



Identifying Key Players for Early Stroke Management

Cabinet Peaks Medical Center
Libby, Montana

Presented by: Kimberlee Rebo and John Thornton

OBJECTIVES

- Identify key **players** in early stroke care & management
- Identify key **actions** in early stroke care & management
- Identify what **your role** in early stroke care is

No Bias or Conflict of Interest has been identified



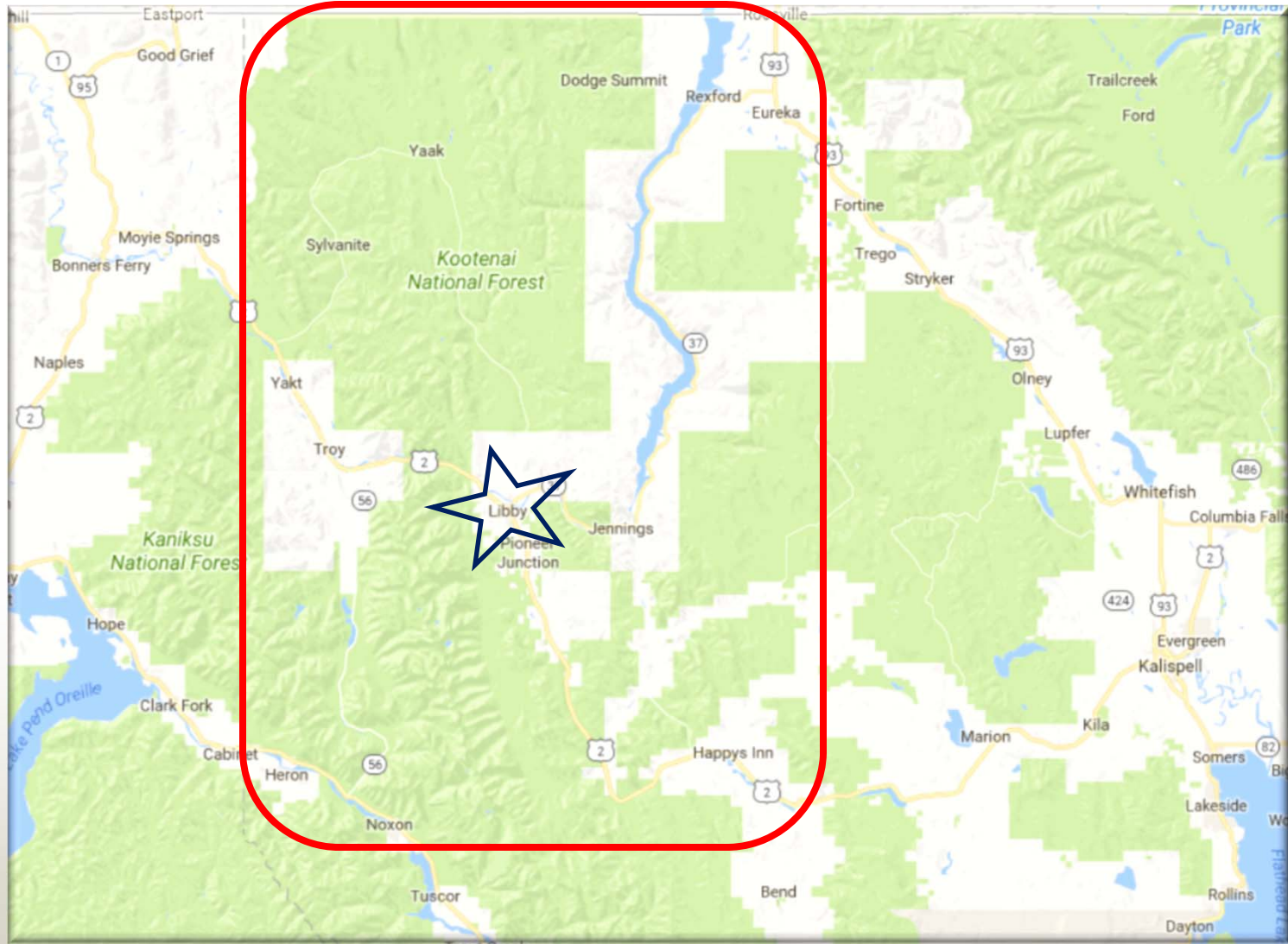
CABINET PEAKS MEDICAL CENTER

- 25 bed Critical Access Hospital (CAH) offering fully staffed:
 - Emergency Department
 - Medical Surgical Unit
 - Intensive Care Unit
 - Labor & Delivery
 - Swingbed Services
- Outpatient Services Available:
 - Cardiopulmonary Services
 - Diabetes/Nutrition Education
 - Imaging
 - Laboratory Services
 - Surgical Services
 - Family Medicine Clinic
 - Rehabilitation Services
 - Senior Life Solutions
 - Chemotherapy and Infusion

Where in the world is CPMC?







WHO ARE WE?

- Kimberlee Rebo – Acute Care Manager
- John Thornton – Emergency Services Manager



Why did CPMC make a change?

- Door to Needle Time – time from arrival at ED or identification of symptoms to the time of Alteplase (tPA) is given
- We started our change in the Summer of 2015.



WHO WAS INVOLVED?

- We decided to identify & recruit key players to be on the task force
- This included:
 - Quality/Risk Management
 - ED providers – including a Physician Champion
 - Clinical Educator
 - Selected Nurses & ED Techs (Paramedics)
 - Local EMS Stakeholders
 - Department Managers
 - Acute Care (Inpatient)
 - Emergency Department
 - Laboratory
 - Imaging
 - Respiratory Therapy (RT)
 - Pharmacy

WHAT WAS DISCOVERED?

- **The group identified the current process & offered suggestions on:**
 - Some Delays
 - Frustrations
 - Things that were working well



