



# A Systematic Review of CABG Educational Interventions

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## INTRODUCTION

Readmissions within 30-60 days' post-coronary artery bypass grafting are a common occurrence and are responsible for increased cost, length of stay, further complications and decreased reimbursement.

The most common reasons for readmission include postoperative infection, heart failure, renal failure, rhythm disturbances and pericardial effusions.

Healthcare providers are increasingly challenged to discharge patients earlier and with less discharge preparation. Targeted education and other interventions are essential to decrease the readmission rate and increase patient satisfaction.

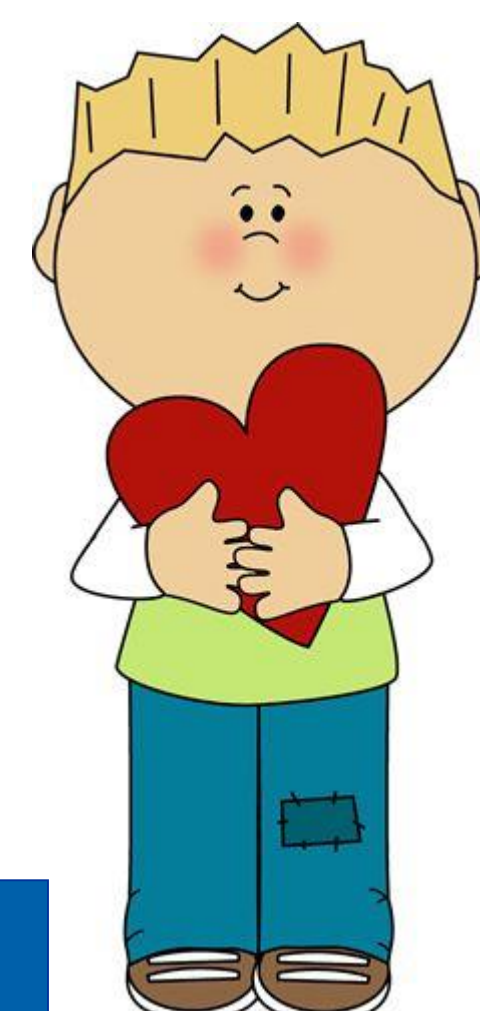
Limitations related to discharge care in the area include distance, rural populations and limited access to telehealth. Additionally, personal responsibility for healthcare outcomes has demonstrated higher satisfaction and decreases in readmissions to the healthcare system.

Telehealth is a viable option and it may be enhanced with mobile telephone or computer applications.

## PURPOSE

The purpose of this systematic review is to appraise the published evidence related to post-discharge readmissions and interventions to decrease the rate of readmissions in the coronary artery bypass population.

PICO Question: In post-cardiac surgery patients does an educational intervention compared to no educational intervention affect hospital readmission rates within 60 days?



## METHODS

A literature search was conducted using PubMed, CINAHL, the National Guidelines and the Cochrane Library in addition to Google Scholar. Words used in the search included "CABG," "Coronary artery bypass surgery," "education," "readmission rates," "decreasing readmission rates" and "complications." Exclusion criteria were articles older than 10 years and adults younger than 50. No pediatric studies were included.

## TABLE: COMPARISON OF INTERVENTIONS AND READMISSIONS IN CABG PATIENTS

Reference	Subjects	Intervention	Results
Fredericks & Yau, 2013	34	Individualized patient education	14.8% readmission rate for study group
Sawatzky, et al 2013	200	Needs assessment, phone calls and follow-up	Intervention group had higher satisfaction, less symptoms and improved function
Tramner & Parry, 2004	200	Usual care and/or d/c phone calls	Intervention group had less symptoms, readmissions and higher satisfaction
Zhang, et al 2011	40	Usual care and/or structured education	Education group had less readmissions and higher satisfaction
Kalogiann, et al 2015	395	Preop education vs usual care	Education group had decreased rate of complications and less infection
Fredericks, 2007	142	Individualized education vs no education	Decrease in symptoms in education group
Cebecci, et al 2007	109	Planned d/c training vs no education	Intervention group had less anxiety and greater self-care

## FINDINGS AND SYNTHESIS OF THE EVIDENCE

Six Randomized Control Trials (RCT) and one quasi-experimental study on pre- and post-discharge instruction for CABG patients were reviewed for this systematic review.

- Six studies reported that pre-operative and pre-discharge education were more likely to decrease readmissions and anxiety.
- Timing of the educational sessions was more important than actual content.
- Individualized education may be more beneficial and home care should be targeted early in the process.

All studies demonstrated a decrease in anxiety levels with education delivered pre-operatively

The studies also reported that close support by the APRN and/or HCP was significant in decreasing readmissions, particularly with complex patients.

Those receiving education also exhibited decreased symptoms in the post-discharge time frame

## CONCLUSION

Pre-CABG educational interventions and close discharge follow-up have demonstrated decreased anxiety, symptomology and readmissions.

The APRN and/or HCP has a significant role in decreasing readmissions and promoting recovery.

The use of computer-based and/or mobile technology should be considered as a method for increasing contact with the HCP and decreasing readmissions

