POLICY NUMBER: CP02.078
CATEGORY: Patient Care

TITLE: “Stroke Alert” Process

POLICY: Patients who present with or develop the “cardinal signs” of stroke will be identified as “Stroke Alert” patients and acknowledged as those that have a greater potential for significant injury and can benefit from early stroke team intervention. A consistent process will be used for notification and activation of the stroke team in a timely manner by implementing a standardized approach to patient care management for patients who meet “Stroke Alert” criteria.

PURPOSE: To improve patient outcomes and the quality of service delivery by implementing a standardized approach to patient care management for patients who meet “Stroke Alert” criteria.

APPROVED:

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Chief Medical Officer

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CORE PROCEDURE:

I. The following signs and symptoms are recognized by the American Stroke Association (ASA) Stroke Guidelines as cardinal signs of stroke and therefore meet “Stroke Alert” criteria. If a patient is 18 years or older, have one or more of the following criteria, the “Stroke Alert” process will be initiated:

   A. Sudden numbness or weakness of the face, arm or leg (especially on one side of the body)

   B. Sudden confusion, trouble speaking or understanding speech

   C. Sudden trouble seeing in one or both eyes

   D. Sudden trouble walking, dizziness, loss of balance or coordination

   E. Sudden severe headache with no known cause

II. External “Stroke Alert” activation process:

   A. When the UF Health Stroke Center is notified by EMS that a patient meets “Stroke Alert” criteria or if a patient who meets the stated criteria arrives by means other than EMS (e.g. private vehicle), a “Stroke Alert” is called and the stroke team is mobilized.

   B. When notification by radio/telephone is given to the ShandsCair Communication Specialist by the pre-hospital care providers of the impending arrival of a patient meeting “Stroke Alert” criteria, a “Stroke Alert” will be called.

   C. If the assessment of a patient who has arrived in the Emergency Department (triage or patient room) reveals that the patient meets “Stroke Alert” criteria, the nurse will notify the ShandsCair Communication Specialist and a “Stroke Alert” will be called. This may occur when pre-hospital personnel have not called a “Stroke Alert,” the patient has had a decline in neurological status, or the patient has arrived by means other than EMS.

III. The External “Stroke Alert” Team consists of the following members:

   A. Vascular Neurology Attending on call

   B. Vascular Neurology Fellow on call

   C. Neurology Resident on call

   D. Vascular Neurology ARNP

   E. Neuroradiologist

   F. ED Attending

G. ED Resident

H. ED Charge Nurse

I. ED RN

J. STAT Nurse

K. Radiology Staff e.g. CT/MRI

L. Laboratory Personnel

M. Pharmacy

Additional services are notified by the "Stroke Alert" paging system and are available as needed:

1. Respiratory Care Services

2. Anesthesiology

3. Interventional Radiology personnel

4. Critical Care Medicine Service

5. Designated Stroke nursing units

6. Core Stroke team members

IV. External "Stroke Alert" timeline and designated team member responsibilities as referenced in Appendix A.

V. Internal "Stroke Alert" activation process (Appendix A):

A. Dial **69** on any hard wired phone to initiate notification of a "Stroke Alert" patient.

B. Give the operator the following information:

1. "Stroke Alert"

2. Onset of symptoms

3. Patient room number

4. A text message from the web-based beeper system will be accessed by the operator

a. The UF Health Shands Hospital Intranet Web page will be accessed

b. Select Communications-CHRIS on the main menu

c. Then Text Messaging/Alpha Paging Gateway

5. Place the following information in:

From: "**STROKE ALERT"**
Enter the four digit pager number: **7871**

6. Message:

"STROKE ALERT"
Patient Room number

7. Select Send Page

8. In circumstances when the paging system is down:

a. Dial 69 and tell the operator to overhead page ""Stroke Alert" respond to unit"

b. The operator will call the neurology resident on-call and notify of a Stroke Alert and give the patient's room number

c. Follow this procedure until dispatch is notified that the paging system is operational

VI. Primary Service Notification of "Stroke Alert"

A. Health care professionals activating a "Stroke Alert" do not need to contact the patient's primary service prior to initiation.

B. The patient's primary service however, should be notified as soon as possible after the initiation of the "Stroke Alert".

