Commentary: 2B or 2A, that is the question

Dawn S. Hui, MD,^a and Richard Lee, MD, MBA^b

From the 2018 American College of Cardiology, American Heart Association, American College of Cardiology, the American Heart Association, and the Heart Rhythm Society Guidelines¹ come both good news and bad news for cardiac surgeons. The good news is the newly developed section dedicated to the management of postoperative bradycardia and conduction disorders after cardiac surgery. This is a contrast to the 2008 guidelines,² in which the guidance for postsurgical patients consisted of a handful of comments interspersed throughout the document, with sparse discussion of the strength of evidence. This meant that the 2018 evidence review and writing committees had the formidable task of writing this section de novo. These committees have admirably reviewed the evidence, providing a structured and systematic synthesis of the available literature and their resulting recommendations.

The bad news is that in the intervening 10 years, there does not appear to have been a robust body of evidence accumulated to aid them in their task. Because surgeons may refer to the guidelines in clinical practice daily, it is useful to evaluate the impact of this fact. Consider the process and intent outlined in the document's preamble and introduction. The guidelines are meant to translate "scientific evidence into clinical practice guidelines...to improve quality of care." Although the document also states that it is "not intended to be an exhaustive review," the process includes a critical, extensive evaluation of the literature from numerous high-quality databases and systematic methods to classify that evidence. The work of the committee reveals that the literature to support recommendations for postoperative bradycardia and conduction disorders in adult cardiac surgery is conspicuously limited. The evidence meets only level C for nearly half of the recommendations (limited data, n = 4; expert opinion, n = 6) and level B, nonrandomized, for the remainder (n = 12). This is also apparent in the supportive text, with timing of pacemaker implant lacking formal study across all operation types; ambivalent language regarding intraoperative placement of an epicardial left ventricular lead and the subsequent safety of magnetic

CENTRAL MESSAGE

More contemporary, high-quality evidence is needed to provide recommendations for management of bradycardia and conduction disorders after cardiac surgery.

resonance imaging; and the rationale for routine temporary epicardial wires being "standard surgical practice" rather than evidence-based.

One may thus interpret the guidelines in 1 of 2 ways. In essence, they document what are standard practices that have developed out of decades of surgical practice. Surgeons who practice in the routine manner described by the document may rest assured that their actions do not place the patient at harm. Those who look to the guidelines to improve quality of care, however, will find that the committee has been hampered by the rudimentary state of knowledge. Without evidence, there can be no forward movement. The 2018 guidelines lay bare this state of affairs. It is up to our specialty to begin broaching questions as to whether deviations from these practices will improve quality of care, to identify the nuances of the various operations' effects on conduction abnormalities, and to start building the evidence that allows the next guideline committee to accomplish its stated goal.

References

1. Kusumoto FM, Schoenfeld MH, Barret C, Edgerton JR, Ellenbogen KA, Gold MR, et al. 2018 ACC/AHA/HRS guideline on the evaluation and management of patients with bradycardia and cardiac conduction delay. *J Am Coll Cardiol*. 2019;74:e51-156.
2. Epstein AE, Di Marco JP, Ellenbogen KA, Estes NA III, Freedman RA, Gettes LS, et al American College of Cardiology/American Heart Association Task Force on Practice Guidelines (Writing Committee to Revise the ACC/AHA/NASPE 2002 Guideline Update for Implantation of Cardiac Pacemakers and Antiarrhythmia Devices). American Association for Thoracic Surgery; Society of Thoracic Surgeons. ACC/AHA/HRS 2008 guidelines for device-based therapy of cardiac rhythm abnormalities: a report of the American College of Cardiology/American Heart Association/task force on practice guidelines (writing committee to revise the ACC/AHA/NASPE 2002 guideline update for implantation of cardiac pacemakers and antiarrhythmia devices): developed in collaboration with the American Association for Thoracic Surgery and Society of Thoracic Surgeons. *Circulation*. 2008;117:e350-408. Erratum in: *Circulation*. 2009;120:e34-5.

^a Department of Cardiothoracic Surgery, University of Texas Health Science Center San Antonio, San Antonio, Tex;^b Division of Cardiothoracic Surgery, Department of Surgery, Medical College of Georgia, Augusta University, Augusta, Ga
Disclosures: Authors have nothing to disclose with regard to commercial support.
Received for publication Jan 16, 2019; accepted for publication Jan 16, 2019; available ahead of print Jan 26, 2019.

Address for reprints: Richard Lee, MD, MBA, 1120 15th St, BA-4300, Augusta, GA 30912 (E-mail: ricklee@augusta.edu).

J Thorac Cardiovasc Surg 2022;164:e33

0022-5223/\$36.00

Copyright © 2019 by The American Association for Thoracic Surgery

<https://doi.org/10.1016/j.jtcvs.2019.01.059>