

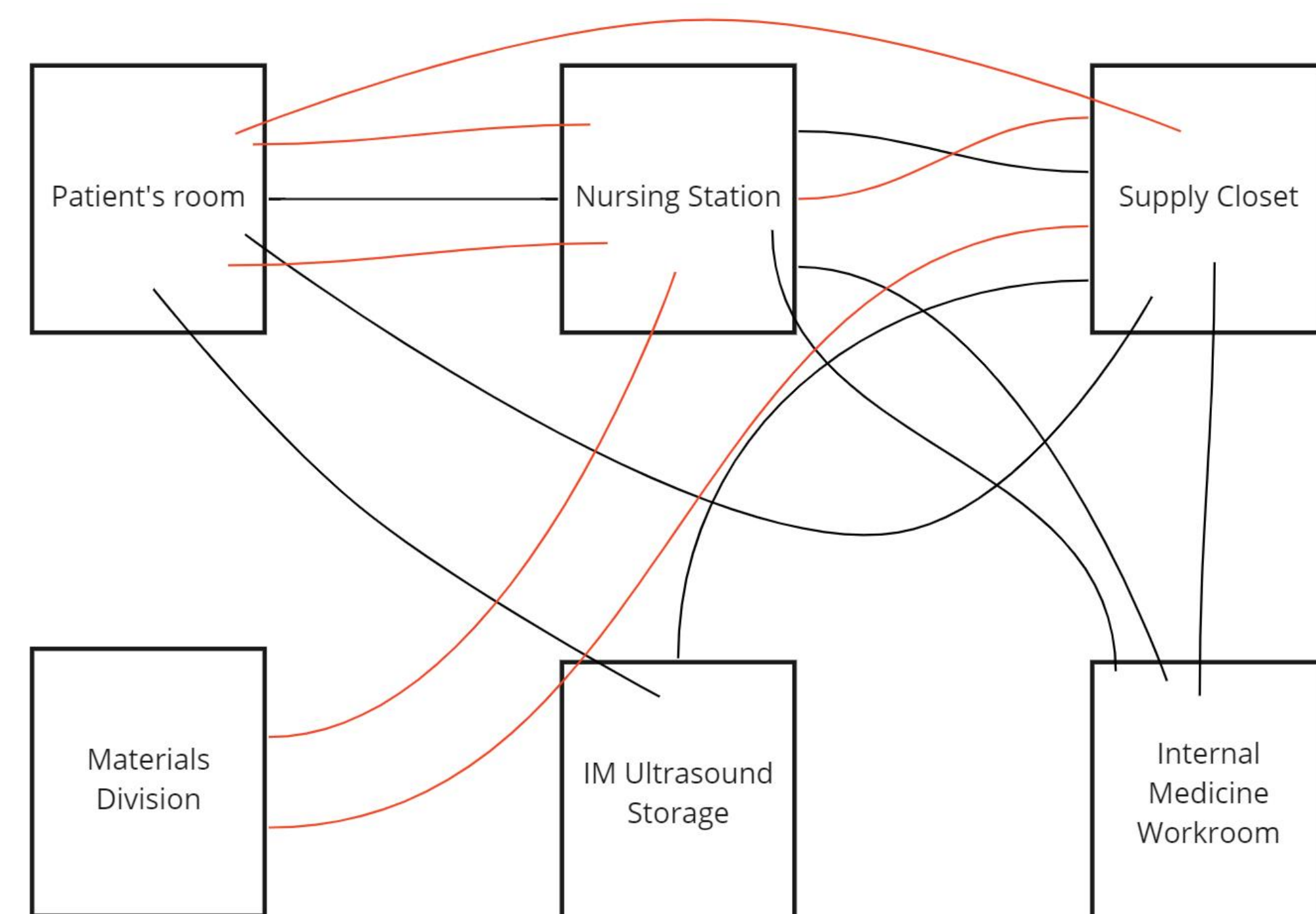
Background

- Supply chain inefficiency and equipment unavailability cause physicians to spend less time caring for patients and more time gathering supplies.
- Procedure preparation times are widely variable and impact workflow
- Inefficiency and time waste impact physicians' outlook on the care they provide to patients, their overall work-life balance, and their relationship with workplace colleagues¹
- Procedure bundles have been shown to increase efficiency and decrease complications²

Aim Statement: To utilize LEAN methodology to create a pre-assembled paracentesis procedure bundle that decreases residents' procedure preparation time by 50%

Current State

- Primary source of physician time waste = pre-procedure supplies
- Resident physician, nursing, and materials division are all required for supply gathering
- Process involves waiting, motion, and transportation waste when analyzed with LEAN principles



Methods

- Surveyed resident stakeholders to create standardized procedure bundle supply list
- Assembled bundles and stored in a centralized workroom
- In-Scope: Inpatient internal medicine teaching teams
- Outcome Measure: preparation time (minutes from start of prep to patient marked)

