

INR Activation

Effective Date: 5/4/17 (replaces 11/3/14 version)

PURPOSE

To optimize time to revascularization in patients presenting with acute stroke.

PROCEDURE:

1. ED physician, inpatient physician, or outside physician contacts Stroke Attending for patient presenting with an acute ischemic stroke (Stroke Team Pager – 12600).
2. If Stroke Attending determines that patient is a candidate for endovascular/interventional stroke therapy, Stroke Attending contacts Transfer Center – 503-494-7000.
3. Transfer Center pages INR Attending, while holding on the line.
4. Stroke Attending and INR Attending discuss patient. If patient is deemed appropriate, INR Attending asks Transfer Center for “INR ACTIVATION” with one of the following destinations:
 - a. Angio
 - b. CT, then angio (or MRI, then angio)
5. The INR Activation page and subsequent updates are to be paged out to the INR Activation group and the Stroke Group. The following information to be included in the page:
 - a. “INR ACTIVATION, Pt name, MRN, location, intubated (if applicable), ETA, destination, mode transport (ground, Emergency Air Medical Transport), and call-back number”
 - b. The INR Activation Group includes:
 - i. INR Attending
 - ii. INR NP
 - iii. INR fellow
 - iv. INR resident
 - v. Angio Tech on call
 - vi. Angio Nurse on call
 - vii. Stroke Response Nurse
 - viii. PACU charge Nurse
 - ix. Respiratory Therapist Charge
 - x. Anesthesia on call
 - xi. Anesthesia Tech
 - xii. Bed Control / AOD
 - xiii. NSICU Charge RN
 - xiv. NSICU Attending & NSICU Team
 - xv. CT tech
 - xvi. MRI Shift Coordinator
 - c. The Stroke Group Includes

- i. Stroke Attending
 - ii. Stroke Fellow
 - iii. OSC Research Coordinator on-call
6. When the Transfer Center submits their request to Bed Control and Reservations, they will complete the Special Needs field. They will select "Other" and type in either:
 - a. Start in CT or MRI
 - b. Start in IR Angio
7. CT and MRI tech do not need to check in (they are always in-house), but will call in if CT perfusion or MRI perfusion scanner is down.
8. Transfer Center to page the INR Activation Group and the Stroke Group with all any ETA and/or patient status changes (i.e., patient now intubated). If information available, the Transfer Center will provide 3 ETA's, one estimate with first INR Activation page, a 2nd if they get an EMS patient pickup call from the referring, and a 3rd if they get a '10 minutes out' call from EMS. Based upon initial ETA, the Angio Nurse will call the transfer center for an updated ETA.
9. Anesthesia tech will deliver the anesthesia machine and supply cart to Angio Suite 2 (door code 777) and set up room as described in the Anesthesia Response to INR Activations guideline.
10. NSICU to send bed to CT/MRI holding area for patient once scans are complete.
11. The Stroke Response nurse will meet patient at helipad, Ambulance Bays, or floor, and accompany patient to CT, MRI and/or to the holding area adjacent to Angio Suite 2, until the INR technologist has the designated suite prepared. Stroke Team will meet patient at destination (CT, MRI or angio).
12. When the patient arrives in CT or MRI, the CT or MRI technologist will call 4-8927, and ask for the stroke patient to be admitted; be prepared to provide two unique patient identifiers (i.e., patient name & date of birth). Admitting will admit the patient to a virtual radiology bed (appears as **11B** in Epic). The patient will still be pending to 7C Neuroscience ICU expected list so they can pull the patient in when they arrive on their floor. The angio nurse or NSICU nurse will pull the patient to their census from this bed when the patient arrives to their area.
 - a. If patient is intubated or is requiring infusions of vasoactive medications a NSICU provider will meet the patient in CT to assess the patient, write orders, and manage medications as needed.
13. Follow CT (or MRI) policy for any renal function adjustments, unless Treatment Team overrides.
14. CT or MRI technologist to send all acute images to RAPID-SWIFT.
15. As soon as it is determined that the patient will go to Angio, the Stroke Team physician will call the Transfer Center and ask for an "Anesthesia to Angio for INR" page to go out via INR Activation group page. The Anesthesiologist will meet the patient, and rest of team in Angio holding area or designated Angio Suite within 30 minutes of this page. The Stroke Response nurse will provide a verbal handoff to the Anesthesia provider of information on the INR Activation Report Sheet.
16. After initial evaluation by Stroke Attending, decision about intubation will be made. Anesthesia to monitor patient throughout procedure, whether intubated or not.
17. The Angio Tech and Nurse will set up room, per standard, prep patient, per standard of care with, assistance of Stroke Response nurse when needed.
18. Bed assignment in the NSICU is made by Bedflow Manager or AOD.
19. If INR ACTIVATION occurs during usual working hours, it is the responsibility of the INR Attending to notify the Transfer Center. All INR ACTIVATION pages continue to be sent by Transfer Center.
20. The INR Attending will notify the Angio Tech and Nurse to have angio suite available for patient

21. If it is determined the patient will not go to Angio, the Stroke Team physician will ask the Transfer Center to send out an INR Standdown group page. The Stroke Response nurse will communicate to NSICU Charge Nurse via Vocera that they are on the way to NSICU.
22. The INR call schedule and forwarding system will be maintained by 11A IR office staff. Any last minute on call changes must be updated through the paging operator by whomever is making the changes.

