Our collaboration frequently meets to discuss data analysis results and explore processes and practices beyond the data. Through promoting dialogue among UMCs, a learning environment has been created.

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## THE AUTHORS RESPOND

We thank Dr. Stepaniak for his interest in our commentary on the identification and use of operating room (OR) efficiency indicators. While the Procedural Times Glossary, developed by the Association of Anesthesia Clinical Directors (AACD), is a leading source of procedural time definitions in support of economic and efficiency analyses within the OR, this does not negate the fact that variable performance indicator definitions nonetheless exist in the body of OR efficiency literature. Moreover, despite the availability of leading sources of definitions such as the Procedural Times Glossary, differences in how hospitals define key OR performance indicators persist.

Furthermore, even the AACD's Procedural Times Glossary may not always be adequate if one wants to ensure consistent performance indicator data collection across multiple hospitals. For example, the AACD defines "turnover time" as the "time from prior patient out of room to succeeding patient in room time for sequentially scheduled cases."[1] However, while this definition is clearly meant to exclude idle time between nonsequentially scheduled cases, it does not entirely address potential exclusions, such as delays between sequentially scheduled cases unrelated to room cleaning and preparation (e.g., patient arrives late); how these situations are handled varies significantly across hospitals and materially impacts how the indicator is collected.

Another example is the definition of "on-time starts," defined as the patient being in the OR at the scheduled time.[1] This does not consider, however, whether certain late starts should be excluded (e.g., owing to delayed access to postoperative beds, as is the case at some hospitals).

Thus, we do believe that there is room for professional associations to agree to develop common metrics and operational definitions, perhaps using the AACD's Procedural Times Glossary (or an equivalent source) as a starting point, closing any gaps from there.

Regarding Dr. Stepaniak's second point, while performance indicators may not contribute to the *effective* use of resources as defined by the Institute of Medicine's Committee on Quality Health Care in America, they may do so under another definition, such as the *Oxford English Dictionary*, which defines "effective" as "having an intended or expected effect." If using resources efficiently leads to the most patients having surgery in the best way (i.e., on time starts, no delays, no cancellations), then use of OR performance indicators to monitor operational performance can indeed lead to the effective use of resources.

In addition, we also thank Dr. Kazemier and Ms. van Veen-Berkx for their interest in our commentary and note that the Dutch experience, whereby it took 2 years to harmonize OR performance indicator definitions and reporting across 8 university medical centres, speaks to the complexity of the undertaking and the continuing lack of universal standards for indicator definitions.

Moreover, some Canadian provinces have also had some success in harmonizing OR performance indicators, such as the OR Benchmarks Collaborative in Ontario. As our commentary has demonstrated, though, variable indicator definitions persist and harmonizing them nationally may be particularly challenging due to the provincial delivery of health care.

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