Capsule Commentary on Tukey et al., The Impact of a Medical Procedure Service on Patient Safety, Procedure Quality and Resident Training Opportunities

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Medical procedure services (MPS) were developed to achieve several aims: 1) train residents in the performance of bedside procedures, 2) routinely provide attending supervision, 3) improve procedural success while reducing complications, and 4) offset resident workload in the era of duty hours restrictions.^{1–3}

The study by Tukey et al.⁴ examines the impact of a MPS on trainee engagement and procedural safety. They found that resident participation in procedures did not differ when performed by the MPS versus the primary team. Procedures performed by the MPS were more likely to use ultrasound guidance, be supervised by an attending, and were more likely to be completed successfully. However, there was no difference in the primary outcome of overall or individual procedure complication rates.

This is not the first study that has failed to show a difference in complications.³ Similar to previous studies, the inability to measure differences in patient outcomes may be the result of selection bias: more procedural referrals to the MPS from inexperienced residents or referrals for more complex procedures that in other hands may have resulted in complications.

What does it mean that, when studied rigorously, a MPS does not achieve all desired aims?

Perhaps we can draw an analogy between MPS and Rapid Response Teams (RRTs). Both are resource-rich innovations that provide valuable support to hospital providers, but have not yet consistently demonstrated benefits in patient outcomes.⁵ Like RRTs, hospitals may decide the benefits of a

MPS—namely, enhanced resident experience and comfort, improved educational outcomes, and low rates of complications^{1–3}—offset the as yet unproven outcome improvements. The truth is that alternatives are lacking. It is no longer practical or feasible to ensure all Internal Medicine (IM) residents are competent to perform procedures during training. Fewer IM faculty feel comfortable training residents in bedside procedures; they have neither the opportunity nor demand to maintain their skills. The need for safe and timely bedside procedures, however, still exists. MPS offer dedicated experience and training for IM residents, while providing safe and successful procedures for residents and other attendings, who often lack the time and expertise for procedures.

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