WAKEMED RALEIGH EMERGENCY DEPARTMENT

# Acute Stroke Algorithm with Telestroke

Pt identified with acute neurologic change within 24 hrs of Last Known Normal (LKN) or ≥ 24 hrs of LKN with potential basilar artery occlusion

RN Code stroke activated. If EMS > 5 min out, Charge RN to request EMS to radio back with a 3-5 min ETA.
A second internal announcement made in the ED by Charge RN

ED Provider, RN, other staff meet Pt on EMS stretcher or triage wheelchair immediately on arrival to "Launch Pad"

5 MIN MD ED Provider quick assessment
(LKN, PMH, anticoagulated? – last dose, baseline function, neuro exam)

**SYMPTOMS INCLUDE, BUT NOT LIMITED TO:**

- Numbness/weakness in face, arm or leg on one side of the body
- New onset confusion/memory difficulty
- Trouble producing or understanding speech
- Trouble seeing with one or both eyes
- Difficulty walking
- Difficulty swallowing
- Sudden headache, off-balance or dizziness

**STROKE?**

Unlikely → Provider documents downgrade

Possible or Highly Likely

10 MIN MD DECISION ED Provider immediately calls Telestroke 631-250-8545 to discuss brief history and exam.

No → RN RN confirms CT orders with ED Provider and uses **Stroke Order Set & Stroke Narrator.** Obtain only finger stick blood sugar, CBC, coags and chem.

MD After off the phone with Telestroke, ED Provider to enter EMR to review Pt in more detail and IMMEDIATELY report any newly found concerns to Telestroke

20 MIN RN Pt arrival to CT on EMS Stretcher with RN.

RN As soon as Pt is done with CT, RN enters weight into chart.

RN **RN transports Pt to Telestroke Evaluation "Plase"(inner CT hallway)**

RN RN to call Telestroke at 631-250-8545 once Pt is in front of cart and ready for Telestroke evaluation

RN Telestroke lets RN know if tele-cart evaluation is needed

Yes, needed → RN RN assists Telestroke with history and exam

No, not needed → RN Transport Pt back to ED room and discuss further care with ED Provider

35 MIN Radiology has results and calls ED Provider. Telestroke reviews imaging independently.

CT
- Hemorrhage → MD Provider calls Neurosurgery
- No Hemorrhage → DECISION Telestroke reviews history/exam, confirms eligibility for Tenecteplase
  - Not Eligible
  - Eligible → Telestroke makes official recommendation for Tenecteplase → RN to obtain Tenecteplase and inform ED Provider of recommendation to secure a verbal order for Tenecteplase order panel → RN ED RN places VERBAL ORDER under ED Provider's name. ED RN or Rounder reconstitutes Tenecteplase and withdraws dose → DUAL RN SIGN OFF: Confirm BP parameters met → 45 MIN ED RN or Rounder administer Tenecteplase in CT Holding

CTA / CTP Results
- No large vessel occlusion
- Large vessel occlusion meeting criteria for potential thrombectomy → 40 MIN Telestroke calls NeuroIR to discuss potential intervention → MD Telestroke contacts ED Provider with intervention decision. ED Provider places case request order and contacts Intensivist. → 60 MIN RN When Cath Lab is ready, transport Pt to Cath Lab and give report

RN RN to transport Pt back to ED room. RN to confirm EKG, Dysphagia Swallow Screen and remaining labs are done

MD ED Provider to sign verbal orders placed by RN and initiate admission

For additional information, contact the stroke coordinator or stroke medical director.

WakeMed Stroke Program

## Imaging Algorithm

Confirm correct Stroke Order Set & head imaging orders are in place

| LKN < 6 hours | | LKN ≥ 6 hours | |
|---|---|---|---|
| NIHSS < 6 and VAN - | NIHSS ≥ 6 or VAN + | NIHSS < 6 and VAN - | NIHSS ≥ 6 or VAN + |
| CT | CT & CTA | CT | CT, CTA & CTP |

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## ED PROVIDER

- If EMS is < 5mins, immediately report to "Launch Pad" location. If EMS is > 5 mins, a second internal announcement will be made in the ED by Charge RN.
- Confirm imaging orders with Primary RN before Pt is transported to imaging.
- Co-management of Pt with Telestroke
- **Directly call Telestroke (631-250-8545) while Pt is being transported to imaging and communicate the following key details:**
  **1)** Patient Identifiers - Name, DOB **2)** LKN (Last Known Normal) date/time (not when found with symptoms) **3)** Anticoagulated? Last dose if known **4)** Pertinent Medical History: HTN, A-fib, HLD, DM, Cancer, CVA, CAD **5)** Baseline functional status if known **6)** Neuro Exam (NIHSS not needed but exam description essential)
- Reminder that Tenecteplase is not to be reconstituted until officially recommended by Telestroke.
- After Telestroke call, continue to review Pt's chart. ED Provider to call Telestroke and/or go to Telestroke evaluation area as needed for any **major new concerns**.
- Pt will remain near CT after imaging to have Telestroke evaluation and Tenecteplase administration.
- Radiology will continue to call ED Provider with results of CT and CTA/CTP if abnormal.
- If Telestroke recommends Tenecteplase, Primary RN will inform ED Provider of plans AND ED Provider will need to **sign verbal orders placed by RN (under ED Provider's name)** for the med.
- Telestroke will directly call NeuroIR for **large vessel occlusions** meeting potential thrombectomy criteria.
- If accepted, ED Provider is notified to place the Cath Lab case request order.
- No change in process for higher level of care transfers, refer to ED Inter-Facility Transfer Algorithm for Acute Stroke Patients.

