Hyper-Acute Stroke

Primary Stroke Centre

Red Deer

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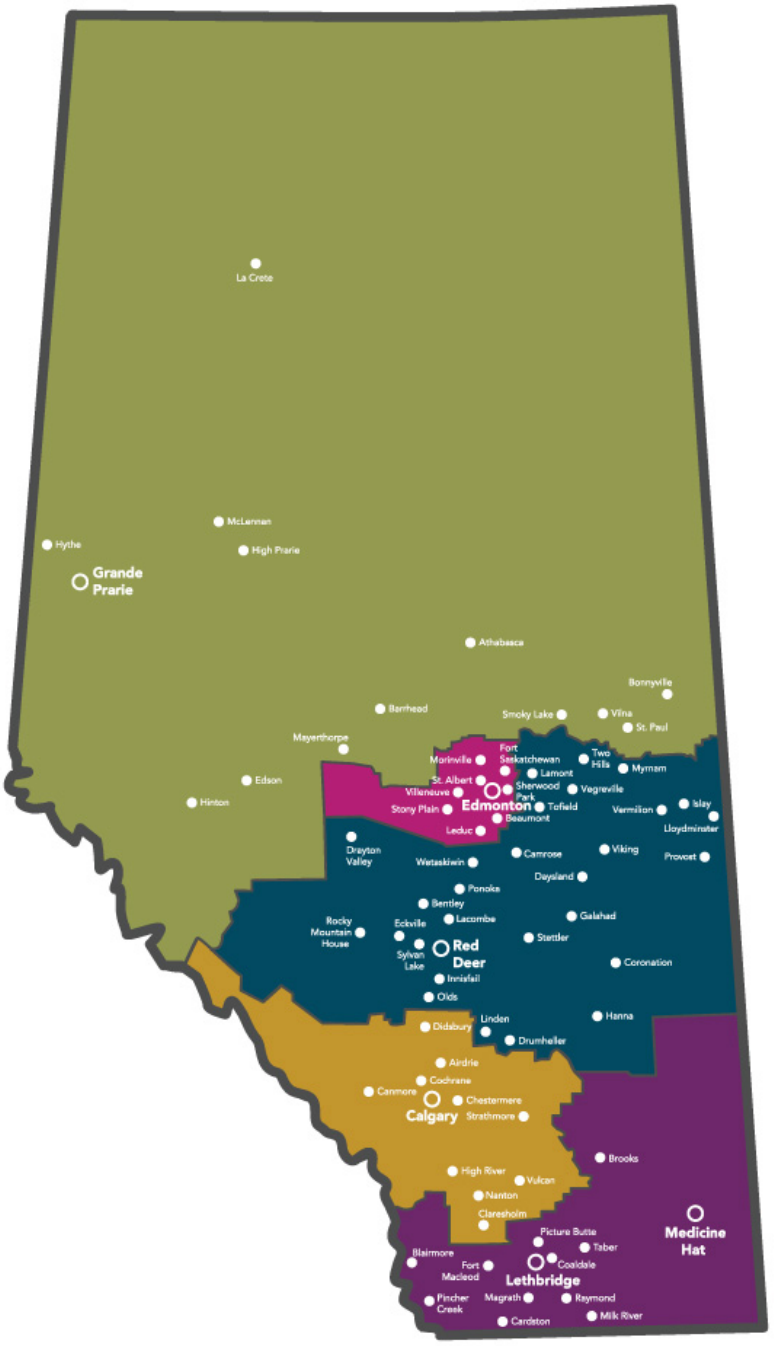
Disclosures

I have received honorariums and an Unrestricted Educational Grant from Allergan with respect to headache management

Central Zone

- Previously 3 neurologists- that has now expanded to 5 neurologists in the last year
- Variable hyper-acute stroke protocol



Previous Protocol

- EMS call to triage or walk-in
- Patient arrives at triage- hyperacute- overhead Trauma Patient , patient is registered
- Patient taken to Trauma by EMS, transferred to bed
- Assessed by trauma team,
- ER doctor initiates stroke orders and calls radiologist and Neurologist, labs drawn, ECG, IV
- Patient transported for CT +/- CTA
- Patient arrives back to trauma bay or critical track
- Neurology assesses +/- tPA