Stroke/INR Nurse Roles and Responsibilities for INR Activation

POLICY

The Stroke Response nurse will respond to INR Activation pages to assist with the transport, prep, and management of patients presenting to or within OHSU with acute stroke (unless patient is already admitted to NSICU, these patients to be transported by NSICU RN or Stroke Response nurse).

PROCEDURE:

1. Out of hospital INR Activation patient transported to OHSU by Emergency Air Medical Transport
 - a. The INR Attending will activate the INR Activation Group via the Transfer Center.
 - b. The Transfer Center will page the INR Activation group for patient presenting from out of hospital with acute stroke being transported to OHSU.
 - c. The Stroke Response nurse will contact the Transfer Center at 4-7000 to connect to sending facility to receive report.
 - d. The Stroke Response nurse will fax report to Angio, 4-7664 and make a photocopy for the NSICU Charge nurse.
 - e. The Transfer Center will continue to page the INR Activation group with updates on patient disposition and ETA as updated by Emergency Air Medical Transport personnel.
 - f. The Stroke Response nurse and Respiratory Therapist (as needed) will report to the Emergency Department (ED) 8th floor entrance 10 minutes prior to ETA of patient to be escorted to the helipad with ED and Public Safety personnel.
 - g. In the event of a patient experiencing cardiac arrest or airway code and this information is known prior to patient arrival, the patient will be transported directly to the Emergency Department for stabilization prior to transport to CT, MRI and/or angiography lab.
 - i. In this situation the SRN will update the ED for the need to stabilize patient in ED.
 - ii. The SRN will inform the NSICU team of need to divert patient to ED.
 - h. The Stroke Response nurse, and Emergency Air Medical Transport personnel will transport the patient directly to CT or MRI for Rapid Swift Imaging Protocol prior to transport Angio, when indicated.
 - i. After CT or MRI is complete, the Stroke Response nurse and Stroke Team physician will transport the patient directly to the holding area adjacent to Angio Control Room 2 on monitor. Patient to be moved into an Angio Suite when INR technologist indicates the room is ready. If patient not going to Angio, the Stroke Response nurse to notify NSICU Charge nurse via Vocera that they are on the way. A FULL INR ACTIVATION page must go out stating "patient to angio" or "stand down".
 - j. On arrival to angiography, the Stroke Response nurse will assist with the following:
 - i. transferring the patient to the angio table (complete below when asked by Angio RN).
 - ii. placing the patient on the angio monitoring system
 - iii. placing Foley catheter if not already in place
 - iv. ensuring at least 2 large bore IV's are present
 - v. assist with intubation if necessary
 - vi. transferring any continuous infusions to Alaris IV pumps
 - k. On arrival to the angio suite, the Respiratory Therapist (when indicated) will assist with:
 - i. Attaching patient to transport ventilator if advanced airway is in place
 - ii. Assist with intubation if necessary