## TELESTROKE

- Available 24/7 to provide recommendations for care on acute stroke Pts
- Directly and clearly let the ED Provider know in the 1st phone call initial impressions, if tele-cart use is desired, and if Pt may be a Tenecteplase candidate.
- Expect a 2nd call from the Primary RN after imaging, once Pt is ready for tele-cart evaluation. Let Primary RN know if tele-cart is not needed.
- Facilitate evaluation of Pt via telecart promptly.
- **Confirm history, exam, and eligibility criteria for Tenecteplase** independently. Final inclusion/exclusion criteria ultimately the responsibility of Telestroke
- Inform RN as soon as they should reconstitute Tenecteplase. RN will be informing ED Provider of plan to use Tenecteplase with verbal order to be placed under ED Provider's name.
- If Tenecteplase is given, serve as guide during Dual Sign Off prior to Tenecteplase being given.
- Directly call NeuroIR for patients meeting selection criteria for potential thrombectomy.
- Call ED provider to close loop on NeuroIR's thrombectomy decision.
- If patient is not a candidate for thrombectomy, document the NeuroIR MD's reason for no thrombectomy.

## SECRETARY/ TECH

- Meet Pt with Primary RN in "Launch Pad" for initial evaluation.
- Follow Primary RN and Pt to **imaging with the ED bed and monitor**.
- Ensure cart is ready and in appropriate location for post CT Telestroke evaluation.
- Pt will remain near CT after imaging to have Telestroke evaluation.
- After code stroke is completed, ensure "Launch Pad" and "Telestroke evaluation area" are **replenished** with a bed and supplies (pumps, bed, Zoll, transport monitor, etc.) to **ensure space is ready for next Pt.**

## PRIMARY RN

- If EMS is < 5mins, immediately report to "Launch Pad" location. If EMS is > 5mins, a second internal announcement will be made in the ED by Charge RN within a few minutes of Pt arrival.
- Open ED code stroke Order Set & Stroke Narrator in EPIC and initiate charting in "Launch Pad." Document time of patient's actual arrival and ED Provider arrival time.
- **Confirm viable IV (AC preferred) and send labs. Finger stick blood sugar lab required. Send CBC, Chem, Coags, troponin and type and screen in "Launch Pad" OR after CT if needed (don't delay CT).**
- Confirm imaging orders with ED Provider before Pt is transported to imaging.
- Notify CT prior to transport.
- Immediately after CT is done, transport Pt to Telestroke evaluation "plase" (inner CT hallway). Be sure to enter Pt weight into chart.
- Pt will remain near CT after imaging to have Telestroke evaluation and Tenecteplase administration.
- As soon as imaging is done and Pt is in front of the telecart and ready for evaluation, **directly call Telestroke (631-250-8545)** to let them know to sign onto the cart. You will be informed if Telestroke evaluation is or is not needed. If not needed, take Pt back to ED room and talk to the ED Provider for further care plans.
- If Tenecteplase is recommended by Telestroke, inform ED Provider to obtain a verbal order. Place verbal order for Tenecteplase under ED Provider's name.
- Obtain, reconstitute and administer medication as dual sign off with second RN and Telestroke.
- Telestroke contacts NeuroIR for thrombectomy decision. Clarify final decision with Telestroke or ED Provider as needed.
- If patient accepted, prepare for emergent transport to Cath Lab.

## ROUNDING RN/ TASKING RN

- Assist Primary RN with responsibilities for these complex Pts.
- Pt will remain near CT after imaging to have Telestroke evaluation and Tenecteplase administration.
- If Pt is a potential Tenecteplase candidate, be available for second sign off. Verbal order will need to be placed under ED Provider's name.
- **Return cart and plug it in** at designated spot after Tenecteplase administration and Telestroke signs off.
- Telestroke contacts NeuroIR for thrombectomy decision. Clarify final decision with Telestroke or ED provider as needed.
- If patient accepted, prepare for emergent transport to Cath Lab.

## LAB

- No change in process

## PHARMACY

- Pt will remain near CT after imaging to have Telestroke evaluation and Tenecteplase administration.
- Be available in inner CT hallway for acute care needs.
- RN will place verbal order, reconstitute and administer Tenecteplase. Be available to assist or answer any questions as able and be prepared to verify order

## IMAGING

- ED Provider and Primary RN responsible for correct CT imaging orders. **Carry out orders as written**.
- Telestroke evaluation and Tenecteplase administration will occur in **inner CT hallway**.
- Radiology will **continue to call ED Provider with imaging result**s.
- Telestroke will also have access to review images once complete.
- Telestroke will make direct call to NeuroIR for potential thrombectomy candidates.

## CATH LAB

- ED Provider places an order for a case request.
- In Raleigh, if the Pt is an embolectomy candidate.

## NEURO IR

- If suspected large vessel occlusion, will continue to receive a direct CALL from Telestroke for patients meeting selection criteria for potential thrombectomy.
- NeuroIR attending to independently review images.
- NeuroIR attending will decide if Pt is an embolectomy candidate or not and call Telestroke on their cell phone to relay decision.
- NeuroIR attending to contact appropriate Cath Lab and provide location information, supplies needed and location of clot.