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Delirium after Cardiac Surgery and Cognitive Change: Reply

In Reply:

We thank Drs. Boncyk and Hughes for their letter and interest in the article, "Cognitive Decline after Delirium in Patients Undergoing Cardiac Surgery."[1] The research group at Vanderbilt University, Nashville, Tennessee, has conducted seminal work in understanding delirium and long-term cognitive change after hospitalization. We generally agree with the points discussed in the accompanying letter and are glad to see these points emphasized. Our results show a nonlinear trajectory of cognitive status after surgery up to 1 yr postoperatively. We agree that the findings of no difference in cognition by delirium status at 1 yr should be interpreted cautiously, since the 1-yr assessments were not the primary outcome and the study may be underpowered to demonstrate meaningful differences. Although we discussed this limitation and tried to be appropriately cautious in our interpretation of the 1-yr data, this letter highlights an important limitation of our results. We also agree that examining longer-term trajectories is critical, given that Inouye *et al.*[2] showed increased cognitive decline in delirious patients during extended follow-up—from 1 to 3 yr postoperatively. To this end, we are currently examining the feasibility of obtaining cognitive assessments in our study patients at time points greater than 5 yr after surgery. We also agree that patient-reported outcomes are important to consider to evaluate both statistical and clinical significance of our findings and will consider whether patient-related outcomes that we did collect could provide further insight. Finally, the importance of future observational and interventional studies to illuminate mechanisms for delirium cannot be overemphasized. The epidemiology and risk factors for delirium have been well described; a seminal current challenge is to understand mechanisms for the development and consequences of delirium after surgery and critical illness.

Competing Interests

Dr. Brown has consulted for and received grant funding from Medtronic (Minneapolis, Minnesota). Dr. Hogue is a consultant and provides lectures for Medtronic/Covidien (Boulder, Colorado) and is a consultant to Merck (Kenilworth, New Jersey).

Research Support

Supported by grants from the National Institutes of Health, Bethesda, Maryland (grant No. K76 AG057020 to Dr. Brown and grant No. RO1 HL092259 to Dr. Hogue).

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(Accepted for publication February 22, 2019.)