C. The person initiating the "Stroke Alert" and the responding team should follow the Internal "Stroke Alert" timeline and designated team member responsibilities: Appendix A. once the "Stroke Alert" has been initiated.

D. The responding neurologist assigned to the "Stroke Alert" Team should update the patient's primary physician once all diagnostic information is available.

VII. The Internal "Stroke Alert" Team consists of the following members:

A. Vascular Neurology Resident on call

B. First Responder RN or other health care professional (initiator of the alert)

C. Designated RN Responder from 82 NSICU (Neurosurgical Intensive Care Unit)

D. Stat RN

E. Pharmacy

F. Radiology CT/MRI

G. Laboratory personnel

H. Primary Physician

I. Nursing Coordinator

Additional services are notified by the “Stroke Alert” paging system and are available as needed:

1. Respiratory Care Services
2. Anesthesiology
3. Interventional Radiology personnel
4. Critical Care Medicine Service
5. Core Stroke team members

VIII. Standardized interventions for all “Stroke Alert” patients following the diagnosis of an acute stroke:

A. Consult to Neurology and/or Neurosurgery as appropriate for care and recommendation for treatment and therapy.

B. All patients are managed by standardized order sets when available

C. All acute stroke patients must pass a bedside swallow screen prior to receiving any PO medications, fluid or food. All patients who fail their swallow screen should receive a formal evaluation by speech/language/pathology as soon as clinically appropriate.

D. Patients who receive thrombolytic and/or endovascular therapy following an acute stroke will be monitored in an intensive care unit for a minimum of 24 hours.

E. All patients who receive IV thrombolytic therapy will have vital signs (Blood pressure and heart rate) and neurological check monitoring at the following frequency: every 15 minutes for 2 hours; every 30 minutes for 6 hours; every 1 hour for 16 hours

External "Stroke Alert" timeline and designated team member responsibilities

<table>
<tr><th>Process</th><th>0-5</th><th>10</th><th>15</th><th>20</th><th>25</th><th>30</th><th>40</th><th>45</th><th>50</th><th>55</th><th>60</th></tr>
<tr><td>EMS or Triage Notification of "Stroke Alert" patient</td><td>ShandsCair Communication Specialists</td><td colspan="10"></td></tr>
<tr><td>Triage to designated stroke bed(s)</td><td>ED CN</td><td colspan="10"></td></tr>
<tr><td>Obtain Blood glucose, assess/obtain IV access, Vitals signs, neuro assessment, weight and prepare for transport to CT scan</td><td>ED RN</td><td colspan="10"></td></tr>
<tr><td>Initiate ED Stroke "Doc flowsheet"</td><td colspan="2">ED RN</td><td colspan="9"></td></tr>
<tr><td>ED Attending assess patient</td><td colspan="2">ED Attending</td><td colspan="9"></td></tr>
<tr><td>Initiate Stroke order sets</td><td colspan="2">Vascular Neurology team/ ED MD</td><td colspan="9"></td></tr>
<tr><td>Vascular Neurology team assess patient (initial NIHSS)</td><td colspan="3">Vascular Neurology team</td><td colspan="8"></td></tr>
<tr><td>Labs sent and Non Contrast CT complete</td><td colspan="5">ED RN/STAT RN</td><td colspan="6"></td></tr>
<tr><td>CT results interpreted</td><td colspan="8">Vascular Neurology team</td><td colspan="3"></td></tr>
<tr><td>Labs, Chest X-ray, and ECG resulted</td><td colspan="8">ED RN/STAT RN/Radiology Staff</td><td colspan="3"></td></tr>
<tr><td>Notify appropriate nursing unit/nursing coordinator of patient placement need</td><td colspan="8">ED CN</td><td colspan="3"></td></tr>
<tr><td>t-PA decision made (e.g. Labs, LKN,imaging, patient informed consent, t-PA inclusion/exclusion criteria)</td><td colspan="8">Vascular Neurology team/ED MD</td><td colspan="3"></td></tr>
<tr><td>Consult to Neurosurgery if CT positive for hemorrhagic stroke</td><td colspan="8">Vascular Neurology team</td><td colspan="3"></td></tr>
<tr><td>Consult to Endovascular Neurosurgeon if endovascular procedure candidate</td><td colspan="8">Vascular Neurology team</td><td colspan="3"></td></tr>
<tr><td>RN mixes and dual verifies bolus and infusion of t-PA when patient meeds criteria and order received</td><td colspan="11">ED RN</td></tr>
<tr><td>Prior to t-PA administration obtain baseline blood pressure and neuro assessment and document on ED Stroke "Doc flowsheet"</td><td colspan="11">ED RN</td></tr>
<tr><td>Following administration of t-PA blood pressure, HR, full neuro assessment obtained and documented on ED Stroke "Doc flowsheet" every 15 min X 2 hours, every 30min X 6 hours, every 1 hour X 16 hours</td><td colspan="11">ED RN/Interventional Radiology RN (if IR case)</td></tr>
<tr><td>Swallow Screen prior to administration of any PO medication, fluids or food (document on ED Stroke doc flowsheet)</td><td colspan="11">ED RN</td></tr>
<tr><td>Complete full neuro assessment and handoff upon transport of patient to designated bed placement (document in ED Stroke "doc flowsheet")</td><td colspan="11">ED/STAT/ICU/Interventional Radiology RN</td></tr>
</table>

