Critical Elements In Stroke Interventions And Who Should Be In The Game

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Critical Elements

- This is a team sport and will involve community-wide systems to deliver care
- Different communities may have different solutions

Not like Acute Coronary Syndromes

- Like PCI in terms of the need for quick revascularization
- Unlike PCI –
  - Clinical diagnosis
    - Recognition/diagnosis of stroke by 1st responders and ED is harder
    - Neurology or teleneurology is important
    - Imaging triage – critical and complicated
  - Need to be able to handle the acute hemorrhage and aneurysms once diagnosed

Hemorrhagic and Ischemic stroke

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- Unlike PCI –
  - Clinical diagnosis
    - Recognition/diagnosis of stroke by 1st responders and ED is harder
    - Neurology or teleneurology is important
    - Imaging triage – critical and complicated
  - Need to be able to handle the acute hemorrhage and aneurysms once diagnosed
JC Comprehensive Stroke Centers

- Key capabilities: 24/7
  - Neurosurgery
  - 20 SAH/15 treated aneurysms annually
  - Dedicated NNICU beds
  - NeuroEndovascular
  - NeuroImaging
- Commitments
  - Multidisciplinary peer review/QI for ischemic and hemorrhagic stroke care
  - Meet the 8 PSC stroke core measures and submit CSC pilot metrics

Who Should be Doing These Cases?

Fellowship Trained Neuro Interventionists

Who Should be Doing These Cases?

Why?

- Patients best served by well-trained, experienced physicians and high-volume institutions
- How to ensure quality? Credentialling based on:
  - Documented training
  - Documented experience
  - Board certification
  - Outcomes

Credentialling for Coronary Intervention

- 24 months of clinical training
  - Medical management
  - Cardiac pathophysiology
- 8 months/300 Diagnostic Coronary Angiograms
- 20 months/250 supervised PCI

Endovascular Surgical Neuroradiology

- One year clinical fellowship
  - After Neurosurgery residency that includes a year of pre-requisite neuroangio training
  - After Neurology residency and vascular neurology or neurocritical care fellowships and pre-requisite neuroangio training
  - After Radiology residency and Neuroradiology Fellowships and six months of clinical neuro
- ACGME or CAST accredited
- Board Certification - CAST

Meyers 2009

Veith Symposium 2015
The number of patients is not enormous:
- 795,000 stroke per year in the US (935k MI, 30-50% STEMI)
- Exclude hemorrhage (13%), presentation within 6 hours - 100,000 to 200,000 per year
- Exclude by vascular or brain imaging – 25,000 to 125,000 per year
- Over 300 comprehensive stroke centers (CSC)
  - 24/7 neuroendovascular coverage
  - Over 800 trained neuro-endovascular physicians in 2012
- 400 acute stroke interventions per CSC per year

There is not an Acute Manpower Need

Conclusions
- This is a team sport and will involve community-wide systems to deliver care
- Different communities and institutions will have different solutions