WHAT CONTRIBUTED TO THE DELAYS?

- Process Delays
- Waiting on CT table
- Documentation



WHAT WAS DECIDED?

- **The following changes were suggested and implemented:**
 - A process titled “Code Stroke” was created and was to be initiated on the identification of stroke like symptoms in any setting
 - Drive-by Assessments by the ED Provider
 - The creation & use of a Code Stroke packet was implemented

The group met TWICE

WHAT IS CODE STROKE?

*An immediate activation of key team members,
departments & equipment*



Can be initiated by EMS or CPMC team
upon recognition of stroke like symptoms

PRE-STAGING

- ED Provider
- Radiology
- Lab
- Respiratory
- Request for additional staff as needed
- Pharmacy during business hours
- Stroke robot at bedside

DRIVE BY ASSESSMENTS

- On arrival the ED provider meets the patient at the door and does a quick assessment
 - Stable versus unstable
- The EMS crew and ED staff take the patient to CT.
- The initial EKG can be done prior to transferring the patient to the ED gurney.

STROKE PACKETS

- What is included:
 - All forms that may be needed for patient care during an Acute Stroke were placed together in bright yellow packets with clear labels
 - Packets were placed in the ED and Inpatient Unit
- Although several of our forms have been incorporated into our EMR system it was decided to make them also available in paper form where they could be used as reference

STROKE PACKET INCLUDES THESE FORMS

- Acute Stroke Algorithm
- NIH stroke scale and visual aids
- A quality form to document Radiologist read time
- Thrombolytic candidate orders
 - Informed consent for thrombolytic therapy
 - Thrombolytic inpatient admission orders
 - Alteplase mixing instructions
- Heparin drip protocol
- Telemedicine consent & quality tracking forms
- Post event forms

