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Pharmacists Improve Door to Needle Times in the Emergency Department

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Background

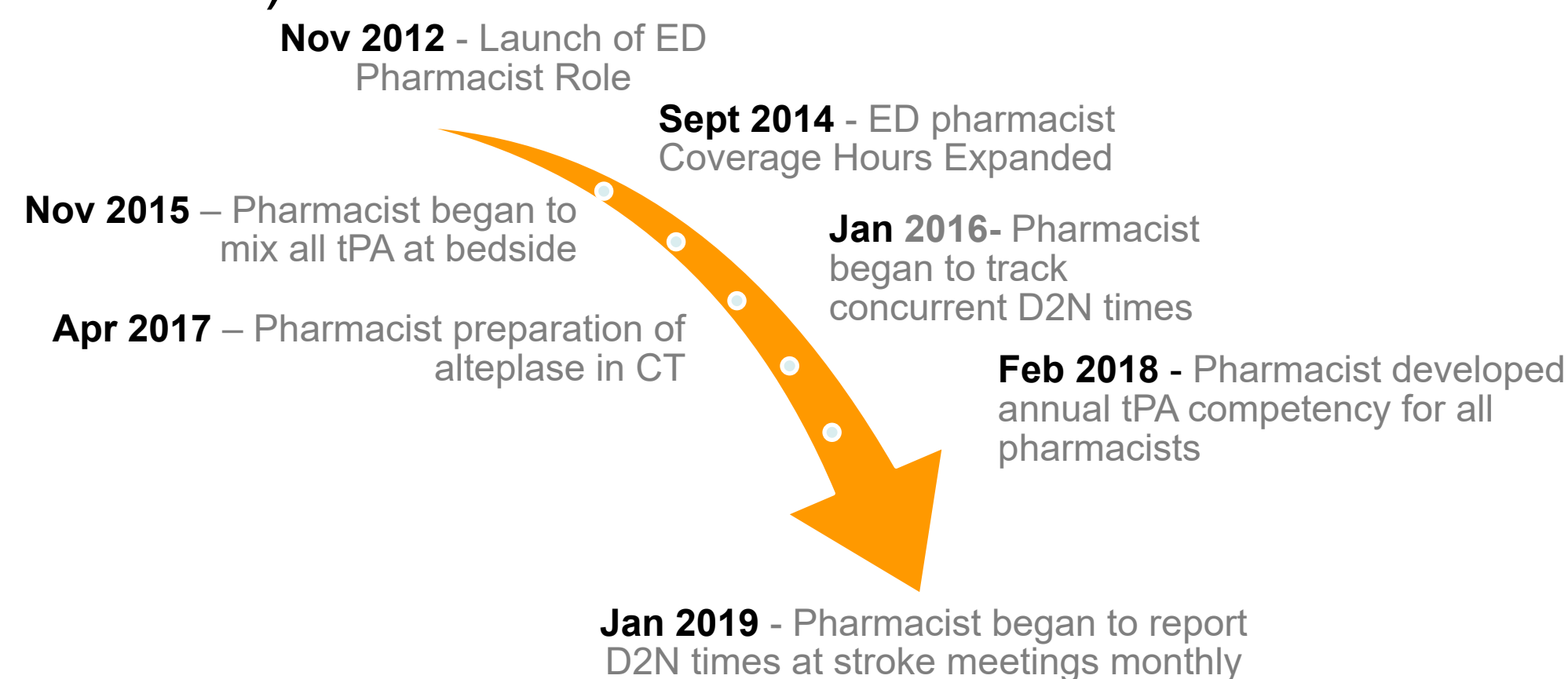
- An estimated two million brain cells die every minute cerebral perfusion is impaired
- Best outcomes for acute ischemic stroke are achieved by decreasing the time from emergency department (ED) arrival to thrombolytic therapy
- Previously, alteplase was dosed and prepared in the pharmacy which contributed to prolonged door to needle (D2N)

