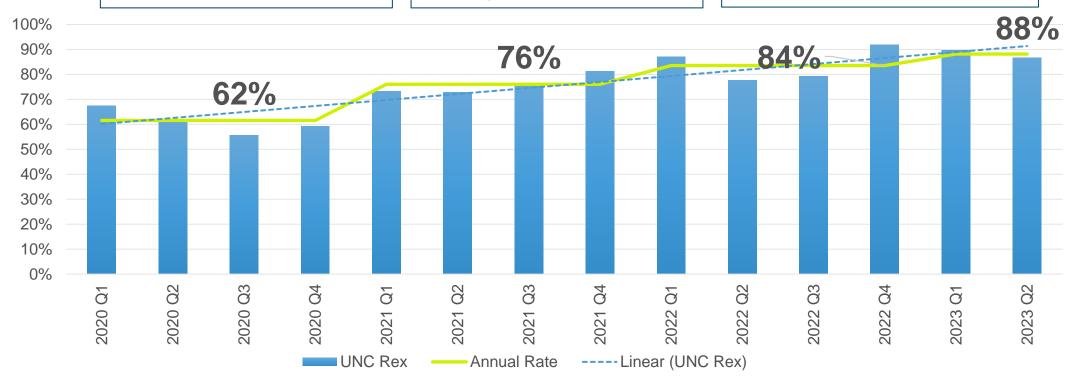
System Collaboration Dysphagia Cups

Phase 2

- Sustained Compliance
- Increased Communication

Successes:

- 1. Transparency
- 2. Accountability



Risk Factor Documentation

Standards Related to Individualized Risk Factor Teaching

TJC

DSSE.2 The program addresses the patient's self-management Plan.

EP 5 The program addresses the education needs of the patient regarding disease progression and health promotion

DNV

PC.10 Plan of Care

CR.1 Nursing staff shall develop a standardized plan of care for the admitted stroke patient which will include identified individual needs of the patient based on their condition and the family's needs. Documentation of interdisciplinary findings shall be included in the plan of care, as appropriate.

PC14 Patient/Family/community Education

CR.1 The stroke center will ensure that it provides for the involvement of patients and/or family members in:

CR.1a making decisions about the plan of care goals during hospitalization

CR.1b discussing and planning for lifestyle changes to manage disease/condition

CR.1c discussing and planning for post hospital care and needs, including possible placement

Barriers to Individualization of Risk Factors

EMR MODULES

MAY NOT BE USER FRIENDLY

HARD TO INDIVIDULIZE

DISCHARGE PAPERWORK

CREATES A LOT OF PAPER

OFTEN GETS OVERLOOKED ORGANIZATIONAL HANDOUTS

NO PAPER TRAIL
IN EMR

HARD TO CAPTURE WHEN GIVEN TO PATIENT

Methods of Dissemination at UNC REX

EMR MODULES



DISCHARGE PAPERWORK

Learning About Risk Factors for Stroke

What puts you at risk for stroke?

Your chances of having a stroke depend on your risk factors. Some risks can be lowered with treatment and a

This list includes some of the risk factors for having a stroke. You and your doctor can discuss your risk and how to

Risk factors you can control with treatment

- Atrial fibrillation. This type of irregular heartbeat increases the risk of blood clots that could cause a stroke.
 Atherosclerosis. Also called hardening of the arteries, this happens when fatty deposits build up inside
- arteries. It can cause conditions such as carotid artery disease or coronary artery disease. Diabetes. Diabetes results in high blood sugar. Over time, high blood sugar can lead to hardening of the
- · High blood pressure. Over time, this damages the walls of the arteries which can lead to hardening of the
- High cholesterol. This can lead to the buildup of fatty deposits in artery walls.
- Other health problems. There are many problems that raise the risk of blood clots that could cause a stroke. These include sickle cell disease and blood clotting problems.

Risk factors you can control with a heart-healthy lifestyle

- . Smoking, Smoking, or even inhaling secondhand smoke, increases your risk of heart attack and stroke.
- Being overweight. This makes it more likely that you'll develop high blood pressure, heart problems, and diabetes. These conditions make a stroke more likely.
- Drinking too much alcohol. This means more than 2 drinks a day for men and 1 drink a day for women. · Not getting enough physical activity. If you aren't active, you have a higher risk of health conditions that
- Not eating a heart-healthy diet. Heart-healthy eating includes vegetables, fruits, nuts, beans, lean meat, fish, and whole grains. You limit things like sodium, alcohol, and sugar.