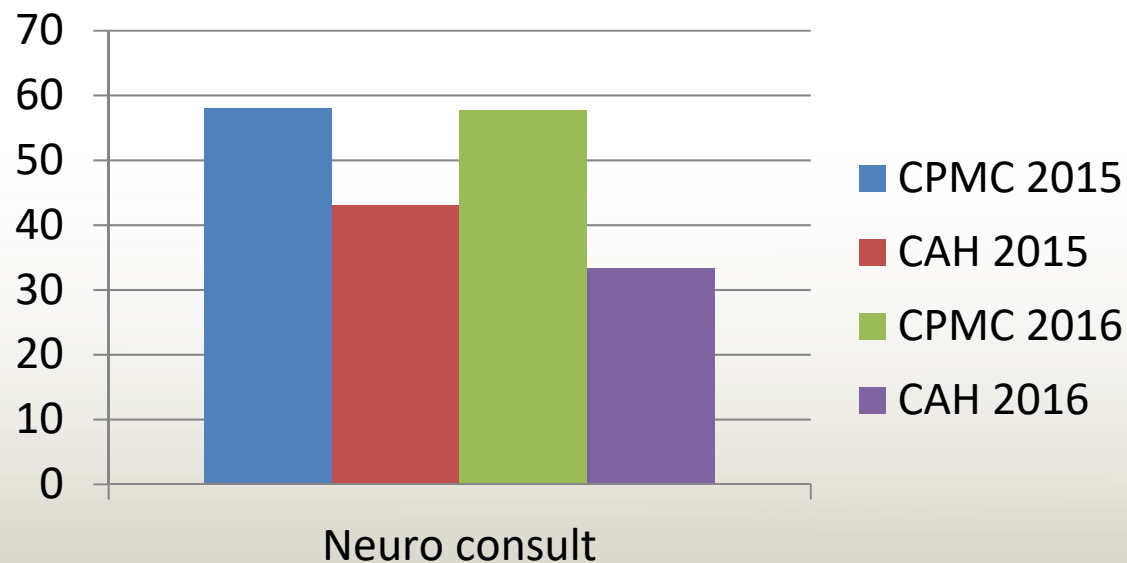
TELEMEDICINE & THE STROKE ROBOT



- The use of a telemedicine monitor to remotely examine patients in real time by a neurology specialist.
- Provides 2-way voice and video services with a simple set-up, 24/7
- No more waiting for a consult or transporting our patients unnecessarily

NEUROLOGY CONSULTS

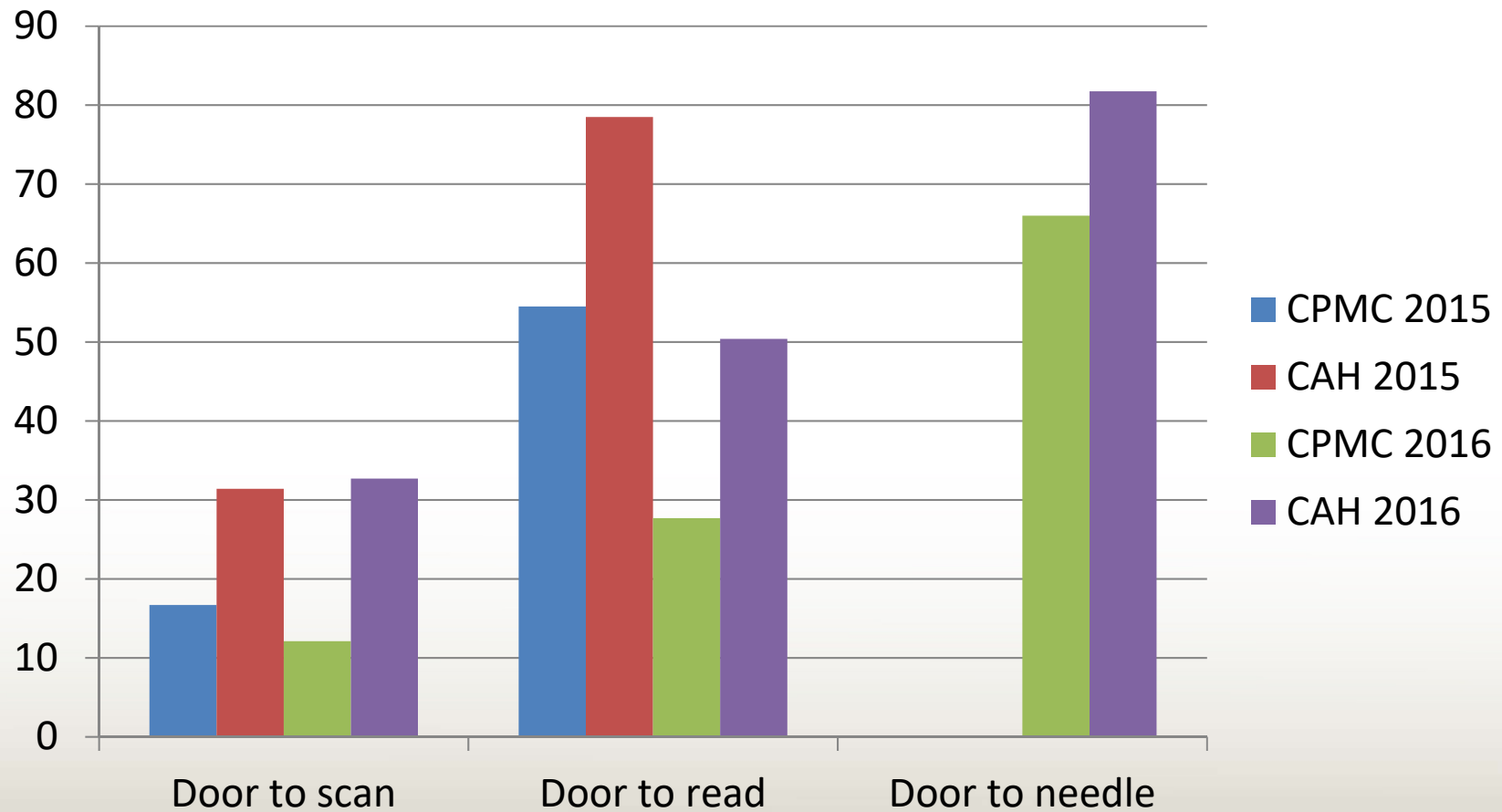
- We have higher than average usage of neurology consults done via the telestroke robot, compared to other CAH.



