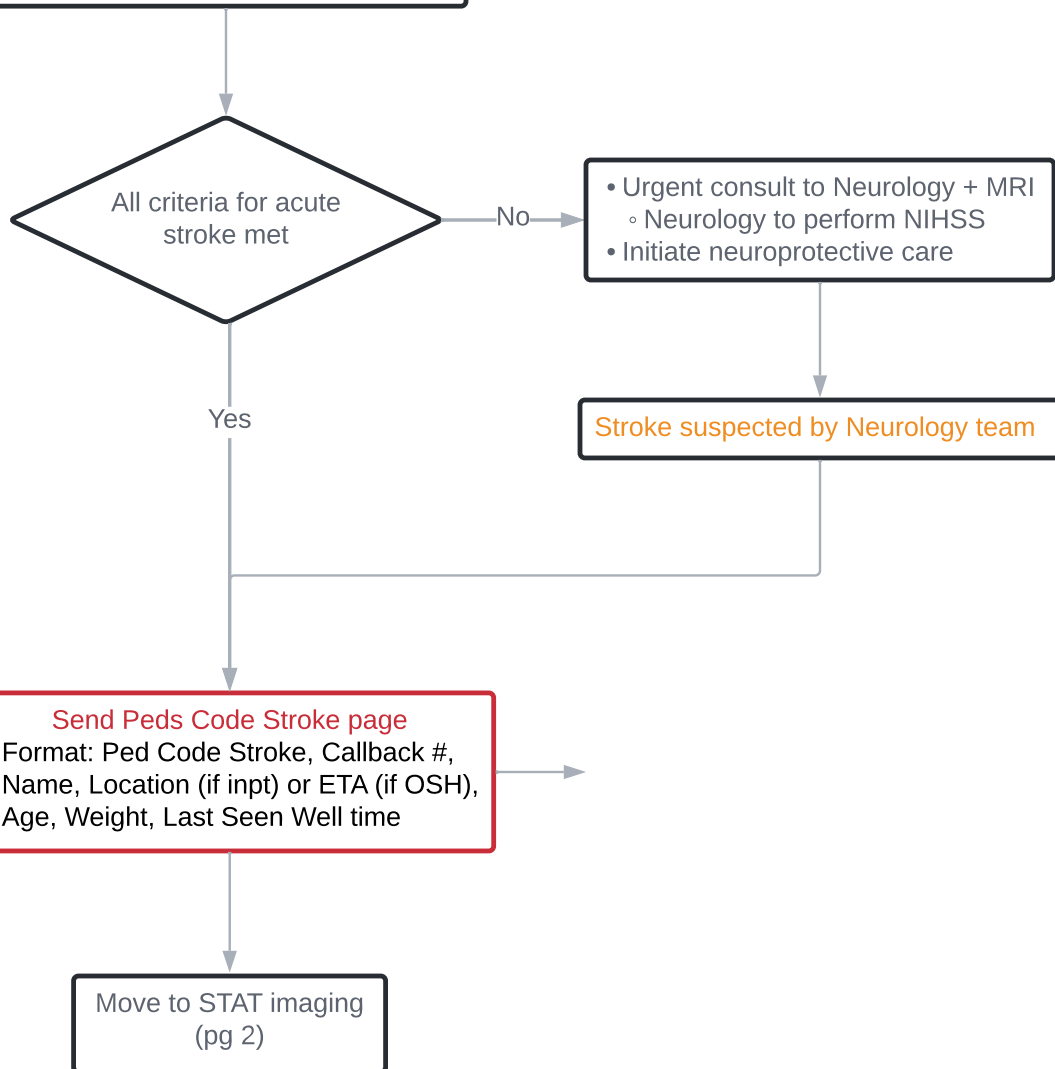


### Acute stroke criteria

1. Focal neurologic deficit
  - Unilateral weakness/sensory change
  - Vision loss/double vision
  - Speech difficulty
  - Dizziness/trouble walking
  - Sudden severe HA w/accompanying symptoms
2. Acute onset
3. Present for <24h

