



CORRESPONDENCE

Further considerations on competence by design: when opportunity stops knocking

George Shorten, MD, PhD · Mark F. Levine, MBBCh, FRCPC

Received: 27 October 2016 / Accepted: 24 November 2016 / Published online: 9 December 2016
© Canadian Anesthesiologists' Society 2016

To the Editor,

Dr. Waechter's recent insightful letter¹ identifies a very important, and as yet unanswered, question regarding the implementation of competence by design in medical training. In his final sentence, he summarizes the challenge, stating that, "we must be aware of learners' needs so we can fill the existing opportunistic learning gaps with future designed learning solutions."¹

We suggest that astute analysis of novel, data-rich sources may potentially provide the solution. If, as seems likely, doctors move toward acquiring more detailed records (e.g., via multimedia) of increasing amounts of their work - perhaps in the form of video recordings collected using wearable recording devices² - it could create a large digital data set of one's clinical experience. These data sets are obvious sources of information relating to the scope of experience and the quality of a physician's performance. We suggest that these data sets could potentially provide important insights into the learning curves for individual trainees.³ They therefore offer the potential to identify unmet learner-specific needs, which are specific to the trainee, his or her training program, and

to particular points in time during that training. These records could form the foundation for "design-based" training during which invaluable clinical learning opportunities are augmented by simulation-based training.

Conflicts of interest None declared

Editorial responsibility This submission was handled by Dr. Hilary P. Grocott, Editor-in-Chief, *Canadian Journal of Anesthesia*

References

1. Waechter J. Competency by design: when opportunity stops knocking. *Can. J Anesth* 2017. DOI: [10.1007/s12630-016-0774-z](https://doi.org/10.1007/s12630-016-0774-z).
2. Beard HR, Marquez-Lara AJ, Hamid KS. Using wearable video technology to build a point-of-view surgical education library. *JAMA Surg* 2016; 151: 771-2.
3. Ericsson KA. Acquisition and maintenance of medical expertise: a perspective from the expert performance approach with deliberate practice. *Acad Med* 2015; 90: 1471-86.

This letter is accompanied by a reply. Please see *Can J Anesth* 2017; 64: this issue.

G. Shorten, MD, PhD
Department of Anaesthesia and Intensive Care Medicine,
University College Cork, Cork, Ireland

M. F. Levine, MBBCh, FRCPC (✉)
Department of Anesthesia and Pain Medicine, The Hospital for
Sick Children, The University of Toronto, Toronto, ON, Canada