

Providence

## Providence Digital Commons

---

Books, Presentations, Posters, Etc.

---

2020

### Pharmacists Improve Door to Needle Times in the Emergency Department

Kevin Phan

*Providence Little Company of Mary Medical Center Torrance*, [Kevin.Phan2@providence.org](mailto:Kevin.Phan2@providence.org)

Megan Degener

*Providence Little Company of Mary Medical Center Torrance*, [Megan.Degener@providence.org](mailto:Megan.Degener@providence.org)

Follow this and additional works at: [https://digitalcommons.providence.org/other\\_pubs](https://digitalcommons.providence.org/other_pubs)



Part of the [Emergency Medicine Commons](#), [Neurosciences Commons](#), and the [Pharmacy and Pharmaceutical Sciences Commons](#)

---

#### Recommended Citation

Phan, Kevin and Degener, Megan, "Pharmacists Improve Door to Needle Times in the Emergency Department" (2020). *Books, Presentations, Posters, Etc.*. 122.

[https://digitalcommons.providence.org/other\\_pubs/122](https://digitalcommons.providence.org/other_pubs/122)

This Poster is brought to you for free and open access by Providence Digital Commons. It has been accepted for inclusion in Books, Presentations, Posters, Etc. by an authorized administrator of Providence Digital Commons. For more information, please contact [digitalcommons@providence.org](mailto:digitalcommons@providence.org).

# Pharmacists Improve Door to Needle Times in the Emergency Department

Kevin Phan, Pharm D., BCCCP, APh, Megan Degener, Pharm D., BCCCP  
 Providence Little Company of Mary Medical Center Torrance



## Background

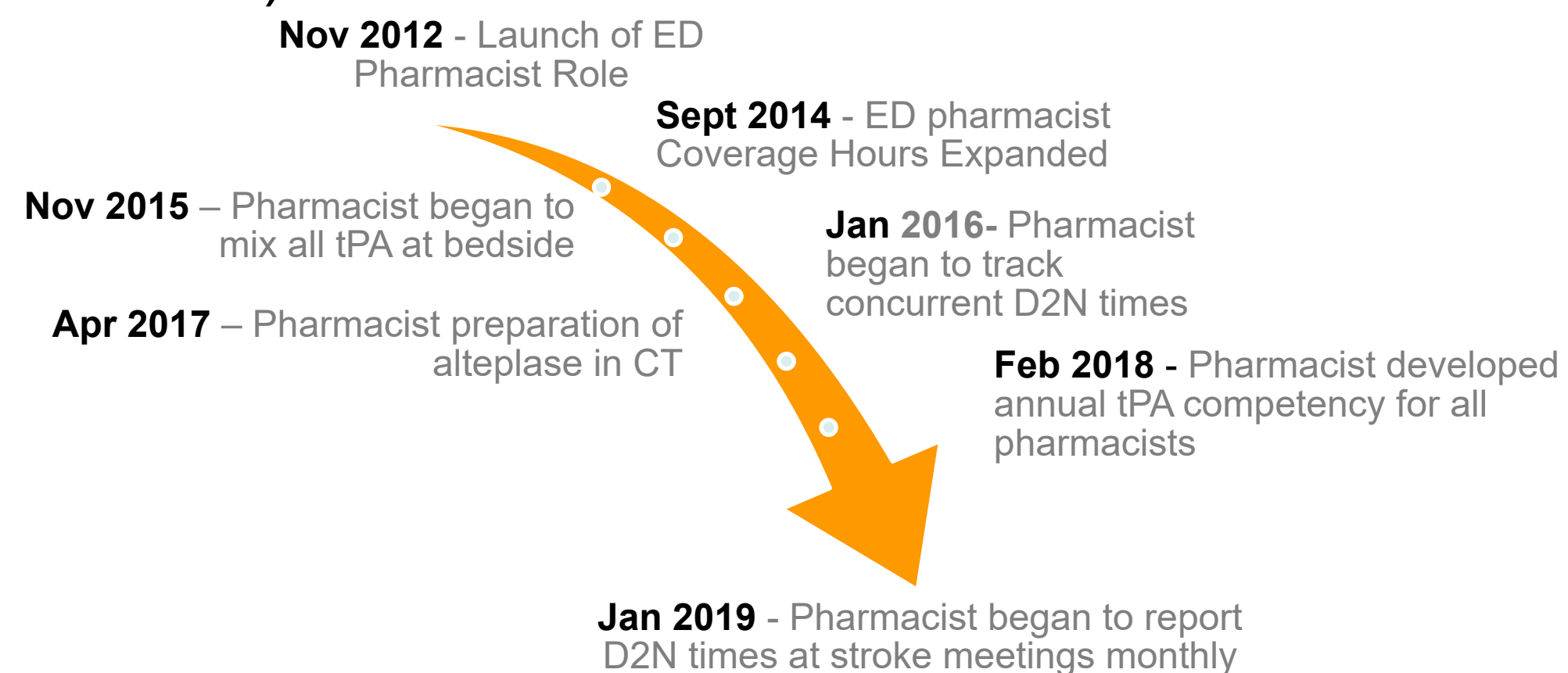
- An estimated two million brain cells die every minute cerebral perfusion is impaired
- Best outcomes for acute ischemic stroke are achieved by decreasing the time from emergency department (ED) arrival to thrombolytic therapy
- Previously, alteplase was dosed and prepared in the pharmacy which contributed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