RESULTS

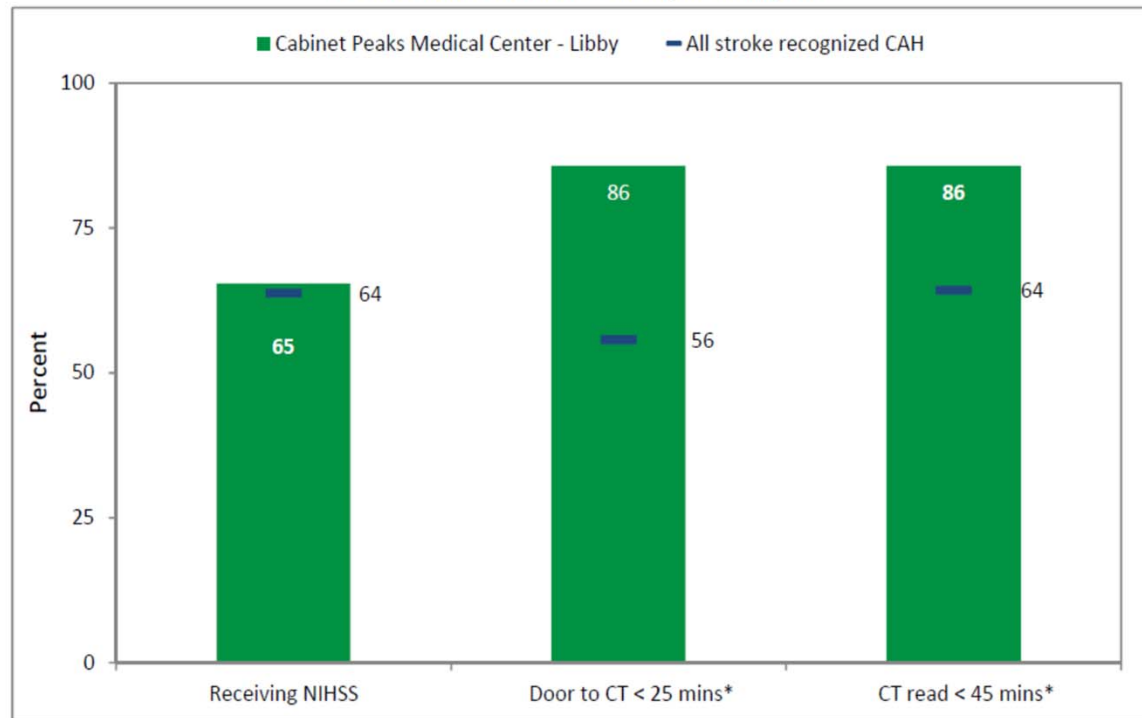
- It is still a work in progress
- While we see many altered mental status patients, we only see about 2 stroke patients a month that require thrombolytics and transfer to a higher level of care.
- In 2016 CPMC cared for 26 stroke patients.
- Our results are improving

