value actually mean and does this management approach apply to my patients? Would you actually send a patient home from the emergency department with a large pneumothorax that is stable on a repeat 4-hour chest radiograph? Many practitioners will remain tentative until they understand the nitty gritty of the PSP trial. Obtaining a master's degree in clinical investigation would provide an outstanding platform to dissect these high profile and statistically complex trials. Or, you can preview the last section

of Giles and colleagues² masterfully structured review: "Does the evidence support the conclusions?"

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Commentary: Tube or no tube?

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I am not sure many of us have thought much about the options for treating a symptomatic large primary pneumothorax. The biggest decision was probably "should I put in a standard-size or small-bore chest tube?" The thought of sending an 18-year-old with pain, shortness of breath, and a 70% pneumothorax home without treatment might not have crossed your mind.

In January 2020, Brown and colleagues published the results of the Primary Spontaneous Pneumothorax (PSP) Trial in the *New England Journal of Medicine*.¹ That trial, performed in Australia and New Zealand, randomized patients with moderate to large (>32%) primary spontaneous pneumothorax to either observation or a small-bore chest drain. As long as patients could maintain a room air saturation >90% with pain controlled on oral pain medications, they were sent home with serial follow-up. Perhaps surprising to many, the conservative approach was found to be noninferior to an interventional approach. Specifically, at 8 weeks, the rate of pneumothorax resolution was similar, and the

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CENTRAL MESSAGE

Understanding the strengths and limitations of the Primary Spontaneous Pneumothorax Trial will help determine how best to implement a conservative management strategy.

rate of adverse events was lower in the conservative group. Of interest, the conservative approach was associated with a lower 1-year rate of recurrent pneumothorax compared with the intervention group (8.8% vs 16.8%).

The PSP trial was authored predominantly by emergency medicine physicians but obviously has implications for thoracic surgeons, who are typically responsible for managing these patients. Owing to its potential for a significant change in clinical management, the PSP trial paper was chosen by the Evidence-Based Reviews in Surgery global journal club for methodologic review. In this issue of the *Journal*, Giles and colleagues² nicely summarize the expert clinical and methodologic analysis of the PSP trial from a surgeon's perspective. They deftly point out that the trial had a highly selected population (2637 screened for 316

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Disclosure: The author reported no conflicts of interest.

The *Journal* policy requires editors and reviewers to disclose conflicts of interest and to decline handling or reviewing manuscripts for which they may have a conflict of interest. The editors and reviewers of this article have no conflicts of interest.

Received for publication March 22, 2021; revisions received March 22, 2021; accepted for publication March 23, 2021; available ahead of print March 30, 2021.

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J Thorac Cardiovasc Surg 2021;162:1434-5

0022-5223/\$36.00

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<https://doi.org/10.1016/j.jtcvs.2021.03.087>

randomized), so generalizability may be an issue. Although the majority of the patients did well with conservative management, 15% still required chest tubes, and 16% of the entire study population ultimately required surgery.

Thoracic surgeons should understand the strengths and limitations of the PSP trial so they can effectively discuss with their emergency and pulmonary medicine colleagues how to incorporate a conservative management strategy into their algorithm for primary spontaneous pneumothorax. Both of these articles should spur us to continue to conduct clinical trials to study common problems and test

medical dogma. As is often the case, the PSP trial has uncovered interesting questions, and one that I want to see answered is how a noninterventional approach led to a 50% reduction in recurrent pneumothorax at 1 year.

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