- Having had a previous stroke or TIA (transient ischemic attack).
- · Having a family history of stroke. Your chances of having a stroke are higher if other people in your family
- Being older. The risk of stroke goes up as you age.
 Being African American, Alaskan Native, Native American, or South Asian American.
- . Being female. Women have a higher risk of stroke than men
- · Having certain problems during pregnancy. These include gestational diabetes and preeclampsia.
- Being past menopause.

ORGANIZATIONAL HANDOUTS



Neuroscience & Spine Center

Guide to Stroke

An overview of stroke for patients and caregivers

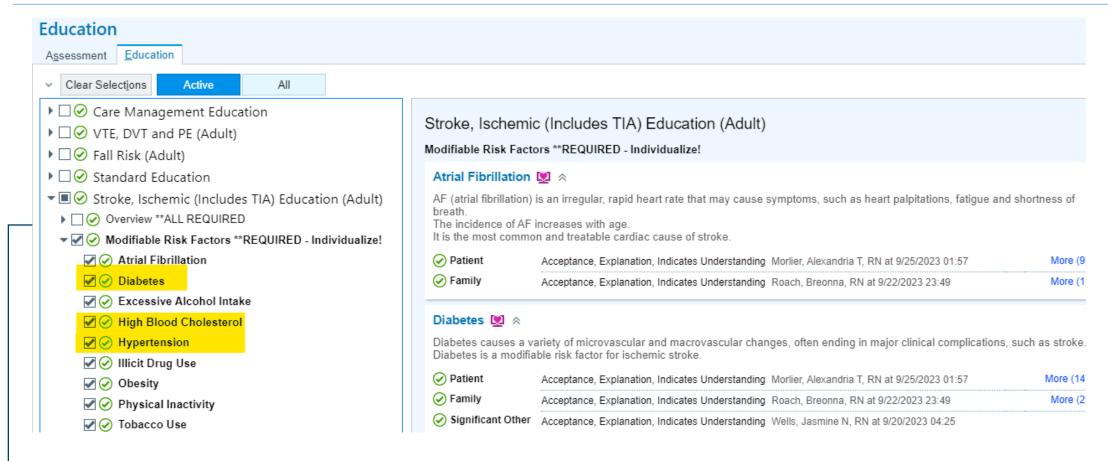


Goals of Individualized Risk Factor Education



Is there a one-size fits all solution to both priorities?

EMR Modules- Epic CMP Content -



Pros:

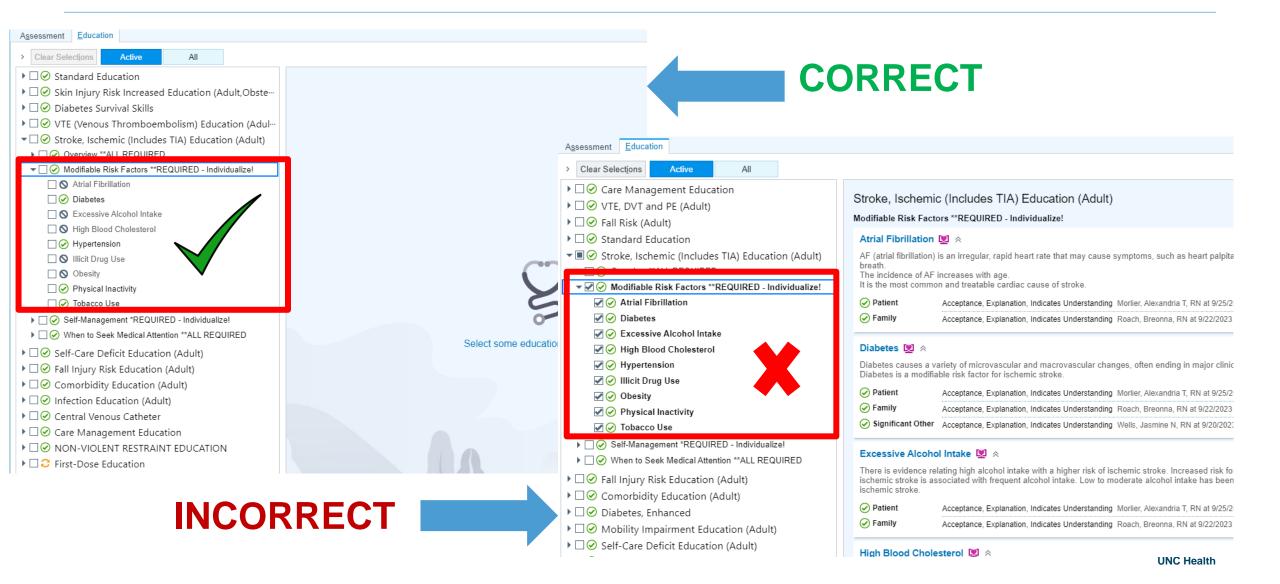
Education topic automatically populated once care plan is added

