



# Lessons Learned from Evaluation of PICC Line Utilization at AFCH in 2020

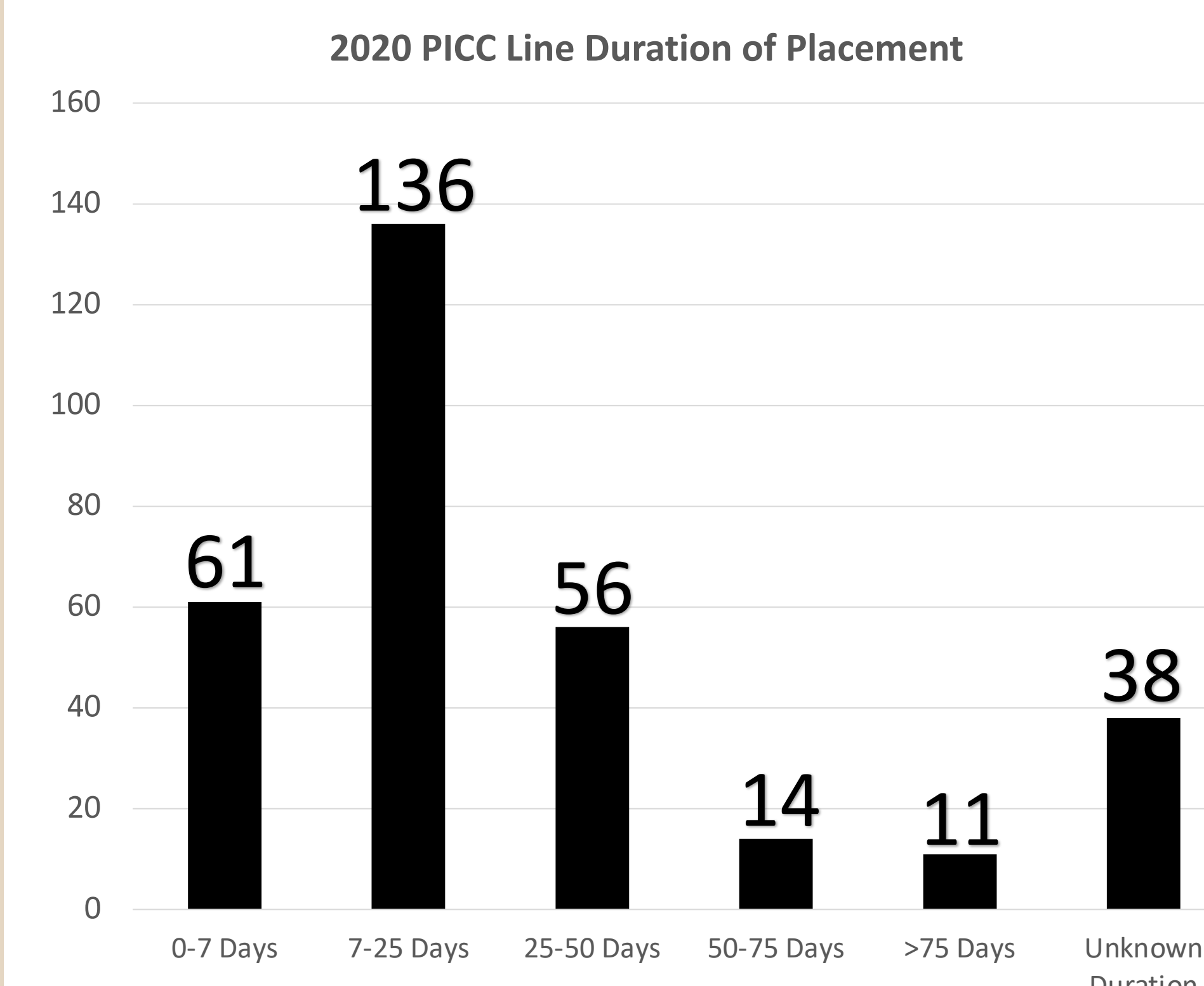
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## BACKGROUND

- At American Family Children's Hospital (AFCH), rates of central line associated bloodstream infection (CLABSI) dramatically increased from 0.97 per 1000 line days in 2018 to 2.16 per 1000 line days in 2020.
- Over half of CLABSIs at AFCH in 2020 occurred in PICC lines; overall PICC utilization has been increasing from 2018 to 2020.
- We hypothesized that a portion of PICC lines in place for <7 days was unnecessary. We analyzed all PICC lines with <7 days' duration in 2020 to identify a subset that could have been avoided in order to decrease PICC line utilization and, hopefully, the overall CLABSI rate.

