

# A Post-2011 Time Motion Study

Lauren Block, MD, MPH<sup>1</sup>, Robert Habicht, MD<sup>2</sup>, Albert W. Wu, MD, MPH<sup>3,4</sup>, Sanjay V. Desai, MD<sup>4</sup>, Kevin Wang<sup>5</sup>, Kathryn Novello Silva, MD<sup>2</sup>, Timothy Niessen, MD, MPH<sup>4</sup>, Nora Oliver, MD, MPH<sup>6</sup>, and Leonard Feldman, MD<sup>4</sup>

<sup>1</sup>Department of Medicine, Hofstra North Shore-LIJ School of Medicine, Lake Success, NY, USA; <sup>2</sup>Department of Medicine, University of Maryland School of Medicine, Baltimore, MD, USA; <sup>3</sup>Department of Health Policy and Management, Johns Hopkins Bloomberg School of Public Health, Baltimore, MD, USA; <sup>4</sup>Department of Medicine, Johns Hopkins University School of Medicine, Baltimore, MD, USA; <sup>5</sup>Johns Hopkins University, Baltimore, MD, USA; <sup>6</sup>Department of Medicine, University of Maryland Medical Center, Baltimore, MD, USA.

J Gen Intern Med 29(1):24  
DOI: 10.1007/s11606-013-2669-9  
© Society of General Internal Medicine 2013

*The Authors' Reply*—We thank Dr. Lee and co-authors for their letter. We agree that mobile technology, used in a patient-centered manner, holds the potential to improve care at the bedside. Recent studies have revealed that use of iPads for inpatient work improved efficiency, as reported by residents and as tracked by timing of order placement.<sup>1,2</sup> Our residency programs have supported the use of mobile technology in resident education and clinical care, and one program has provided residents with iPads since 2012, including at the time of data collection for our study.

Due to our conviction that mobile technology applied at the bedside can augment patient care, our analysis included as direct patient care all time spent by residents at the bedside, including time during which the resident was also using mobile technology, teaching, or speaking with other members of the medical team. We did this to give residents the ‘benefit of the doubt’ that time spent with patients was important, even if the residents were multi-tasking at the time, including the use of mobile technology. Despite this, our results indicated that only 12 % of time was spent face-to-face with patients and 40 % of their time was occupied by computer use that took place outside of patient rooms. There was no significant difference in direct patient care

time between the two sites, despite provision of iPads at one of the sites.

While not rigorously evaluated in our study, efficiency gained through mobile technology used in and out of patients’ rooms did not seem to offset the other demands on resident time that limit direct patient care. While we agree that curricula surrounding electronic medical records (EMR) and mobile technology use has the potential to improve patient-centered care, spending 12 % of the work day on direct patient care may not be sufficient. To increase the time residents spend listening to and learning from patients, we may need to think more broadly than just giving them another electronic device.

---

**Corresponding Author:** Lauren Block, MD, MPH; Department of Medicine, Hofstra North Shore-LIJ School of Medicine, 2001 Marcus Ave, Suite S160, Lake Success, NY 11042, USA (e-mail: Lblock2@nshs.edu).

## REFERENCES

1. Patel BK, Chapman CG, Luo N, Woodruff JN, Arora VM. Impact of mobile tablet computers on internal medicine resident efficiency. *Arch Intern Med.* 2012;172(5):436–8.
2. Lobo MJ, Crandley EF, Rumph JS, et al. Pilot study of iPad incorporation into graduate medical education. *J Grad Med Educ.* 2013;5(1):142–4.