complicated in the immediate postoperative phase. Patients need to be trained in the self-management skills of symptom monitoring so that early decompensation can be intervened upon before an unplanned hospitalization; this is especially important in countries with shorter postsurgical lengths of stay. These study findings highlight the need to get our cardiac surgery patients moving early and often with multidisciplinary support in place to ensure an expeditious recovery.

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ADULT

Commentary: Lessons learned from multidisciplinary inpatient rehabilitation following cardiac surgery and the gap to broad application

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CENTRAL MESSAGE

Inpatient cardiac rehabilitation may not be available and/or desirable for most patients; surgical teams need to determine how to develop integrated care models to their specific clinical practice.

In this issue of the *Journal*, Ogawa and colleagues[1] outline their experience with acute-phase inpatient rehabilitation following elective cardiac surgery in 306 patients, specifically comparing outcomes on readmission in patients undergoing conventional inpatient cardiac rehabilitation (CR) compared with those enrolled in multidisciplinary CR. The authors should be commended on their commitment to CR and insight to the importance of psychoeducational and nutritional support in addition to exercise-based rehabilitation.

While this was a retrospective study, treatment teams enrolled patients to multidisciplinary CR, in which they noted increased need for psychoeducational intervention, comorbidities, and/or unhealthy lifestyle habits.[1] Analysis included both propensity-matched outcomes and multivariable hazard regression modeling, both of which demonstrated benefit of multidisciplinary CR compared with conventional rehabilitation. The authors did not explore socioeconomic factors, which likely also

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contribute to readmission rates.[2] This is critical as we consider widespread application of this study, in which many patients, and particularly those of lower socioeconomic status, may not have ready access to inpatient rehabilitation. The authors generally outline the interventions of the multidisciplinary CR, including biweekly group education and individualized counseling. It is unclear, however, if and how these interventions continued following hospital discharge. How did what the patients learned in CR translate to their postdischarge lives and reduce their hospital readmission rates? Did patients continue in more regular outpatient clinic and/or telephone follow-up?

The authors highlight that many readmissions following cardiac surgery occur early and their strategy of inpatient rehabilitation addresses these early readmissions. While this is true, an average 21-day hospital stay is an extreme tradeoff. If given the choice, many patients would likely opt out of a prolonged inpatient stay. Care teams need to focus on the benefit of multidisciplinary rehabilitation[1] and apply it in a way that is accessible to patients outside of inpatient rehabilitation. Integrated postdismissal care teams, for heart failure, for example,[3] may be a model to accommodate the benefit of multidisciplinary care and education while maintaining shorter hospital stays.

In conclusion, the study by Ogawa and colleagues[1] highlights the benefit of including psychoeducational and nutrition support to exercise-based CR. Inpatient CR is likely not available and/or desirable for most patients following cardiac surgery and therefore readers need to determine how to develop integrated care models to their specific clinical practice. Longitudinal patient education, before and after surgery, focused both broadly on healthy lifestyles and appropriately focused on heart failure management and postsurgical care is critical to empower patients to understand their disease process, to be proactive in seeking appropriate care, and to keep them out of the hospital.

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