Results less than 45" for treatment decision!!

Goal: Door to Needle Administration less than 60 minutes!

Internal "Stroke Alert" timeline and designated team member responsibilities

Process	0-5	10	15	20	25	30	40	45	50	55	60
Any staff member who recognizes signs and symptoms of stroke initiates "Stroke Alert" by dialing 69 on any hard wired phone and provide the following information: Stroke Alert, Onset of symptoms, and phone number to reach RN.	"Stroke Alert" initiator										
Provided information is sent via text page to designated internal stroke team members	Hospital operator										
Notify patients primary MD of "Stroke Alert" activiation	Primary RN/1st RN Responder										
Designated Internal stroke team respond to "Stroke Alert"	Internal Stroke team members										
Initiate IP Stroke "Doc flowsheet"	STAT RN/ICU RN										
Obtain Blood glucose, assess/obtain IV access, Vitals signs, neuro assessment, weight and prepare for potential transport to CT scan	Primary RN/1st RN Responder										
Primary MD assesses patient	Primary MD										
Initiate Stroke order sets	Vascular Neurology team/Primary MD										
Vascular Neurology team assess patient (initial NIHSS)	Vascular Neurology team										
Labs sent and Non Contrast CT complete	STAT RN/ICU RN/Primary RN										
CT results interpreted and reported to Primary MD	Vascular Neurology team										
Labs, Chest X-ray, and ECG resulted	STAT RN/ICU RN										
t-PA decision made (e.g. Labs, LKN,imaging, patient informed consent, t-PA inclusion/exclusion criteria)	Vascular Neurology team										
Notify appropriate nursing unit/nursing coordinator of patient placement need (e.g. post intervention ICU placement required)	STAT RN/ICU RN										
Consult to Neurosurgery if CT positive for hemorrhagic stroke	Vascular Neurology team										
Consult to Endovascular Neurosurgeon if endovascular procedure candidate	Vascular Neurology team										
Contact satellite pharmacy with patient weight and room number	STAT RN/ICU RN										
Prior to t-PA administration obtain baseline blood pressure and neuro assessment and document on IP Stroke "Doc flowsheet"	STAT RN/ICU RN										
t-PA bolus and infusion dual verified and administered if patient is a candidate and order received	STAT RN/ICU RN										
Following administration of t-PA blood pressure, HR, full neuro assessment obtained and documented on ED Stroke "Doc flowsheet" every 15 min X 2 hours, every 30min X 6 hours, every 1 hour X 16 hours	ED RN/Interventional Radiology RN (if IR case)										
Swallow Screen prior to administration of any PO medication, fluids or food (document on IP Stroke doc flowsheet)	STAT RN/ICU RN										
Complete full neuro assessment and handoff upon transport of patient to designated bed placement (document in IP Stroke "doc flowsheet")	ED/STAT/ICU/Interventional Radiology RN										

Results less than 45" for treatment decision!!

Goal: Door to Needle Administration less than 60 minutes!