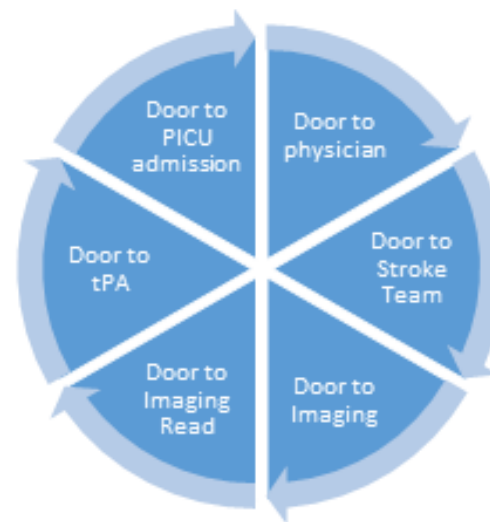


### Neuroprotective Care

- NPO, establish access ( $\geq 2$  large bore IVs)
- STAT Labs: CBC w/diff, DIC profile, T&S + ABO/Rh, Chem10
- **HOB flat - for ischemic strokes**
- Normonatremia
- Normotension: SBP 50th-90th %ile for age
  - Tx hypotension w/NS +/- pressors
  - Tx significant HTN to lower by ~25% over 24 hrs (faster if tPa candidate)
- Normovolemia: isotonic fluid (i.e. NS)
- Normoglycemia
  - Age  $\geq 2y$ : No glucose in fluids unless hypoglycemic
  - Age  $< 2y$ : Glucose containing fluids (i.e. D5NS)
- Normal O<sub>2</sub>, CO<sub>2</sub>, and pH
- Normothermia: consider scheduled acetaminophen
- Seizure control: AED ASAP with suspected seizure activity
- Consider placement of arterial line

**Note:** Patients  $\geq 12$  yo are treated like adults with tPA.

Patients  $< 12$  yo, decision to treat with tPA is made on case-by-case basis as a joint decision between the stroke team and child neuro.



STROKE EVAL AND TREAT GOAL = 60 mins

**IV tPA contraindications:**

**HISTORY**

- > 4.5h from last seen well
- Time of symptom onset unknown
- Stroke, major head trauma, or intracranial surgery in last 3 months
- Hx of prior intracranial hemorrhage, known AVM, or aneurysm
- Major surgery or parenchymal biopsy within 10 days
- GI or GU bleeding within 21 days
- Current neoplasm/malignancy
- Completed cancer treatment within 1 month
- Underlying significant bleeding disorder
  - Mild platelet dysfxn, mild von Willebrand disease, or other mild bleeding disorders NOT excluded
- Previously diagnosed CNS primary angiitis of the central nervous system or secondary arteritis

**PATIENT FACTORS**

- Presentation c/w acute MI or post-MI
- Pericarditis that requires evaluation by Cardiology before treatment
- Arterial puncture at noncompressible site or lumbar puncture within 7 days
  - History of cardiac cath via compressible artery NOT excluded.

**ETIOLOGY**

Stroke due to SBE, meningitis, embolism (bone marrow, air or fat), or moyamoya disease.