AVERAGE TIMES IN MINUTES



RESULTS BY PERCENTAGE

Percent of stroke patients, seen at stroke recognized CAHs, receiving NIHSS, door to CT scan completed within 25 mins and read within 45 mins, Montana, 2016

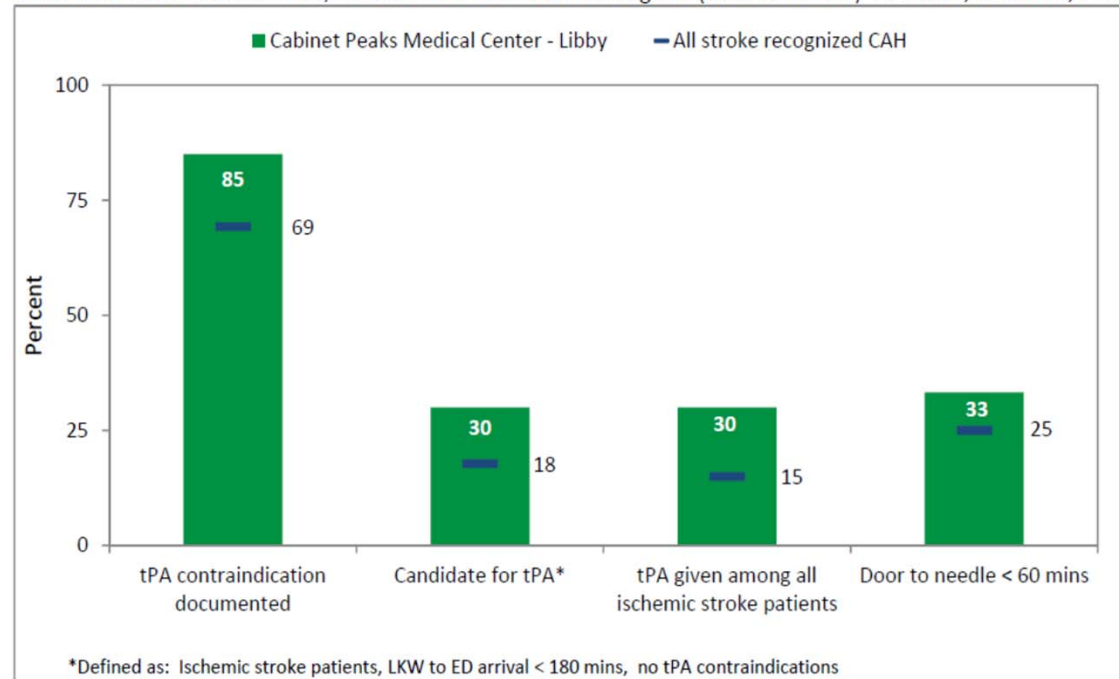


*Among stroke patients arriving < 210 mins of last know well (symptom onset)