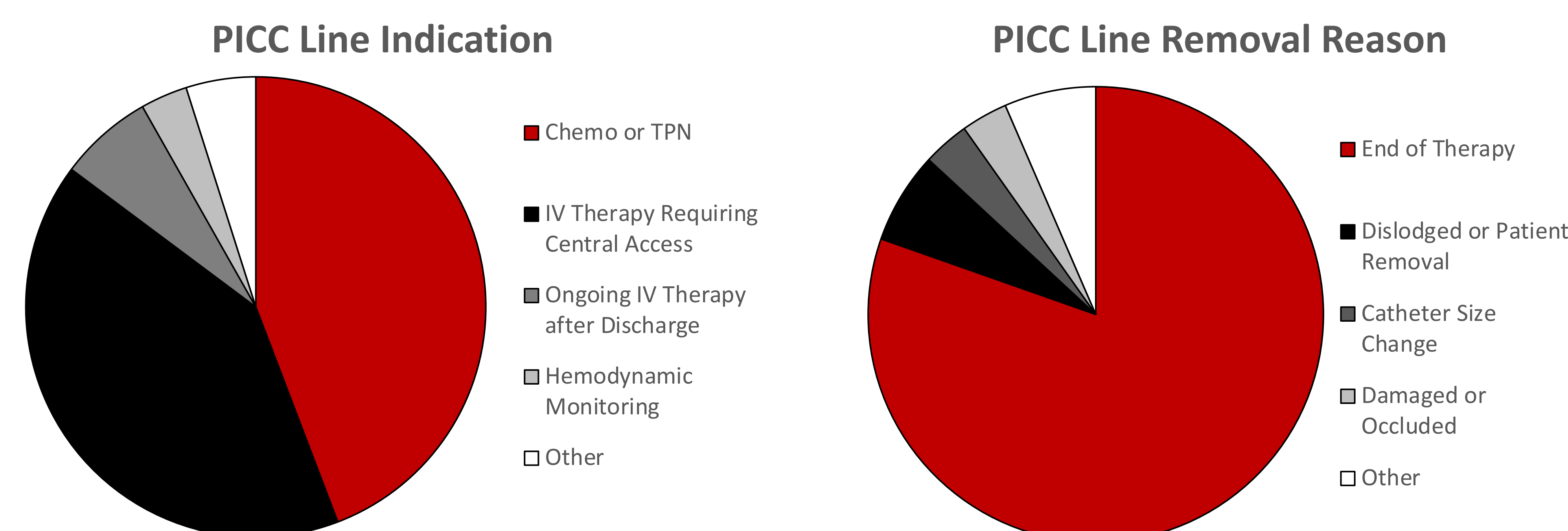
## METHODS

- Data were obtained from the electronic health record (EHR) about PICC lines placed in 2020
- A total of 316 lines were placed in 2020, 61 of which were in place for a duration of <7 days
- Chart review was conducted for these lines to categorize them further, including patient-specific factors (e.g., age, underlying diagnosis, length of stay, etc.) and line-specific factors (e.g., indication for line, removal reason, placement service, etc.)



- All PICC lines placed at AFCH in 2020 in place for <7 days had a *clinically appropriate indication documented*.
- Chart review demonstrated **opportunities for improvement in PICC line ordering and documentation**.

## RESULTS



## CONCLUSIONS

- PICC lines in place < 7 days in 2020 all had adequately documented and medically necessary clinical indications
- The most documented reason for line removal was “end of therapy,” indicating clinical improvement.
- We were not able to identify a subset of PICC lines that could have been avoided

### Next steps:

- There is no agreed upon ideal PICC line duration.
- Park et al. showed that PICC lines in place for ≥25 days may have more CLABSIs. We will review AFCH CLABSI rates for PICCs in place for < 25 days vs those in for ≥ 25 days.
- Update the current PICC placement order set to provide better documentation.
- Simplify the PICC line ordering process.

### Reference:

- Park S, Moon S, Pai H, Kim B. Appropriate duration of peripherally inserted central catheter maintenance to prevent central line-associated bloodstream infection. PLoS One. 2020 Jun 22;15(6):e0234966. doi: 10.1371/journal.pone.0234966. PMID: 32569313; PMCID: PMC7307762

## ADDITIONAL INFORMATION

### Acknowledgements

Thank you to the entire CLABSI Review Committee for their support and input on this project.

### Contact Information

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