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Reach for the Stars…

Building a Dream Team of Physicians

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Optimizing in-Hospital Stroke Care

- **Buy-in from neurologists, emergency medicine physicians, hospitalists and radiologists**
  - Team approach
  - Evidence based practice (BP, Hyperglycemia, etc.)
  - Commitment to adhere to DOH time targets for acute stroke (<6 hours)
  - Commitment to implement GWTG program

- **Understanding the problems preventing effective implementation of in-hospital emergency stroke care**
  - Despite the fact that stroke is a major cause of death and leading cause of disability in the United States, less than 5-7% of acute stroke patients receive IV t-PA
- **Reducing pre-hospital delays that affect in-hospital stroke care**

Barriers to Emergency Stroke Care/Thrombolysis
Suggested articles for review

- **Stroke thrombolysis: Barriers to implementation**. Carter-Jones et al. *Int Emerg Nurs*. 2011 Jan;19(1):53-7

- **Comparative evaluation of stroke triage algorithms for emergency medical dispatchers (MeDS): prospective cohort study protocol**. Govindarajan et al. *BMC Neuro*l. 2011 Jan 27;11:14

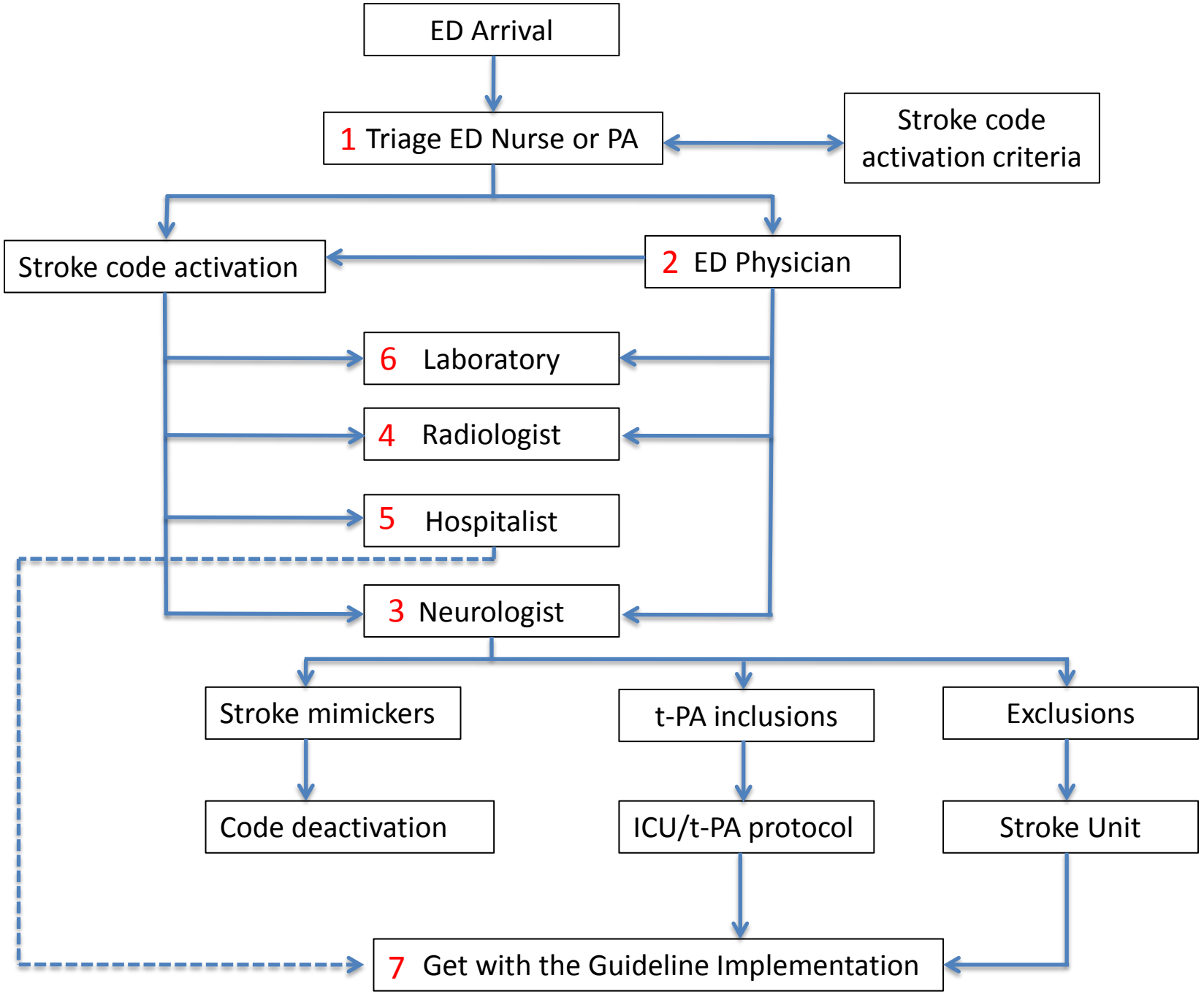
- **A computerized in-hospital alert system for thrombolysis in acute stroke** Heo et al. *Stroke*. 2010 Sep;41(9):1978-83.

- **A review of barriers to thrombolytic therapy: implications for nursing care in the emergency department**. Johnson et al. *J Neurosci Nurs*. 2010 Apr;42(2):88-94.

- **A comprehensive review of prehospital and in-hospital delay times in acute stroke care**. Evenson et al. *Int J Stroke*. 2009 Jun;4(3):187-99.

Challenges with Effective Implementation of in-Hospital Emergency Stroke Care

- 1) Some physicians remain skeptical about the benefits and risks of thrombolytic treatment
- 2) Some emergency medicine physicians and hospitalists feel as though "they are in the hot seat" concerning the issue of "whether to treat or not treat acute stroke patients with a thrombolytic agent" due to lack of formal neurologic training in:
  - Recognition of the subtleties of acute strokes
  - Proper patient selection for thrombolytic therapy
  - Safety issues with thrombolytic therapy
  - NIHSS assessment
- 3) Lack of adequate resources for proper triage of stroke patients, especially in an overcrowded ED
- 4) Inadequate support from neurology and neuroradiology services
- 5) Inefficient team approach for in-hospital emergency stroke care
- 6) Delays in obtaining neuro-imaging
- 7) Pre-hospital delays: contacting primary care physicians, mode of arrival to the hospital, lack of knowledge regarding stroke


ED Arrival
1 Triage ED Nurse or PA
Stroke code activation criteria
Stroke code activation
2 ED Physician
6 Laboratory
4 Radiologist
5 Hospitalist
3 Neurologist
Stroke mimickers
t-PA inclusions
Exclusions
Code deactivation
ICU/t-PA protocol
Stroke Unit
7 Get with the Guideline Implementation

Steps to Improve in-Hospital Emergency Stroke Care

- Buy-in from all stroke team members (neurologists, emergency medicine physicians, hospitalists and radiologists)
- Establishing an organized team approach: “dream team”
- Establishing stoke protocols and effective stroke code activation program
- Implementing effective stroke surveillance systems to better understand and correct the inefficient processes of acute stroke care and GWTG program
- Providing ongoing stroke education for all stroke team members (EMS personnel, medical house staff, nursing staff, hospitalists, emergency physicians, intensivists, and neurologists)
- Reducing pre-hospital delays that affect in-hospital stroke care

  . Better EMS-ED-Neurology interactions