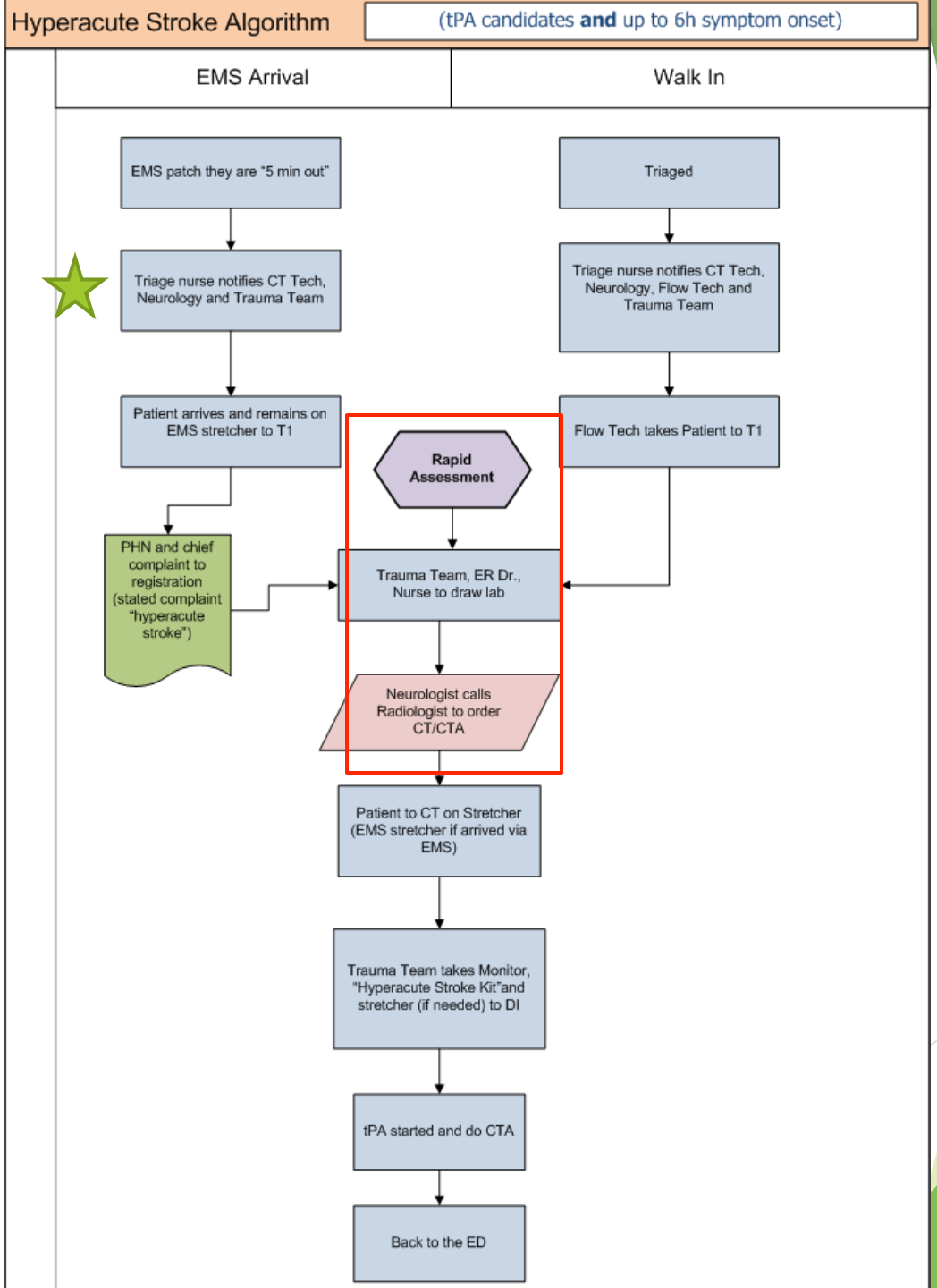
Improving Door to Needle Time in Red Deer

- Keeping in mind optimal door to needle time is the fastest possible time that preserves safety and appropriateness
- In Canada results from a 2011 National Stroke audit on quality of stroke care showed only 34 % of patients had a DTN time </= 60 minutes
- January 2015 -present Red Deer DTN~72 min

Preparation For QuICR

- Meeting in June 2015
- Key stake-holders: ER, Radiology, Neurology, EMS
- Round table discussion about stream-lining current process with goal of DTN = 30 min
- New protocol also considers DIDO for endovascular therapy – New Canadian Standard of care

- A key concept in fast treatment is the paradigm of parallel rather than serial diagnostic evaluation and assessment and treatment



Key Protocol Changes

- Many changes brainstormed are outlined in a paper by Dr. Michael Hill

Good is not Good Enough: The Benchmark Stroke Door-to-Needle Time Should be 30 minutes

Can J Neurol Sci. 2014; 41: 694-696

4 Broad Areas of Protocol Improvement

1. Pre-notification stage
2. Patient arrival
3. Imaging/ tPA delivery
4. Post tPA/ feedback

1. Pre-notification

- EMS contact with Triage before arrival
- Activate ED physicians, Nurses, Neurologist and DI tech at time of pre-notification
- CT/labs ordered at this time

2. Patient Arrival

- SWARM – parallel involvement of ED team, Neurologists for rapid stabilization and transfer to CT
- Consistent flow- to trauma bay
- Stay on EMS stretcher
- Use standardized tPA forms/scales
- No catheterization prior to tPA

3. Diagnostic Imaging/tPA Delivery

- CT/CTA completed quickly- do not wait for creatinine
- Do not wait for formal radiology report or laboratory results
- tPA delivered in CT room immediately after imaging complete

4. Post tPA/Feedback

- Updating every member of team: ER staff, DI, Neurologist
- Regular distribution of DTN times
- Recognition for fast thrombolysis
- Physician leadership engagement
- Targeted continuing professional education
- Administration engaged

Red Deer and QuICR Fall 2015

- Two site visits
- Most recent September 14 2015 – DI staff, Neurology, ER staff, administration present
- Presentation Dr. Michael Hill
- New protocol unveiled to group

Patient Simulation

- Last week we had a simulation, new protocol was trialed from start to finish
- Again all key players involved
- Hope to be ready to go on the new Protocol by **October 1st 2015**