



This study evaluated associations between residents' medical procedure skills measured in a simulation laboratory and self-reported procedure experience and year of training" Barsuk et al (2017).

Abstract:

**BACKGROUND:** Many medical certifying bodies require that a minimum number of clinical procedures be completed during residency training to obtain board eligibility. However, little is known about the relationship between the number of procedures residents perform and their clinical competence.

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**OBJECTIVE:** This study evaluated associations between residents' medical procedure skills measured in a simulation laboratory and self-reported procedure experience and year of training.

**METHODS:** This research synthesis extracted and summarized data from multiple cohorts of internal medicine, emergency medicine, anesthesiology, and neurology resident physicians who performed simulated clinical procedures. The procedures were central venous catheter

insertion, lumbar puncture, paracentesis, and thoracentesis. We compared residents' baseline simulated performance to their self-reported procedure experience using data from 7 research reports written by Northwestern University investigators between 2006 and 2016. We also evaluated how performance differed by postgraduate year (PGY).

**RESULTS:** A total of 588 simulated procedures were performed during the study period. We found significant associations between passing the skills examinations and higher number of self-reported procedures performed ( $P = .011$ ) and higher PGY ( $P < .001$ ). However, performance for all procedures was poor, as only 10% of residents passed the assessments with a mean of 48% of checklist items correct ( $SD = 24.2$ ). The association between passing the skills examination and year of training was mostly due to differences between PGY-1 and subsequent years of training.

**CONCLUSIONS:** Despite positive associations between self-reported experience and simulated procedure performance, overall performance was poor. Residents' clinical experience is not a proxy for skill.

Reference:

Barsuk, J.H., Cohen, E.R., Feinglass, J., McGaghie, W.C. and Wayne, D.B. (2017) Residents' Procedural Experience Does Not Ensure Competence: A Research Synthesis. *Journal of Graduate Medical Education*. 9(2), p.201-208.

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