## Purpose

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

## Methods

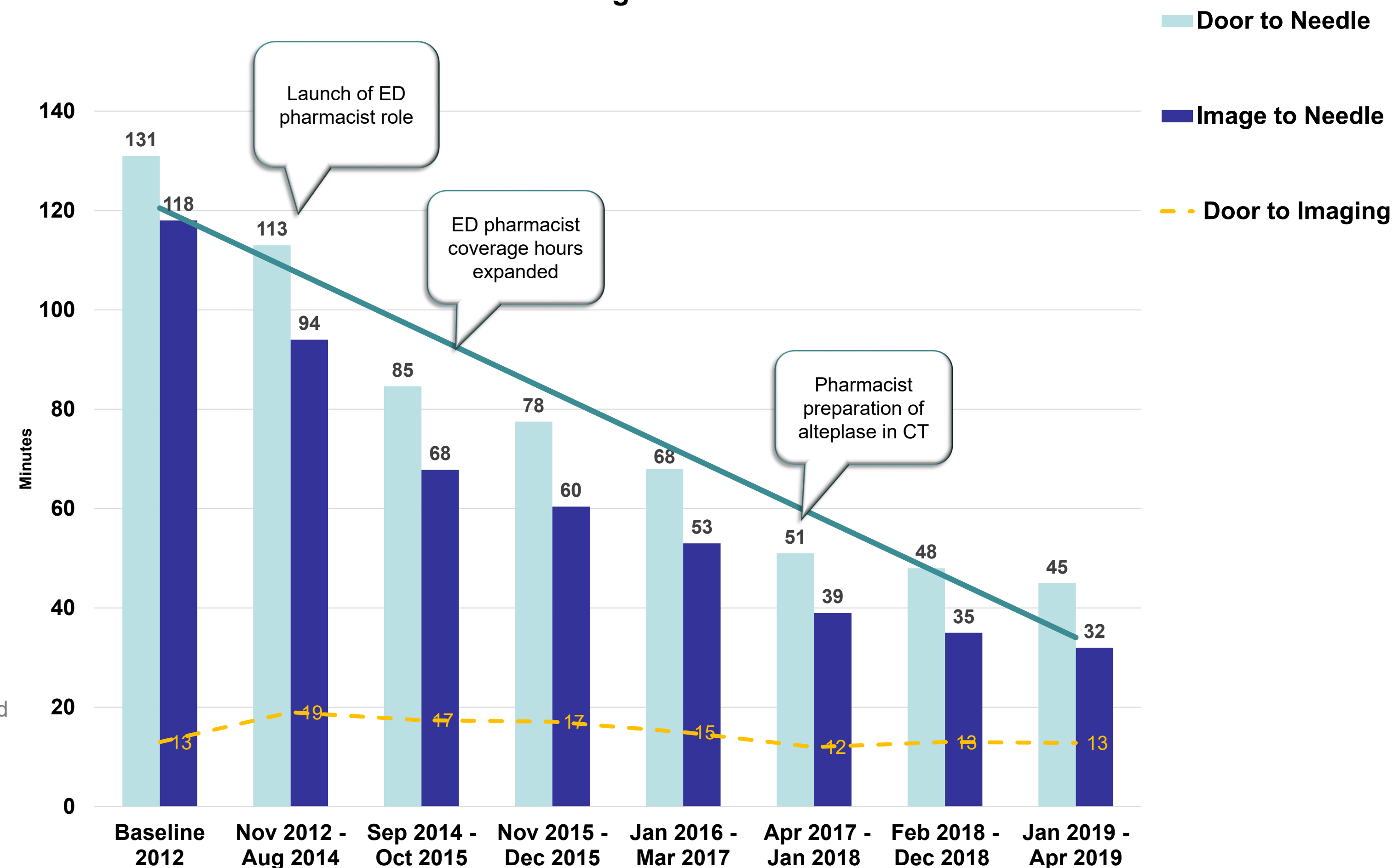
- Retrospective data from all patients who received alteplase for acute ischemic stroke from November 2012- April 2019 compared to baseline (Jan 2012 – October 2012)



## 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, Demaerschak 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.
- Demaerschak 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](https://doi.org/10.1161/01STR.0000196957.55928.ab.2006;37:263-266)