Use of a Stroke Stop

Implementation of a Direct to CT Approach

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Disclosure Statement

- I have no actual or potential conflicts of interest in relationship to this presentation.

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Welcome

- My Background
  - Stroke Program Coordinator
  - Stroke Certified
  - American Association of Neuroscience Nurses Member
  - Nebraska Stroke Advisory Council Steering Committee (NSAC)
  - Lincoln Stroke Partnership

Objectives

- Understand the purpose of a Stroke Stop
- Discuss the importance of using a Stroke Stop
- Describe steps to develop a Stroke Stop
- Advance the quality of acute stroke care

Stroke Stop

- An interdisciplinary approach to improve the timeliness of alteplase (tPA) administration
- Protocol-driven process with clear definition of roles and parallel processing of tasks
- Involves stroke patients currently being brought in by EMS to be taken directly to CT

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Background

- Door to needle goals changing from 60 minutes to 45 minutes
- August 2015: Discussions started at Stroke Committee regarding a “pit crew” approach
- September 2015: Formed a sub-group with key members from our hospital stroke committee to attend meetings for the sole purpose of the development of a Stroke Stop
- October 2015: First meeting where we discussed current roles/process and made goals for new roles/processes.
- November 2015: Second meeting where follow-up from first meetings assignments were discussed and process algorithm was made.
- December 2015: Education
- Jan 1, 2016: Implementation

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Needs Assessment

- What can be done at the hospital level? What can be done by EMS?
- Identify Barriers
  - Time spent in patient room
  - EMS turnaround times
- Define Goals and Objectives
  - Bypass patient room and take the patient directly to CT with the goal of reducing door-to-CT time
- Prioritize interventions for stroke patients
  - CT, Lab, EKG, Assessments, etc.

EMS Goals

- Correctly identify patients with stroke symptoms
  - Prehospital stroke screening tool
- Begin transport within 10 minutes of arrival at patients side
- Activate “Stroke Alert” early!
- Provide hospital with appropriate information in radio report
  - Patients age and gender
  - Results of prehospital stroke screening tool
  - Last Known Well and/or Symptom Onset time
  - Glucose
- Stop in ED at designated site

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Stroke Stop at St. Elizabeth

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What happens at the stroke stop?

- EMS Report:
  - Stroke symptoms
  - Medications—Particularly blood thinners
  - Medical history
    - Prior stroke
    - Diabetes
    - A-fib/A-flutter
- Provider Exam
  - Brief Neuro—BE FAST, FAST-ED
- Nursing
  - Lab Draw/Peripheral IV

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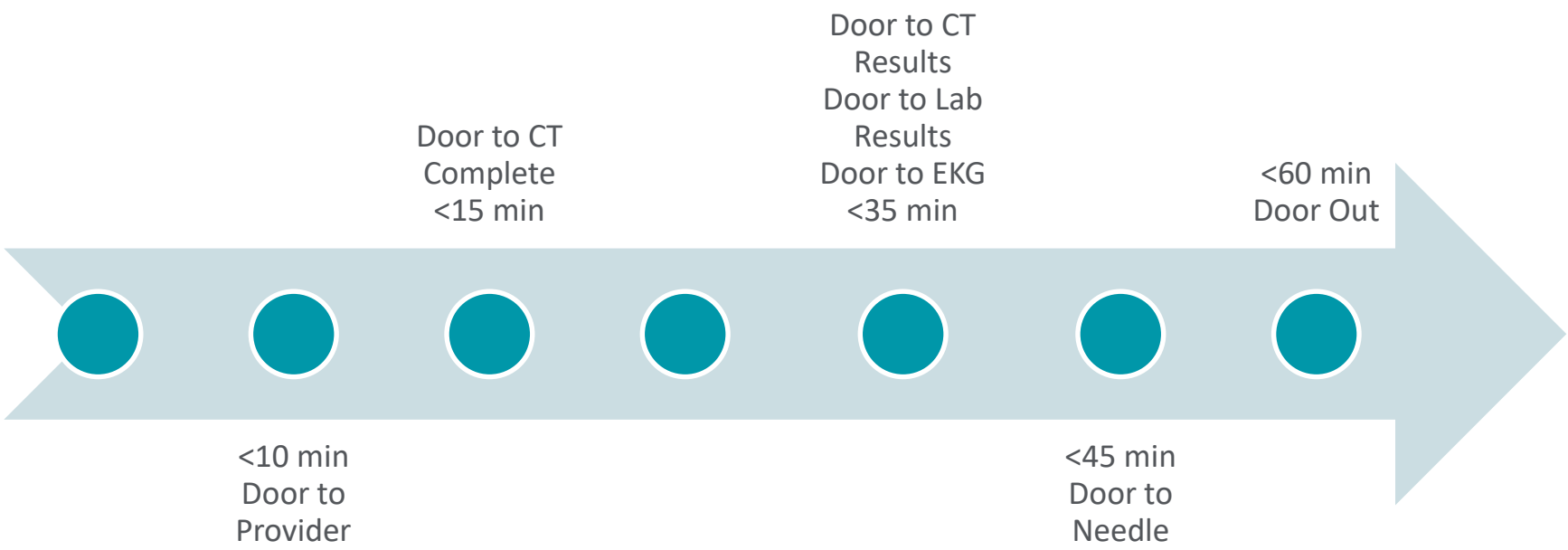
Goals