- I. The Stroke Response nurse will give a hand off of the patient to the angio RN & Anesthesia provider.
2. Out of Hospital Angio Stroke patient transported to OHSU by Ground Transportation
 - a. The INR Attending will activate the INR Activation Group via the Transfer Center.
 - b. The Transfer Center will page the INR Activation group for patient presenting from out of hospital with acute stroke being transported to OHSU.
 - c. The Stroke Response nurse will contact the Transfer Center at 4-7000 to connect to sending facility to receive report.
 - d. The Stroke Response nurse will fax report to Angio, 4-7664 and make a photocopy for the NSICU Charge nurse.
 - e. The Transfer Center will continue to page the INR Activation group with updates on patient disposition and ETA as updated by Lifeflight personnel.
 - f. The Stroke Response nurse and Respiratory Therapist (as needed) will report to the Emergency Department (ED) 8th floor entrance 10 minutes prior to ETA of patient.
 - g. In the event of a patient experiencing cardiac arrest or airway code and this information is known prior to patient arrival, the patient will be transported directly to the Emergency Department for stabilization prior to transport to CT, MRI and/or angiography lab.
 - h. In this situation the SRN will update the ED for the need to stabilize patient in ED.
 - i. The SRN will inform the NSICU team of need to divert patient to ED.
 - i. The Stroke Response nurse will transport the patient directly to CT or MRI for Rapid Swift Imaging Protocol prior to transport Angio, when indicated.
 - j. After CT or MRI is complete, the Stroke Response nurse and Stroke Team physician will transport the patient directly to the holding area adjacent to Angio Control Room 2 on monitor. Patient to be moved into an Angio Suite when INR technologist indicates the room is ready. If patient not going to Angio, the Stroke Response nurse to notify NSICU Charge nurse via Vocera that they are on the way. A FULL INR ACTIVATION page must go out stating "patient to angio" or "stand down".
 - k. On arrival to angiography, the Stroke Response nurse will assist with the following:
 - i. transferring the patient to the angio table (complete below when asked by Angio RN).
 - ii. placing the patient on the angio monitoring system
 - iii. placing Foley catheter if not already in place
 - iv. ensuring at least 2 large bore IV's are present
 - v. assist with intubation if necessary
 - vi. transferring any continuous infusions to Alaris IV pumps
 - l. On arrival to the angio suite, the Respiratory Therapist (when indicated) will assist with:
 - i. Attaching patient to transport ventilator if advanced airway is in place
 - ii. Assist with intubation if necessary
 - m. The Stroke Response nurse will give a hand off of the patient to the angio RN & Anesthesia provider.
3. Angio Stroke patient presenting to the Emergency Department or "In Hospital" (except for NSICU, who will transport their own patients)
 - a. The INR Attending will activate the INR Activation Group via the Transfer Center.
 - b. The Transfer Center will page the INR Activation group for patient who is in the ED or In Hospital.
 - c. The Stroke Response nurse and Respiratory Therapist (as needed) will report to the unit where the patient is currently located.
 - d. The Stroke Response nurse will get report from the primary nurse caring for the patient, if they have time they will fax report to Angio, 4-7664 and make a photocopy for the NSICU Charge nurse.
 - e. The Transfer Center will continue to page the INR Activation group with updates on patient disposition and ETA.
 - f. In the event the patient is experiencing cardiac arrest or airway code follow in house procedure for Code Blue/Airway code.

- g. The Stroke Response nurse will transport the patient directly to CT or MRI for Rapid Swift Imaging Protocol prior to transport Angio, when indicated.
- h. After CT or MRI is complete, the Stroke Response nurse and Stroke Team physician will transport the patient directly to the holding area adjacent to Angio Control Room 2 on monitor. Patient to be moved into an Angio Suite when INR technologist indicates the room is ready. If patient not going to Angio, the Stroke Response nurse to notify NSICU Charge nurse via Vocera that they are on the way. A FULL INR ACTIVATION page must go out stating "patient to angio" or "stand down".
- i. On arrival to angiography, the Stroke Response nurse will assist with the following:
 - i. transferring the patient to the angio table (complete below when asked by Angio RN)
 - ii. placing the patient on the angio monitoring system
 - iii. placing Foley catheter if not already in place
 - iv. ensuring at least 2 large bore IV's are present
 - v. assist with intubation if necessary
 - vi. transferring any continuous infusions to Alaris IV pumps
- j. On arrival to the angio suite, the Respiratory Therapist (when indicated) will assist with:
 - i. Attaching patient to transport ventilator if advanced airway is in place
 - ii. Assist with intubation if necessary
 - iii. The Stroke Response nurse will give a hand off of the patient to the angio RN & Anesthesia provider.

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- Updates: Noah Jacobson MN, RN, CCRN, Stroke Program Coordinator
- Approved by:
- Revised May 2017: Approved by Stroke Advisory Committee
- Revised July & November 2014: Stroke/INR response nurse subcommittee, and approved by Stroke Advisory Committee.
- Revised August 2013: Stroke Team, INR Team, Rapid Response Team, Anesthesia Services, Emergency Communication Center. Approved by: Stroke Advisory Group, 8/21/13.
- Approved by: Stroke Advisory Group, 12/19/12
- Reviewed December 2012: Stroke Team, INR Team, Rapid Response Team, NSICU Charge Nurses, Imaging Supervisors, and Anesthesia Services.
- Reviewed April 2012: Stroke Team, INR Team, Rapid Response Team, Stroke Advisory Group
- Approved by: Stroke Team, INR Team, Rapid Response Team, Stroke Advisory Group
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- Revised April 2010 by: Wayne Clark, MD, David Lee, MD, Judi Workman, RN, MS, Karen Ellmers, RN, MS, CCNS, Cyndi Perez, RN, MS, CNS, Henriette Blanchard, RN, William Greenebaum, Sherrie Forsloff, Randall Ward, RN, Susan Yoder, RN, Shannon Scharringhausen, RN.
- Rapid Response Team & Stroke Team February, 2010