

# Simple heart failure checklist reduces readmission rates, improves care, could save billions

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Use of a new, simple and inexpensive checklist appears to drastically lower the likelihood of heart failure patient readmission and improve quality of care when used before patients leave the hospital, according to research presented today at the American College of Cardiology's 61st Annual Scientific Session. The Scientific Session, the premier cardiovascular medical meeting, brings cardiovascular professionals together to further advances in the field.

Heart failure (the heart's inability to pump enough blood to the body) costs \$29 billion each year in treatment and carries a relatively high 30-day [readmission](#) rate, which can cost hospitals an average of \$2,084 per patient per day. Under the [Affordable Care](#) Act, hospitals may not be reimbursed for readmissions occurring within a 30-day period.

[Clinicians](#) who used this one-page, 27-question checklist at discharge were able to cut the percentage of patients who were readmitted to the hospital within one month of a cardiac event from 20 percent to just 2 percent. The readmission rate continued to be lower six months after discharge. If broadly adopted, this would translate into billions of Medicare dollars saved each year. While other studies have shown that home care and patient education can reduce readmissions, this is the first to evaluate the use of such a unique one-page, in-hospital checklist that required no extra cost.

"In addition to lowering 30-day and six-month readmissions and the associated costs, we also showed that more patients in the checklist group were likely to be on correct medications and had appropriate [drug doses](#) than patients in the [control group](#)," said Abhijeet Basoor, MD, the study's lead investigator, who developed the checklist at St. Joseph Mercy Oakland Hospital in Pontiac, Mich., where he practices [Internal Medicine](#) and Cardiology.

The checklist was developed and used after approval of the hospital Cardiovascular Quality Integration Board. Dr. Basoor said that everything on the checklist is derived from and reinforces evidence-based practices for managing heart failure and lowering the likelihood of another cardiac event. It is divided into three parts: medications and their appropriate dose modification; counseling and monitoring intervention; and follow-up instructions. The average heart failure patient will need 12 to 15 of the total 27 interventions listed, so using this checklist can help remind both patients and doctors about the various steps that can be taken to manage the condition.

"The checklist provides simple reminders to instruct patients about things like diet, weight, blood pressure monitoring and appropriate drug dose up titration," said Dr. Basoor. "The physician or nurse practitioner working with the patient uses the checklist, so hospitals don't have to pay for additional nursing staff or home care follow-up."

In this randomized controlled trial, 96 heart failure patients were followed for six months after discharge for an initial cardiovascular event. Doctors randomly used the checklist before discharge in half of these patients, while the other half received standard treatment including discharge education and instructions. Data were collected at 30 days and six months post-discharge. Both groups were comparable in terms of other cardiovascular risk factors, age, sex and physician groups treating them. After excluding deaths during follow up, only one person in the

checklist group was readmitted to the hospital in the month following discharge compared to nine in the control group. At six months, 11 patients in the checklist group had been readmitted, compared to 20 in the control group. Higher proportions of patients were on ACE I/ARB medications (those used to control blood pressure) in the checklist group compared to the control group (40 of 48 vs. 23 of 48, 95 percent CI = 0.17 to 0.53, p

According to the Kaiser Family Foundation, heart failure readmission costs \$12 billion in Medicare spending each year and approximately 25 percent of Medicare [patients](#) with heart failure are readmitted to the hospital within 30 days of an event. Previous studies have shown 50 percent of these [heart failure](#) readmissions can be prevented. When the Affordable Care Act takes effect in 2014, Medicare will begin to penalize hospitals with high readmission rates by refusing reimbursements.

"Right now the checklist isn't part of the standard medical record, so there could be resistance to using it," Dr. Basoor said, "but if we show it's really beneficial and easy to use, this could become a common practice. We've shown that quality of care can be improved at almost no additional cost. In the era of electronic medical records, we are working on transforming the [checklist](#) to an electronic form."

Provided by American College of Cardiology

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