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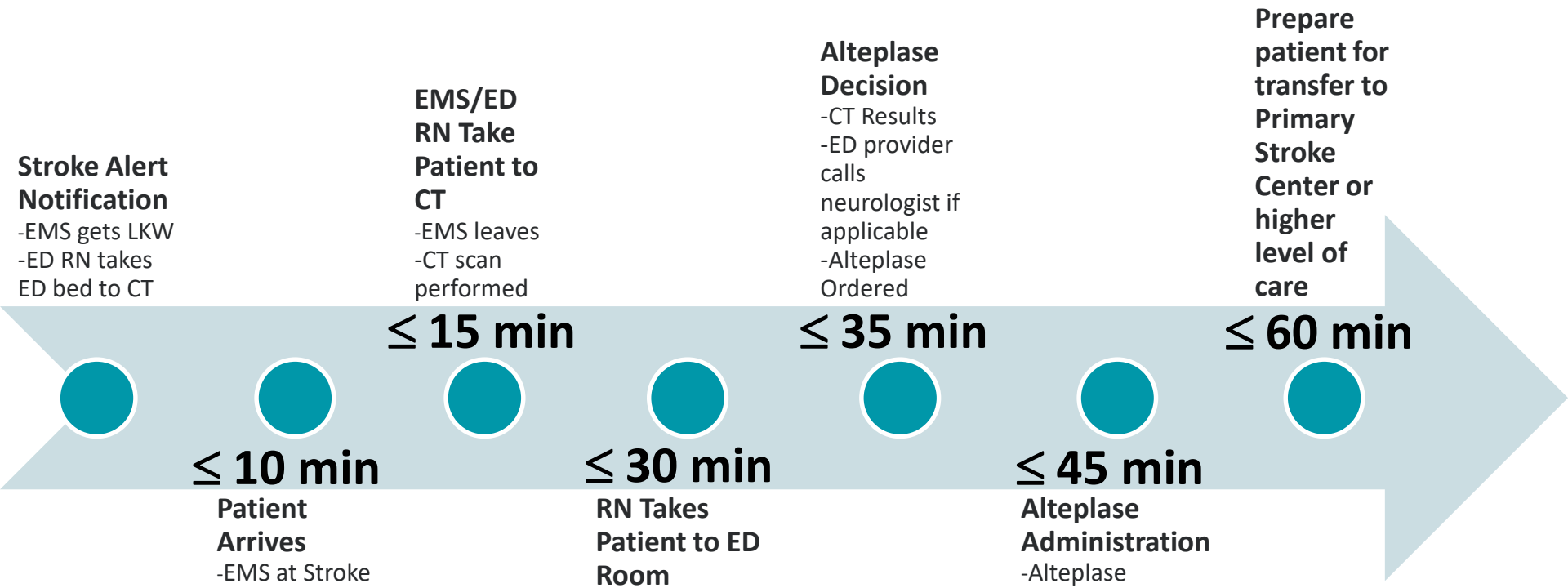
Parallel Processing



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- Comparison of CY2015 to January/February 2016
  - All based on comparison of LFR patients only

	2015 (minutes)	2016 (Jan/Feb)
Door to CT Ordered	11.52	3.44
Door to CT Complete	16.16	6.81
Door to CT Results	24.78	16.50
Door to Lab Drawn	13.63	10.06
Door to Lab Results	28.66	20.88
Door to EKG	19.94	16.69

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Stroke Stop Results

Comparison of CY2016 to CY2018

- All based on comparison of LFR patients only

	2015 (minutes)	2016 (minutes)	2017 (minutes)	2018 (minutes)
Door to CT Ordered	11.52	3.93	5.78	4.73
Door to CT Complete	16.16	6.88	9.45	8.11
Door to CT Results	24.78	15.28	21.71	18.98
Door to Lab Drawn	13.63	9.45	7.88	6.97
Door to Lab Results	28.66	23.48	25.17	22.98
Door to EKG	19.94	22.14	26.73	24.74

