in cardiac surgery patients will go a long way toward improving this.

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Commentary: The pervasive yet elusive problem of delirium after cardiac surgery

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Delirium after cardiac surgery is a common and often under-recognized problem, associated with increased risk of probability of death and hospital readmission, decreased cognitive function, and reduced health-related quality of life.¹ It may be greater in patients who have perioperative complications after cardiac surgery.² Any attempt to improve the prognosis of this postoperative complication must start with early recognition. Several screening tests, such as the Confusion Assessment Method, have been developed in an effort to improve delirium detection.³ The 4 'A's Test, or 4AT, is another established screening tool that has demonstrated good sensitivity and specificity when administered across a variety of clinical settings internationally.⁴ The effectiveness of this tool in the postcardiac surgery setting is not yet known.

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CENTRAL MESSAGE

Improved detection of delirium after cardiac surgery is essential. The 4AT may be an effective screening tool, but further research demonstrating its clinical applicability is warranted.

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In this issue of the *Journal*, Chang and colleagues⁵ seek to evaluate the effectiveness of the 4AT in detecting delirium among patients postcardiac surgery after transfer from the intensive care unit. The study analyzes the screening tool's accuracy when administered by research assistants and by nursing staff on the ward and compares it with reference standards in an effort to establish its clinical relevance and practicality. This topic represents a critical gap in the literature on postoperative delirium; it is necessary not only to acknowledge the effects of delirium on outcomes and to establish a validated screening tool but also to prove that such a tool actually works in the clinical setting. The next steps would be to link increased detection of delirium with an improvement in outcomes by identifying actionable targets.

The authors conclude that the 4AT is a sensitive and specific test for postcardiotomy delirium detection. The sensitivity, however, was markedly reduced among the nurse-administered assessments (58% vs 85% among the research assistant assessments). We wonder whether the results would differ if the instruction on administration, frequency and timing of assessments, and comparison to reference were standardized among all assessments, enabling more effective comparison of the data. If the sensitivity remained this low after addressing these factors, it would argue against the efficacy of the 4AT in the screening of patients postcardiac surgery. A good screening tool should be reproducible and user-independent, in addition to being highly sensitive. It is unclear, too, why nurse adherence to completing the 4AT assessment was so poor. One mentioned barrier to administration was that many patients seemed to still be quite sedated. We wonder whether some of these patients may have actually had unrecognized hypoactive delirium, which can be particularly difficult to detect. In any event, barriers to administration of this and other delirium screening tests should be investigated and addressed.

In summary, the authors investigated a highly relevant and important topic of postoperative delirium, which is common, under-recognized, and consequential. With more standardized methodology and incorporation of baseline and operative characteristics that may affect development of delirium, the utility of the 4AT in screening patients postcardiac surgery may be better understood.

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Commentary: The 4AT score—reducing confusion about delirium diagnosis after cardiac surgery

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CENTRAL MESSAGE

The 4AT score is a practical and accurate method to detect delirium in patients after cardiac surgery on the surgical ward and is administered effectively by nurses.

Delirium remains one of the most common postoperative issues for patients after cardiac surgery.¹ Patients