Using Teach-Back Method to Prevent 30-Day Readmissions in Patients with Heart Failure: A Systematic Review

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Heart failure (HF) affects 5.7 million Americans; one in four patients discharged with a diagnosis of HF are readmitted within 30 days (Bergethon et al., 2016). According to the Centers for Medicare & Medicaid Services (CMS, 2016), HF accounts for an estimated 25% of all-cause readmissions in Medicare recipients. Direct costs from HF are estimated at more than $33 billion, and the burden of HF likely will increase as patient longevity improves (Barker et al., 2012).

Even though readmission rates may reflect in some ways the quality of care provided during the hospital stay, not all readmissions are preventable. Many factors are associated with a patient’s return to the hospital within 30 days of discharge, but effective education with resultant patient comprehension of the discharge plan may decrease the likelihood of readmission by 30% (Peter et al., 2015). The purpose of this systematic review is to discuss the current evidence on using teach-back during patient education to prevent 30-day readmissions among patients with diagnosed HF.

Statement of the Problem/Background

The Patient Protection and Affordable Care Act established the Readmissions Reduction Program, which required CMS (2016) to reduce payments to hospitals with excess readmissions. CMS defined a readmission “as an admission to a subsection hospital within 30 days of discharge from the same or another subsection hospital” (para. 3). Lack of communication and understanding of disease process as well as behavioral, organizational, technical, and patient factors have been associated with return admissions (Hesselink et al., 2014).

The transition period from an inpatient hospital stay to the home setting is a vulnerable time, and a patient may be discharged without adequate education about medication management. He or she thus may feel ill-prepared to provide appropriate self-care during this transition (Cawthon et al., 2012). To address this need, many nurses and primary care providers have used the teach-back method to assess patient comprehension of discharge instructions. With this method, the patient is asked open-ended questions to explain the information provided during the education session (Haney & Shepherd, 2014). This method of patient education has the potential to impact the cost of health care significantly by increasing patient comprehension and thus decreasing 30-day readmissions.

Heart failure is one of the most common readmission diagnoses. A review of the literature is presented to identify a role for teach-back patient education in reducing readmissions in patients with heart failure.

Relevant Literature

The literature offered mixed conclusions regarding the ability of hospital staff to reduce readmissions effectively; the best interventions appeared to involve an interprofessional approach that included pharmacists, social workers, dieticians, registered nurses, advanced practice nurses, and other primary care providers (Pal, Babbott, & Wilkinson, 2013). In addition, use of teach-back has been effective in reducing readmissions and improving understanding of disease processes (Peter et al., 2015). Nurses providing discharge education, as well as advanced practice nurses providing education during hospital follow-up appointments, may be able to impact 30-day readmission rates by using this method of patient education.

Nurses should encourage family presence, assess the patient’s baseline knowledge, schedule teaching sessions at a time convenient for the patient and family, and make the teaching session hands-on. In addition, teach-back education sessions...
should consider the patient's current diagnosis and occur through all stages of patient care, not just in a single episode at the time of hospital discharge (Haney & Shepherd, 2014). The nurse should focus on ensuring the patient understands medication indications, regimen, and side effects; level of activity; diet and weight management; and signs and symptoms of HF exacerbation. Education throughout hospitalization and at discharge also should include when to follow up with the primary care provider (Bates, O'Connor, Dunn, & Hasenau, 2014). Research has supported use of the teach-back method to educate patients with chronic diseases such as HF to increase understanding and adherence to steps for disease management (Dinh, Bonner, Clark, Ramsbotham, & Hines, 2016). Several studies show a positive impact from using the teach-back method, but it is unclear if this intervention has the potential to impact 30-day admission rates and improve patient outcomes (Bates et al., 2014; Dinh et al., 2016).

Experts also generally advocate use of the teach-back method (Miller, Lattanzio, & Cohen, 2016) because it has been recognized by the National Quality Forum (2010) as the preferred method for validating understanding. However, evidence suggesting it may alter key outcomes such as 30-day readmissions is less clear. This review sought to determine if the teach-back method can impact 30-day readmission rates in patients with HF.