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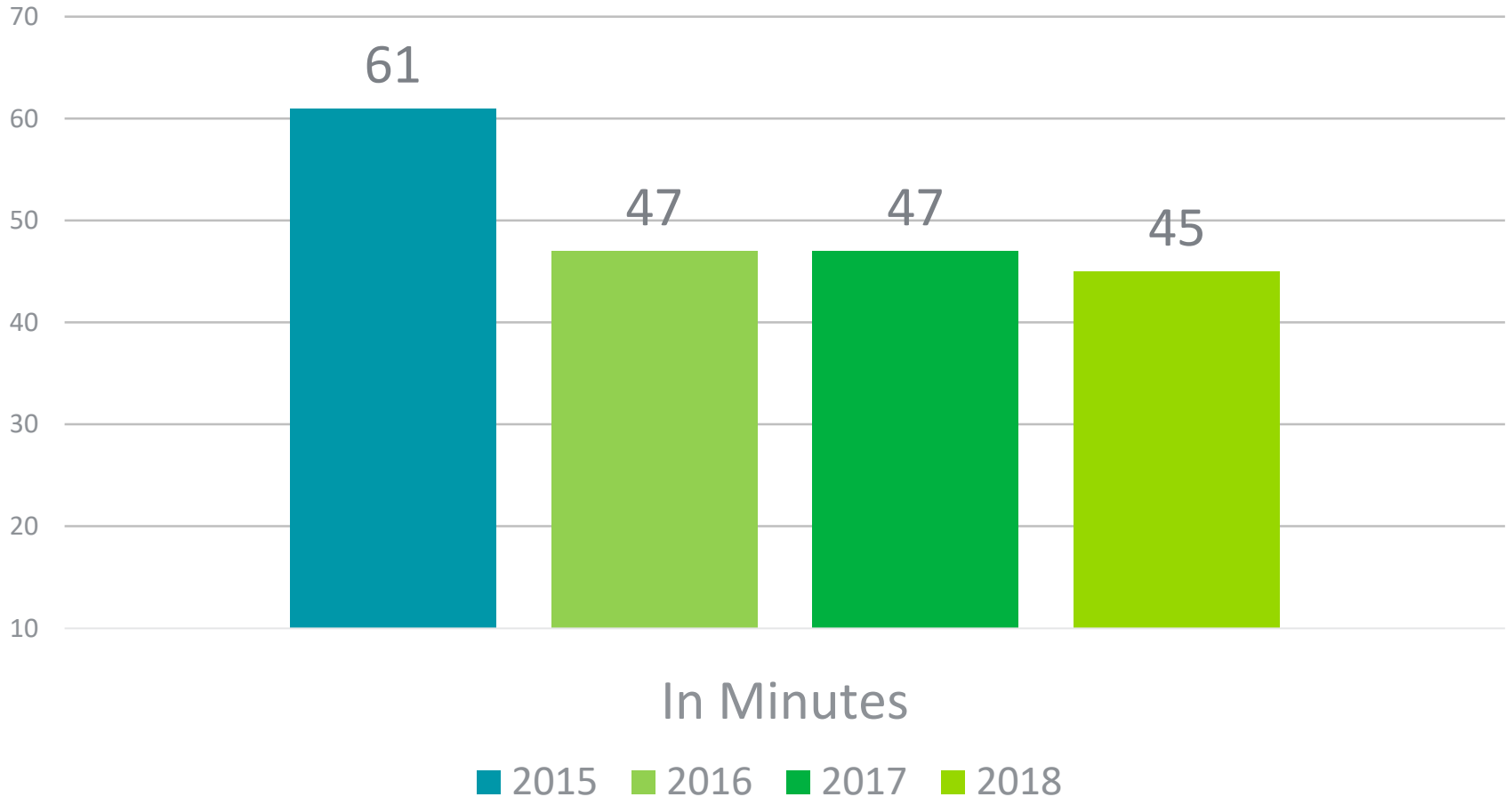
Door to Needle Alteplase Times



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Conclusion

- A critical component of the Stroke Stop's success is a willing collaboration between the pre-hospital EMS providers and the ED staff
- Invite the right person for the key roles identified
- Education and follow-up
- Ongoing assessment
    - Have now began using the Stroke Stop for walk-in stroke patients direct from triage

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Questions?

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