RESULTS BY PERCENTAGE

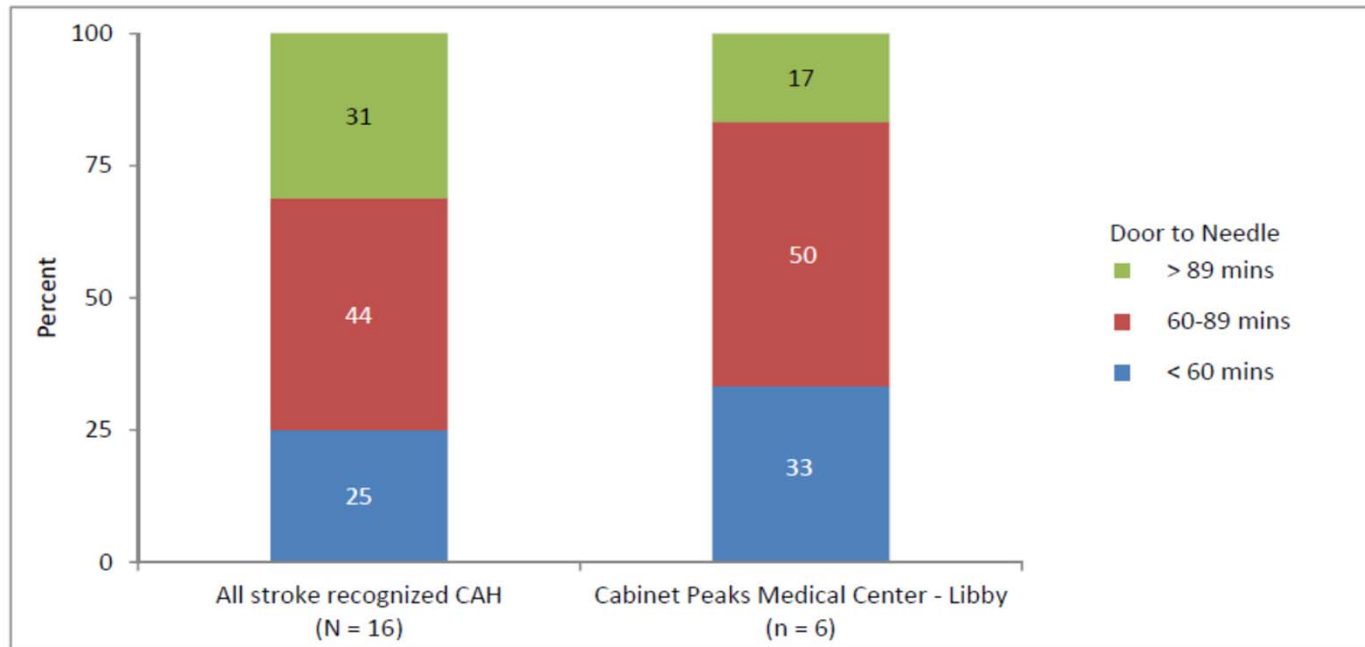
ISCHEMIC STROKE PATIENTS

Percent of ischemic stroke patients, seen at stroke recognized Critical Access Hospitals, with tPA contraindications documented, candidate for tPA and receiving tPA (door to needle) < 60 mins, Montana, 2016.



DOOR TO NEEDLE BY PERCENTAGE

Percent of ischemic stroke patients, seen at stroke recognized Critical Access Hospitals, receiving tPA, Montana, 2016.

