

Response to Chen, Lee, and Chen



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We appreciate the insightful comments of Drs. Chen, Lee, and Chen and will respond to the three questions they raise. First, all of the chief residents who served as junior faculty to run the procedure service were trained 1:1 by the procedure service director during a 6-week period prior to the start of their year as chief resident. In addition to reviewing procedural techniques, chief resident training focused on how to teach and supervise procedures being performed by less experienced operators, specifically internal medicine interns. Chief residents were signed off by the procedure service director before being allowed to serve independently as the attending physician of service. All procedures were performed by interns under the direct supervision of a chief resident.

Second, regarding the number of procedure attempts and successes per intern, we unfortunately do not have this data. Although such data would be interesting to review, collecting such granular data was not possible given the high number of procedure consults received daily. Thus, we evaluated the learning effectiveness by analyzing data in aggregate rather than by individual intern, as done in several prior studies.¹⁻⁵


Third, during the 1-month procedure service rotation, we would estimate that interns generally performed 5 or more paracentesis, 2 to 4 thoracentesis, and 0 to 3 lumbar punctures, arthrocenteses, or central line placements. It is important to note that these numbers varied greatly on a monthly basis. With respect to intern learning satisfaction by procedure type, we did not collect this data but may consider collecting it in future course evaluations.

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Declarations

Conflicts of Interest None.

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REFERENCES

1. **Smith CC, Gordon CE, Feller-Kopman D, et al.** Creation of an innovative inpatient medical procedure service and a method to evaluate house staff competency. *J Gen Intern Med.* 2004;19(5 Pt 2):510-3.
2. **Tukey MH, Wiener RS.** The impact of a medical procedure service on patient safety, procedure quality and resident training opportunities. *J Gen Intern Med.* 2014;29(3):485-90.
3. **Spangler H, Stephens JR, Sturkie E, Dancel R.** Implementation of an academic hospital medicine procedure service: 5-year experience. *Hosp Pract (1995).* 2021;49(3):209-215.
4. **Swartz S, Umpierrez De Reguero A, Puetz JR, et al.** Advancing Internal Medicine Training: Experience of a Bedside Procedure Service as a Resident Elective. *Hosp Top.* 2021 5:1-8.
5. **Buell KG, Hayat MH, Walsh DW, Wooldridge KT, Vasilevskis EE, Heller LT.** Creation of a medical procedure service in a tertiary medical center: Blueprint and procedural outcomes. *J Hosp Med.* 2022;17(8):594-600.

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