Purpose

- To describe the impact of various pharmacist interventions on D2N in the ED

Methods

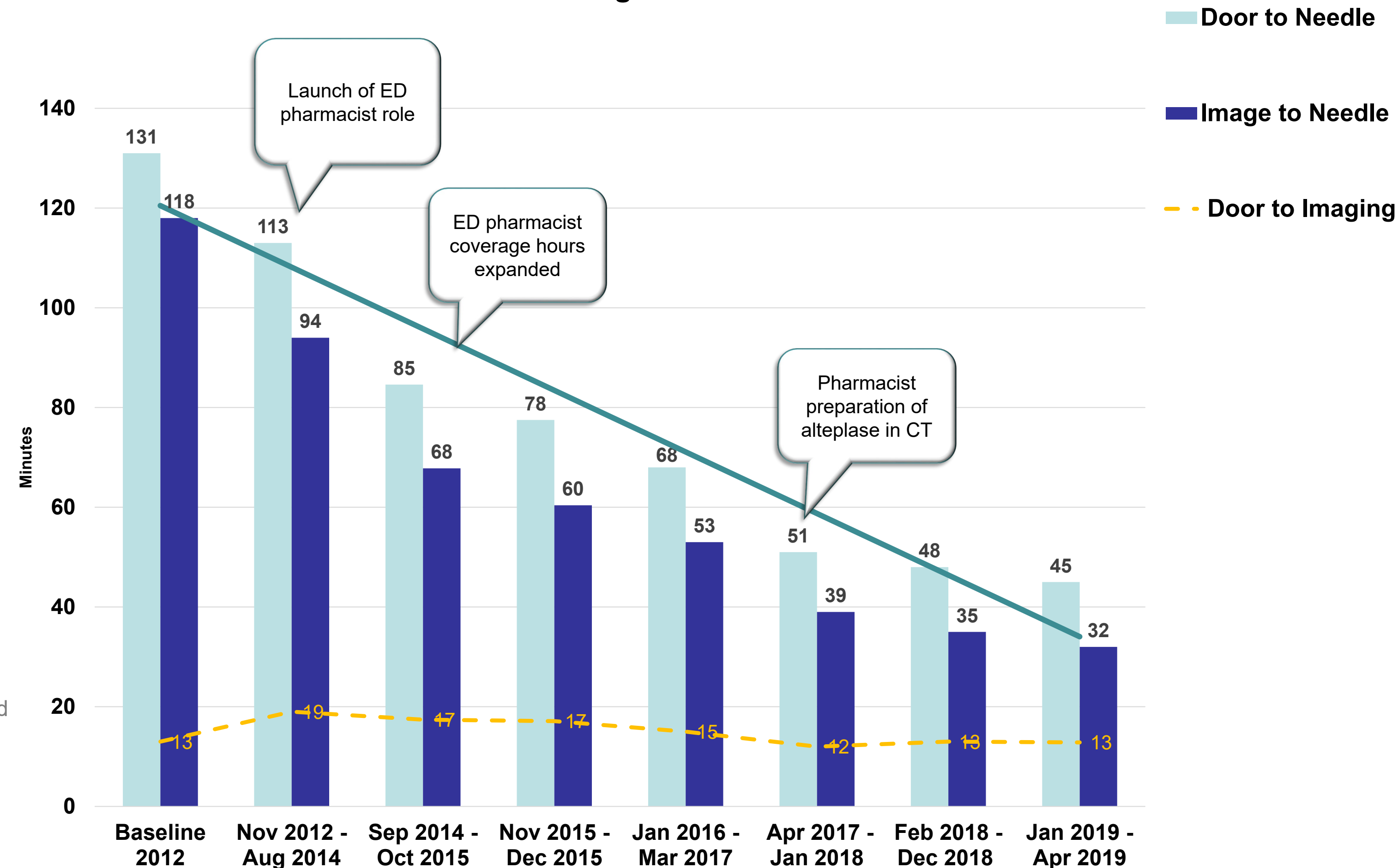
- Retrospective data from all patients who received alteplase for acute ischemic stroke from November 2012- April 2019 compared to baseline (Jan 2012 – October 2012)



Results

- 407 patients received alteplase
- Average D2N decreased from 131 minutes at baseline to 45 minutes
- The largest decrease in average D2N was seen with the launch of the ED pharmacist role (↓18 minutes), the expansion of the ED pharmacist coverage (↓28 minutes), and pharmacist preparation of alteplase in CT (↓17 minutes)

Average Treatment Times



Conclusions

- Pharmacists directly impacted stroke care in the ED by decreasing D2N
- Presence of a pharmacist in the ED enabled fast and safe delivery of alteplase
- Pharmacists also were able to perform rapid medication reconciliation and expedite antihypertensive therapies
- Having pharmacists as a part of the stroke team is a model that can be adopted by hospitals to enhance stroke care

References

- Powers WJ, Rabinstein AA, Ackerson T, Adeoye OM, Bambakidis NC, Becker K, Biller J, Brown M, Demaerschalk BM, Hoh B, Jauch EC, Kidwell CS, Leslie-Mazwi TM, Ovbiagele B, Scott PA, Sheth KN, Southerland AM, Summers DV, Tirschwell DL; on behalf of the American Heart Association Stroke Council. 2018 Guidelines for the early management of patients with acute ischemic stroke: a guideline for healthcare professionals from the American Heart Association/American Stroke Association. *Stroke*. 2018;49:e46–e99.doi: 10.1161/STR.000000000000158.
- Demaerschalk BM, Kleindorfer DO, Adeoye OM, Demchuk AM, Fugate JE, Grotta JC, Khalessi AA, Levy EI, Palesch YY, Prabhakaran S, Saposnik G, Saver JL, Smith EE; on behalf of the American Heart Association Stroke Council and Council on Epidemiology and Prevention. Scientific rationale for the inclusion and exclusion criteria for intravenous alteplase in acute ischemic stroke: a statement for healthcare professionals from the American Heart Association/American Stroke Association. *Stroke*. 2016;47:581–641.
- Saver, JL Time Is Brain- Quantified **Originally published** 8 Dec 2005, <https://doi.org/10.1161/01STR.0000196957.55928.ab>,2006;37:263–266