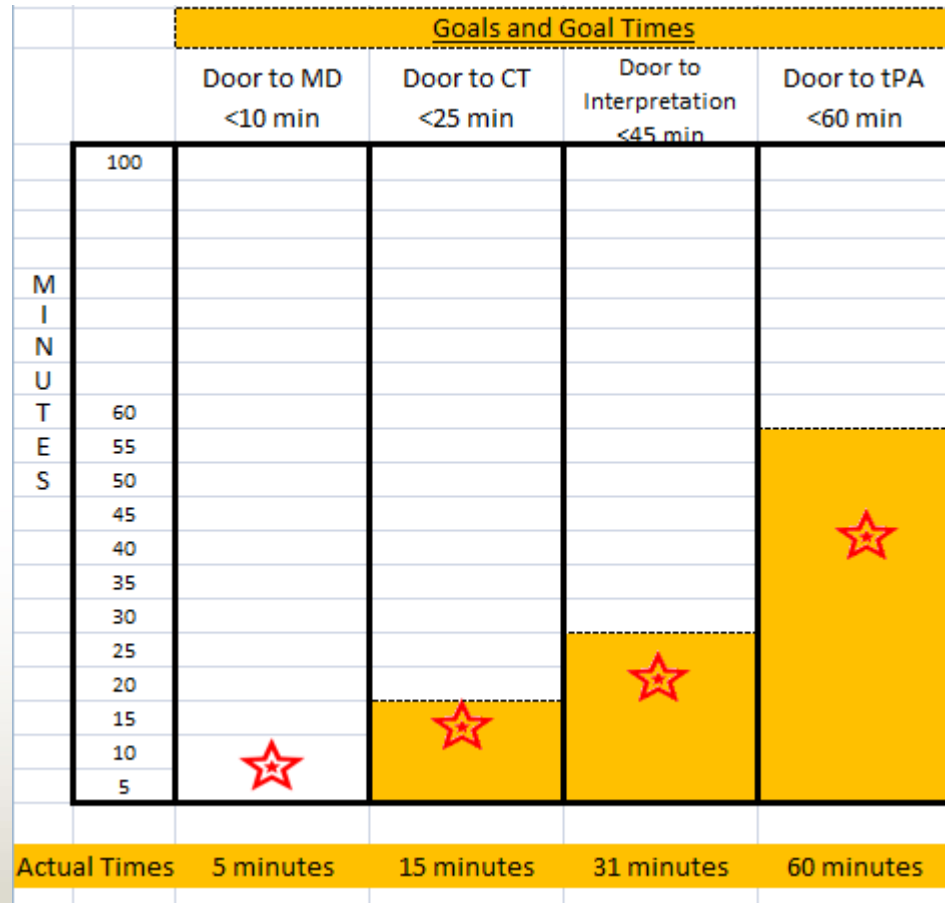


OUTLIERS

- Outliers tend to relate to concern about contraindicators.
 - For example a history of aneurism, long onset to arrival or unknown last seen normal.

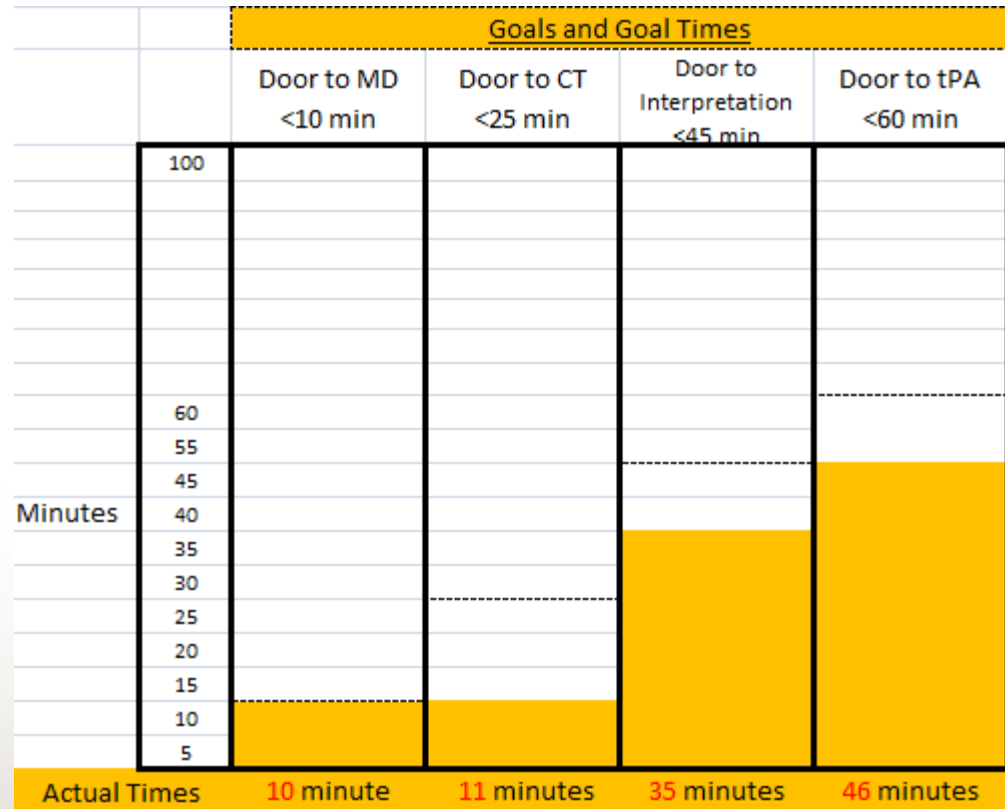
CASE EXAMPLE

- 74 year old female. Brought in by EMS for facial droop noted within one hour of arrival.
 - Onset to tPA = 108 minutes
 - Telestroke Utilized