Easy to navigate to during a certification visit

Cons:

All topics are auto-populated

It all falls to the FIRST Nurse



Supporting Staff

Just In Time Education

2021 TJC Stroke Survey Required Follow-Up

- As a follow up to our recent Joint Commission stroke survey, we are working on an action plan around daily documentation of individualized stroke education in the medical record.
- All RN's working in NSICU, 5 West, and 3 East are required to complete by October 15th, 2021
- Follow the steps below to complete the required education:

Step #1

 <u>Click here</u> or scan the QR code below to review a video on documented daily individualized education

Step #2

- · Review these key points:
 - · Stroke education should be completed daily
 - Documentation should reflect what you actually taught
 - Use the n/a button on admission to set your team up for success with documentation.
- <u>Click here</u> or scan the QR code below to indicate you have reviewed this education

Questions- email erin.lewis@unchealth.unc.edu



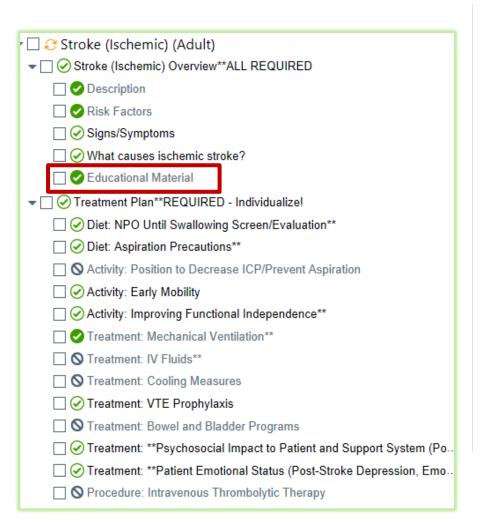


New Nurse On-boarding

- 1. Review the education items & mark what's **not applicable**. Indicated by
- **Resolve** any education reviewed that the patient doesn't need further education on. For example: the patient may know the signs/symptoms of stroke & therefore you do not need to continue educating on them every day. Indicated by
- 3. Lastly, document any education done with the patient that is **ongoing**. Indicated by

r ☐ & Stroke (Ischemic) (Adult)
▼ 🗌 🤡 Stroke (Ischemic) Overview**ALL REQUIRED
☐ O Description
Risk Factors
☐
🗌 Educational Material
▼ 🗌 🤡 Treatment Plan**REQUIRED - Individualize!
☐ ODiet: NPO Until Swallowing Screen/Evaluation**
☐ O Diet: Aspiration Precautions**
☐ S Activity: Position to Decrease ICP/Prevent Aspiration
☐
☐
☐ ☑ Treatment: Mechanical Ventilation**
☐ S Treatment: IV Fluids**
☐ S Treatment: Cooling Measures
☐
🗌 🛇 Treatment: Bowel and Bladder Programs
☐
☐
🔲 🛇 Procedure: Intravenous Thrombolytic Therapy

Organizational Education Book





Neuroscience & Spine Center

Guide to S

An overview of stroke for pati



plan to reduce your chance of another stroke. This may include managi conditions, medications and making lifestyle changes.

What Can I Do to Prevent a Future Strol

High Blood Pressure High blood pressure damages blood vessels in the t Diabetes High blood sugar is a risk factor for stroke. Managing blood su include a combination of medications, healthy diet and regular physical a High Cholesterol Cholesterol can block arteries in the brain and cause a Managing high blood pressure, diabetes or cholesterol involves a combination medications, healthy eating, and regular physical activity.

