BACKGROUND

- Endovascular thrombectomy (ET) improves outcomes for patients with acute ischemic stroke (AIS) when given in addition to standard of care (i.e. IV tPA), up to 24 hours after symptom onset.
- Shorter door-to-puncture (DTP) times for ET are associated with improved patient outcomes.
- JCAHO guidelines recommend a target of 90 minutes for DTP, with an ultimate goal of 60 minutes.

OBJECTIVES

- Optimize the management of patients presenting to TJUH with AIS who are candidates for ET.
- Enable continued process improvement through improved data collection methods and identification of new process metrics.

METHODS

- A multi-disciplinary committee was created and monthly meetings were held starting December 2017.
- Based off preliminary data—the TJUH ED was targeted for intervention, given comparatively high DTP times to direct transfers to Jefferson Hospital for Neuroscience (JHN).
- A preliminary process revision was proposed in January 2018 and new data points and process metrics were introduced to track for improvement.
- The new ED AIS management protocol (below) was formally implemented May 1st, 2018. Key improvement interventions and timeline are also listed.

RESULTS

We present the 1-year follow-up data following implementation of the revised TJUH AIS Management Protocol. Data is compared between Pre- and Post-intervention patients.

- May 18 - Formal protocol introduced – includes automated CTA (c/v perforation) for all stroke alerts
- June 18 - Direct JHSTAT contact and INR fellow communication instituted with neurosurgery consult
- Aug 18 - Improved documentation with service contact times
- Sept 18 - “INR Alert” page instituted - Simultaneous activation of JHSTAT/INR/JHN staff for ET candidates
- Oct 18 - Formalized neurosurgery consult workflow
- Nov 18 - Mar 19 - Initial data collection reviewed - new process metrics and followup metrics added
- Apr 19 - Improved transport protocol
- May 19 - Interim 1 year analysis

DISCUSSION

Conclusions and Future Directions

Multi-disciplinary committee successfully improved process metrics for patients with AIS undergoing ET. However, need for continued improvement as primary measure (DTP) is not consistently at goal.

Next Steps:
1) Improved data collection (see updated list below):
   - Identification of new process metrics (i.e. radiology, transport)
   - Tracking outcome measures (i.e. discharge/6mo mRS)
2) Individual case review:
   - Continued monthly meetings for review.
3) Targeted interventions

Challenges:
- DTP times are not consistently at/below goal (90min)
- Continued analysis – new data points, improvement needed
- Possible targets – Transport, INR to table, Radiology
- Unclear association with outcomes metrics

The new ED AIS management protocol (below) was formally implemented May 1st, 2018. Key improvement interventions and timeline are also listed.