## Improving Procedural Graduate Medical Education for Internal Medicine Residents: Increasing Resident Participation and Comfort with Bedside Paracentesis



Aim: to improve overall percentage of paracenteses completed by residents to 100% by utilizing a paracentesis flowsheet, skills training workshop and introduction of a resident paracentesis cart

**INTRODUCTION:** There has been a decline in the number of procedures performed and the comfort level of residents to do procedures over the past 30 years, with the American Board of Internal Medicine no longer requiring procedural competency<sup>1,2</sup>. At Inova Fairfax Medical Campus, bedside procedures are often outsourced to other non-resident procedure teams, made up of advanced practice providers (APPs). Evidence suggests more procedural experience is associated with reduced complications and increased procedural competency<sup>3</sup>.

**METHODS**: Data from paracenteses performed by both medical residents and APPs was analyzed using chart review and online data gathering tools from October 2021 – March 2022 compared to the same time the previous year to determine the number of procedures performed on resident patients. Interventions included a guided procedure flowsheet (figure 1), procedure workshop and introduction of a paracentesis cart.

**RESULTS:** In the 6-month period analyzed and with each Plan-Do-Study-Act (PDSA) cycle, there was in increase in the percentage of paracenteses for resident patients performed by residents. Following, the skills session and implementation of the paracentesis cart, there was a consistent 100 percent completion rate by residents (graph 1).