Medications to reduce risk of stroke are shown on page 13.

Healthy Eating Some tips on changing your eating habits include:

- Ask a doctor, nurse or licensed nutritionist or registered dietician for he
- · Avoid foods like fatty meats and butter and cream and saturated fats. Eat more fruit, vegetables, whole-grains, beans, pasta, fish, and lean m
- · Read nutrition labels on packaged meals. Many are very high in salt.
- Regular Physical Activity As little as 30 minutes of regular physical actividay can help to lower blood pressure, blood cholesterol and blood sugar. with your doctor before beginning an exercise program.

Tobacco, Alcohol & Substances

Tobacco use damages blood vessels. IV drug use is associated with a high stroke risk. Cocaine use is also linked to stroke. More than two alcoholic drinks per day for a man and more than one per day for a woman can raise blood pressure. Management of tobacco, alcohol or substance abuse may involve community programs, lifestyle changes, and counseling.

The ways I can prevent a stroke in the future are:

What Medications Will I Need?

You may be asked to start some new medications to prevent another stroke. The kinds of medications that you will be started on usually depends on the type of stroke you had, your stroke risk factors, and any allergies or reasons why you can't take certain medications.

Antiplatelets These can help keep blood clots from forming.

My antiplatelet will be

or (NONE)

Anticoagulants These may also be called 'blood thinners'. Anticoagulant medications make it harder for the clots to form in your body.

My anticoagulant will be _

or (NONE)

Statins are used to lower your blood cholesterol. High cholesterol can increase the risk of blockages in your arteries.

My statin will be

or (NONE)

Blood Pressure Lowering Medications also called 'antihypertensive' medications. High blood pressure can cause damage to your arteries and organs over time. High blood pressure is the most common cause of stroke.

My blood pressure medication(s) will be:

Help to quit smoking Nicotine replacement therapy contains a small amount of nicotine and may ease symptoms of withdrawal. There are also medications that can help with cravings that do not contain nicotine.

My smoking cessation medication will be:

or (NONE)

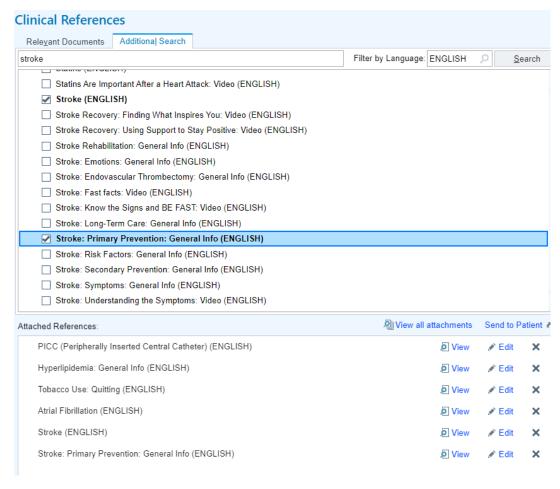
Past Experiences

Flowsheet Rows to Capture Individualization

Document INDIVIDUALIZED risk factor teaching using the Stroke Patient/Family Checklist

	10/9/19					
	1800					
Stroke Patient / Family Checklist						
Stroke Education Book	Reviewed with patient;Re.					
Signs and Symptoms	addressed with patient;ad					
How to activate EMS/911 in event of emergency	addressed with patient;ad.					
Medications Reviewed	antihypertensives;lipid lo					
Lifestyle Changes Reviewed	high blood pressure man					
Importance of Followup	addressed with patient;ad.					

AVS Attachments to Capture Individualization



Summary-Individualizing Risk Factors

- Certified Stroke Centers must have a clear documentation trail that shows the risk factor education was individualized for each patient
- EMRs allow various ways to capture individualized risk factor education but are not always user friendly
 - Epic- Care Plan auto-triggers all education topic and relies on the first RN to mark some risk factors not applicable before charting with the top box
 - Epic- Clinical references can be attached the AVS but can create lots of paper
- Organizational handbooks can provider great information but don't provide evidence of individualization

Bottom Line

There is no right or wrong answer or quick fix.

Choose what works for you and then use education, audits, and orientation to make it stick and become part of your culture on stroke units.





Thank you!

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