**EXAM**

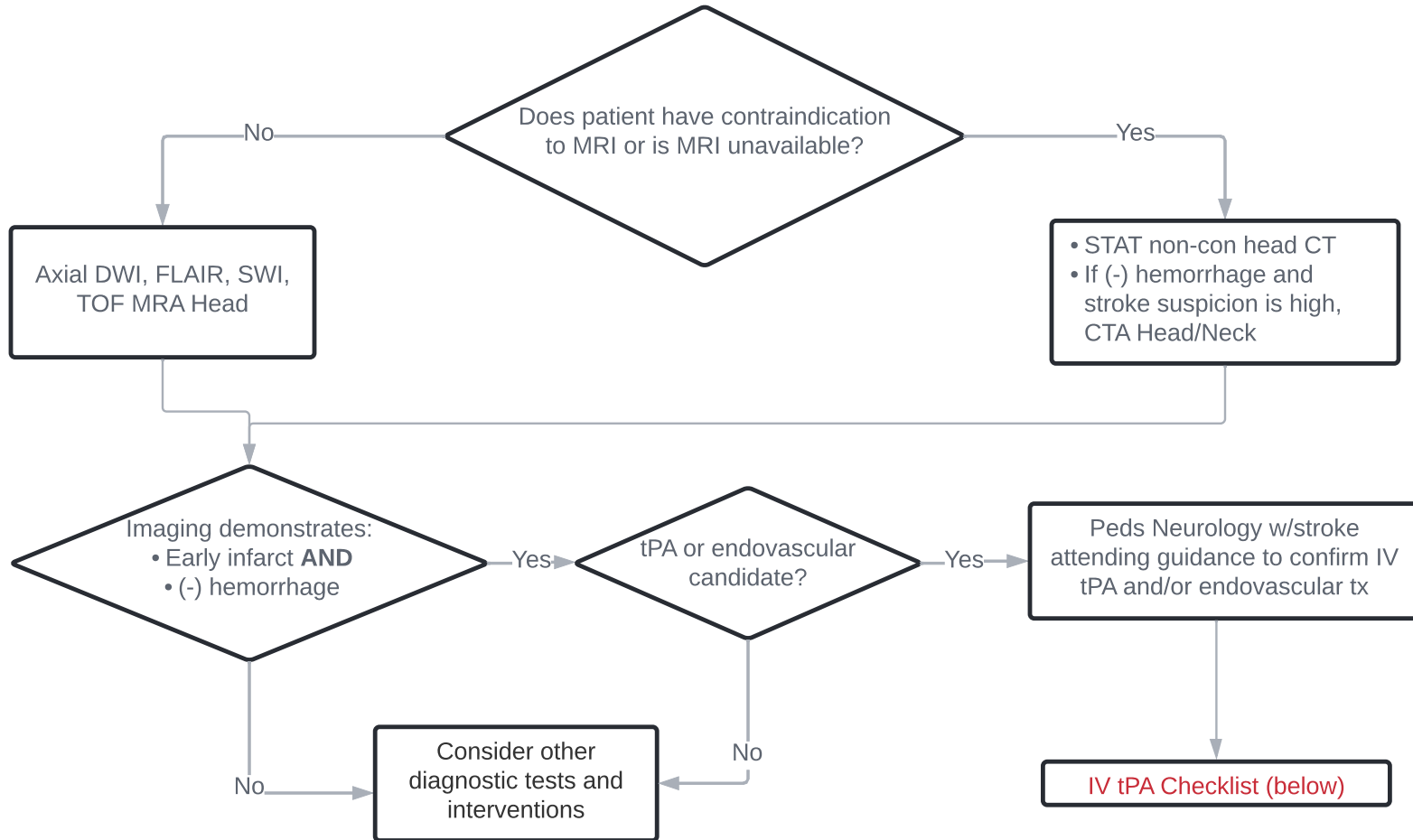
- SBP > 20% above the 95th percentile for age while sitting or supine must be treated first
- nondisabling deficit at start of tPA infusion

**IMAGING**

- Sx suggest SAH even if imaging normal
- CT with hypodensity/sulcal effacement >33% of MCA territory or ASPECTS ≤7
- Intracranial cervicocephalic arterial dissection

**LAB DATA**

- Glucose <50 mg/dL or >400 mg/dL
- Bleeding diathesis:
  - Platelets <100,000
  - PT >15 sec (INR>1.4)
  - Elevated PTT > upper limits of normal



**IV tPA Checklist**

- PICU notifies Pharmacy to prepare STAT tPA infusion
  - Total: 0.9 mg/kg iv
  - Bolus: 10% total dose over 5 mins
  - Infusion: Remaining dose over 1 hr
- During infusion, maintain SBP above 50th percentile for age and below 20% above 95th percentile
  - If > 20% above 95th percentile at any time, TREAT HYPERTENSION
    - Labetalol 0.2 mg/kg IV push over 2-3 mins, repeat q15mins PRN, max dose 40mg
    - hydralazine 0.2 mg/kg IV, max dose 20mg
    - Nicardipine gtt, 0.5-10 mcg/kg/min
  - Note: Use caution in asthmatics or those with underlying cardiac disease

SBP Parameters				
Age	50%	95%	>15%	>20%
1-4 years	90	111	128	133
5 years	94	113	130	136
6-10	96	121	139	145
11-17	105	131	151	157
> 17	-Prior to administration of tPA treat any SBP > 185 -During and after administration of tPa, treat any SBP > 180			