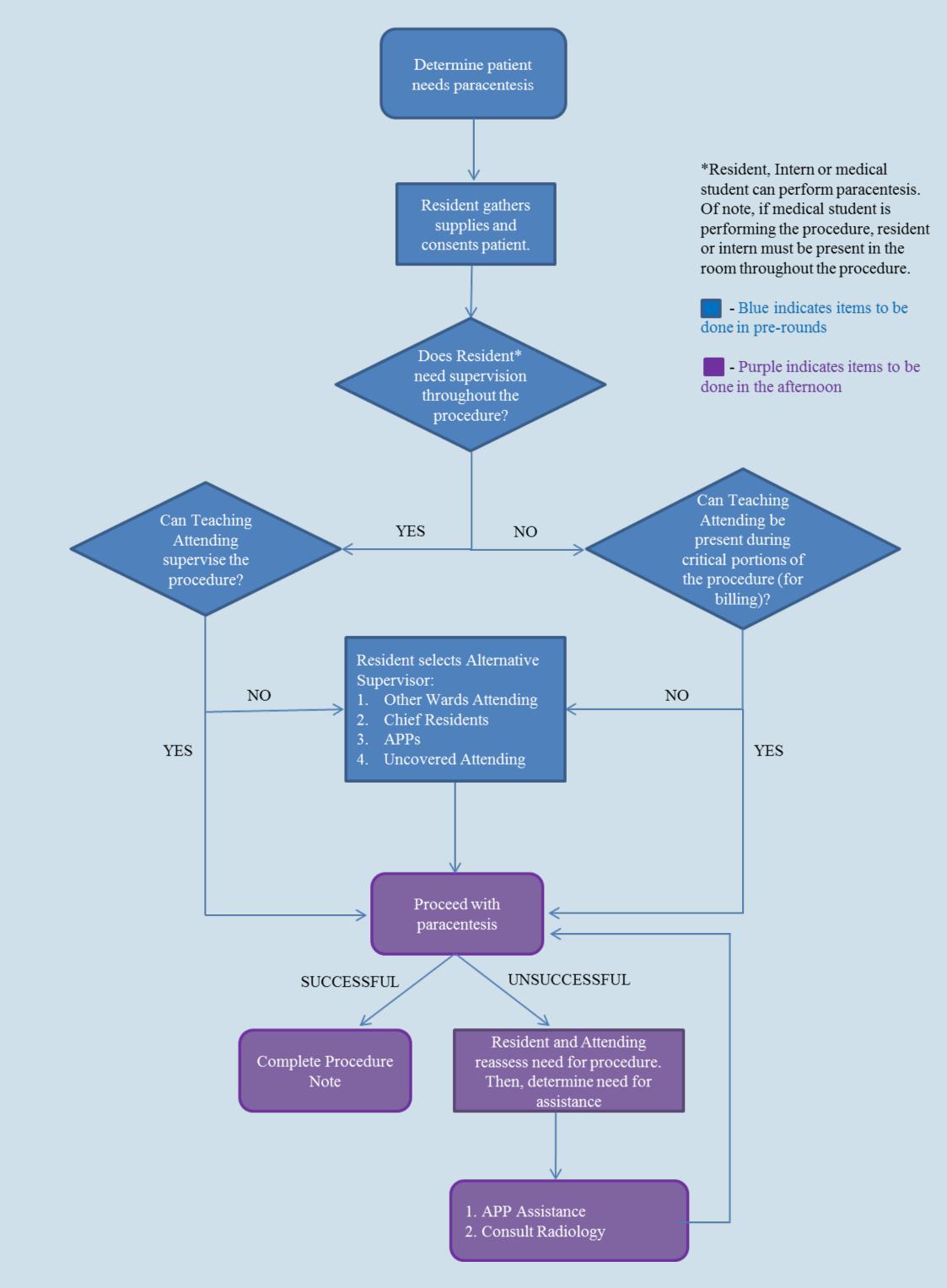
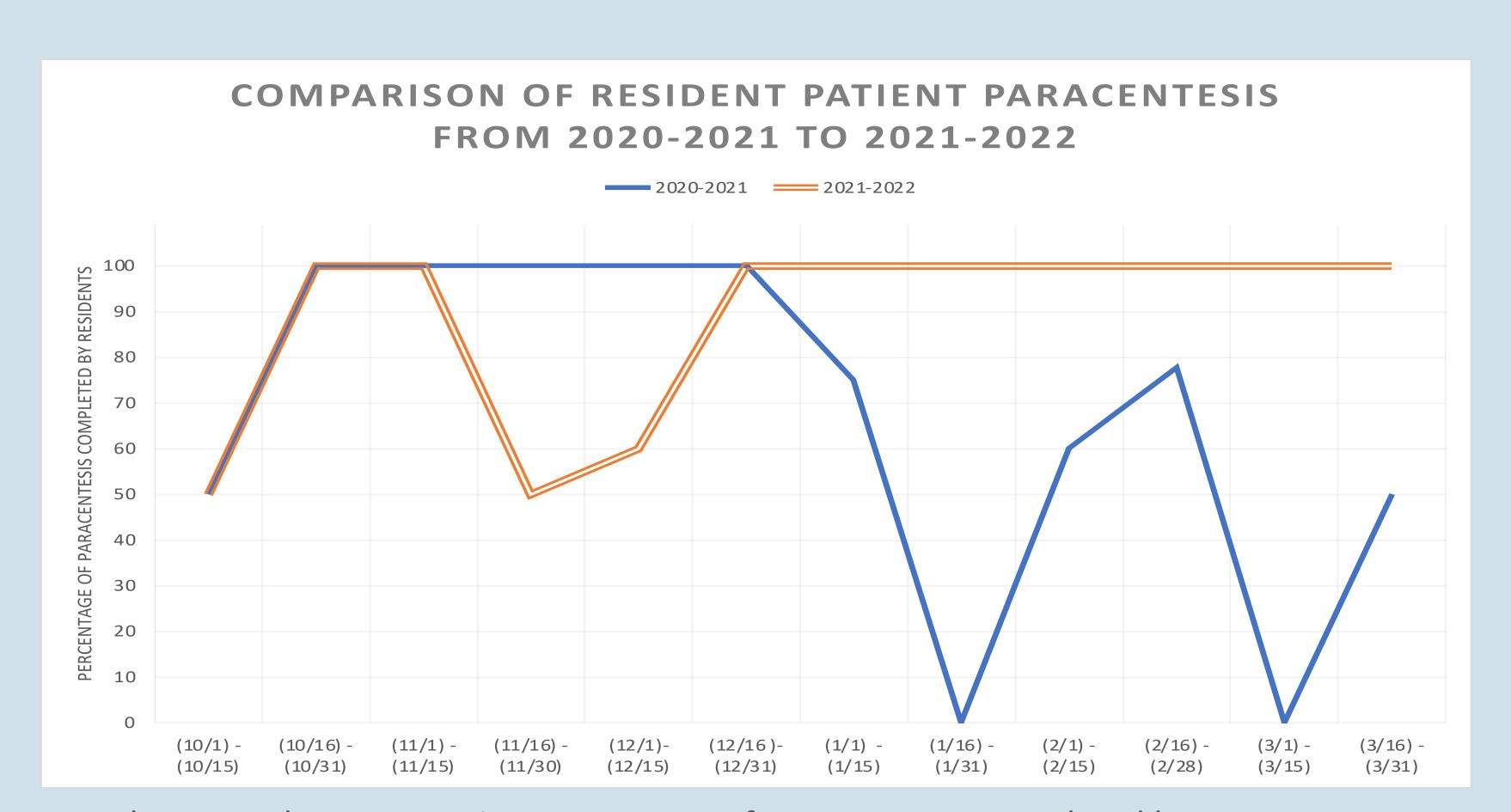


Figure 1: Paracentesis flow chart



Graph 1: Run chart comparing percentage of paracenteses completed by residents from last academic year (blue) to current academic year (orange)

**CONCLUSION**: For internal medicine residents, becoming adept in procedures is a skill that can be utilized for the rest of their professional careers. By utilizing simple and easily implemented strategies, we successfully increased the percentage of resident-performed paracenteses. Further steps may include creating a specific resident-run procedure team, as well as flowsheet/training for other bedside procedures including central lines, thoracentesis and lumbar punctures.

## References:

<sup>1.</sup> Wigton RS, Alguire P. American College of Physicians. The declining number and variety of procedures done by general internists: a resurvey of members of the American College of Physicians. *Ann Intern Med*. 2007;146(5):355–360.

<sup>2.</sup> American Board of Internal Medicine. *Policies and Procedures for Certification*. 2018

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3. Mourad M, Kohlwes J, Maselli J, Auerbach AD, MERN Group. Supervising the Supervisors—Procedural Training and Supervision in Internal Medicine Residency. Journal of General Internal Medicine. 2010;25(4):351–356. https://doi.org/10.1007/s11606-009-1226-z