Paracentesis Bundle

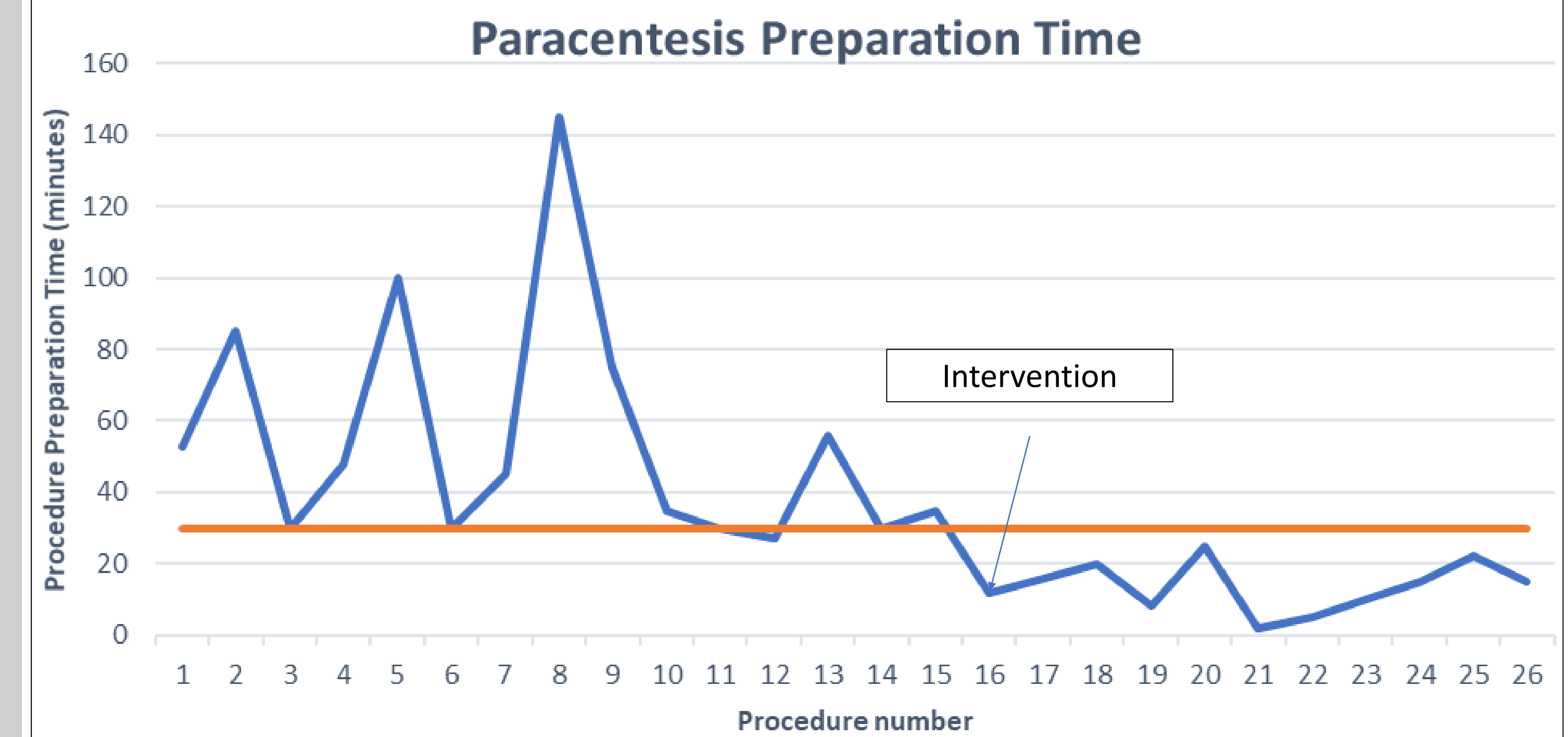
- 1 Collection bucket with lid
- 1 Safe-T-Centesis kit
- 2 Wall suction tubing packs
- 1 Aerobic blood culture bottle
- 1 Anaerobic blood culture bottle
- 2 Medium Tegaderm
- 1 Package of 4x4 gauze
- 1 Heparin lock for patient marking
- 1 Chloraprep stick

Results

Positive Resident Feedback:

"Why didn't we already have these?"

"The bundle significantly decreased the dread I have surrounding doing a para."



Average Prep Time: 55 min → 14 min
Maximum Prep Time: 145 min → 25 minutes
74% Reduction in Prep Time
~450 min Saved in the Intervention Period

Future Directions

- PDSA Cycle #1 effectively decreased prep time, serving as proof of concept
- Future PDSA cycles could expand on this success:
 - Adoption of paracentesis bundles through centralized hub
 - CVC procedure kits in resident MICU
 - Arterial procedure kits in resident CCU

References

1. Byrne D. The relationship between Supply Chain and the frontline clinician. Patient Safety & Quality Healthcare. <https://www.psqh.com/analysis/the-relationship-between-supply-chain-and-the-frontline-clinician/>. Published December 2, 2019. Accessed April 22, 2022.
2. Resar R, Griffin FA, Haraden C, Nolan TW. Using care bundles to improve health care quality. IHI Innovation series white paper.: Institute for Healthcare Improvement;2012.