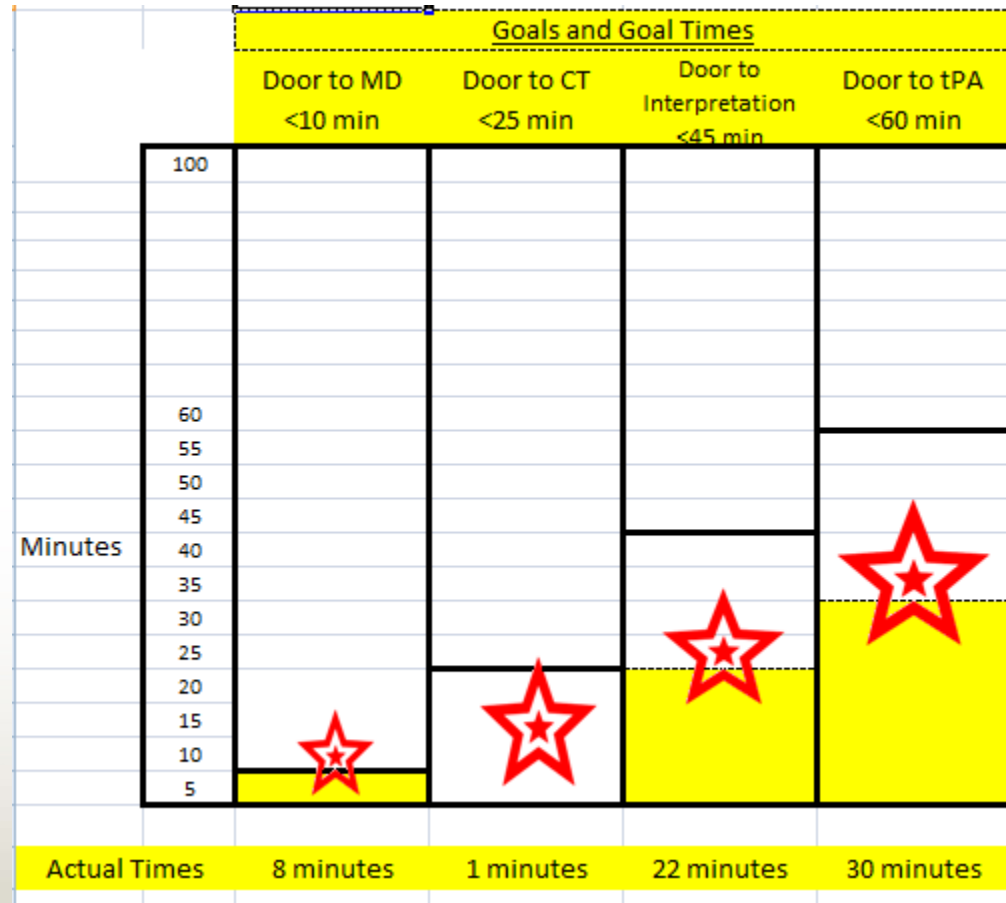
CASE EXAMPLE

- 84 year old male. Brought in by a neighbor for acute onset mental status change. Arrived within 1 hour of last seen normal.
 - Onset to tPA = 115 minutes
 - Telestroke Utilized



CASE EXAMPLE

- 60 year old male. Brought in by EMS for right sided weakness starting about 40 minutes prior to arrival.
 - Onset to tPA = 70 minutes
 - Telestroke Utilized





IS IT REALLY THAT SIMPLE?!?

Yes!

- Why?
 - Identified key players
 - Had a Physician Champion
 - Had buy in from all parties for the same goal – to improve the care our stroke patients receive

If Cabinet Peaks Medical Center can do it, so can you!

STROKE SURVIVORS

- CPMC has a robust Stroke Survivors Support Group for both survivors & their caregivers that is offered by our Rehabilitation Program.
- The group follows up with each stroke patient that is referred to their group.
- Patients can also utilize the Swingbed program to regain strength & return home sooner.

QUESTIONS?