Methods for Conducting the Systematic Review

A search for relevant articles published 2011-2016 was performed using PubMed, CINAHL, and Scopus. Search terms included teach-back, hospital readmissions, heart failure, and patient education. The search was limited to articles in English that included patients over age 18. Reference lists of retrieved articles also were checked for further relevant articles. Articles were not reviewed if they did not involve use of teach-back in chronic disease management and its role in the reduction of hospital readmissions. Of the articles retrieved, five were reviewed in detail. One meta-analysis was included in this review because it involved studies that used teach-back and other interventions, while one study used teach-back as one component of a comprehensive discharge plan. Two of the articles specifically focused on reduction of readmissions using teach-back in patients with HF, while the other two included a variety of chronic conditions. See Table 1 for a summary of the reviewed articles.

The teach-back method leads to improved retention of disease-specific knowledge, better adherence to treatment regimens (Dinh et al., 2016; Haney & Shepherd, 2014), improved self-efficacy and self-care, and a reduction in readmission rates in some instances (Bates et al., 2014). A meta-analysis of randomized and nonrandomized controlled trials, cohort studies, before-after studies, and case-controlled studies (Dinh et al., 2016) showed inconsistent findings related to reduced readmissions when the teach-back method was used; generally positive effects, such as improved self-care, better medication adherence, and increased disease-specific knowledge from using the teach-back method, were identified. Five of the included studies reported a reduction in readmission rates, but without statistical significance. Two studies in the meta-analysis showed statistically significant improvement in self-efficacy ($p=0.0026$ and $p=0.001$), and one study showed statistically significant improvement in medication adherence ($p<0.001$). Four studies confirmed improved disease-specific knowledge. As a limitation of the meta-analysis, two studies were not randomized controlled trials.

In a quantitative comparison study, Bates and colleagues (2014) found the combination of using teach-back and scheduling appointments for follow up with patients’ cardiologists created a statistically significant reduction in 30-day readmission rates ($p=0.02$). Authors also found patients perceived both interventions as a positive experience preparing them for self-care in the home environment. Study limitations include a single setting with homogenous study population and the use of a survey without identified reliability.

A prospective cohort study by White, Garbez, Carroll, Brinker, and Howie-Esquível (2013) found the absence of the teach-back method was associated with the inability of patients with HF to verbalize the importance of daily weight monitoring and the need to report weight gain to their primary care providers. In addition, use of teach-back education prompted 43% of patients to reduce their dietary sodium intake in a 2014 educational study by Haney and Shepherd; the study site also had a 1.8% reduction in readmissions. However, neither study randomized patients to the intervention group, thus limiting the strength of this evidence.

While not all the data are conclusive regarding benefits of using the teach-back method, the literature does offer some lessons to be learned about this strategy. Use of the teach-back method allows educators to identify patients who need more intense education about the management of their chronic diseases. Haney and Shepherd (2014) noted it may be especially effective in patients who are receiving new information about their conditions. Teach-back method is an evidence-based best practice that can be performed with nominal cost to organizations (Bates et al., 2014). Data suggest more knowledge is retained with a longer education session; however, the number of disease-specific questions answered correctly during teach-back does not correlate directly with significant reduction in readmissions (White et al., 2013). The combination of several evidence-based tactics remains the best approach for organizational leaders implementing a readmissions reduction program. Teach-back also is perceived positively by patients (Bates et al., 2014). This intervention, especially when combined with other readmission reduction tactics, has the potential to impact quality of care and ensure patients understand the complexity of their disease processes.

Implications for Practice, Education, and Research

Clinical nurses should learn more about implementing teach-back methods to improve patient outcomes, especially when teaching patients about complex chronic conditions such as HF. All reviewed studies showed positive patient outcomes,
**TABLE 1.**
Evidence Table

<table>
<thead>
<tr>
<th>Publication Information</th>
<th>Purpose</th>
<th>Sample</th>
<th>Duration</th>
<th>Intervention</th>
<th>Findings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bates et al., 2014</td>
<td>Determine impact of teach-back in STAAR program on patients following CABG.</td>
<td>189 patients following CABG</td>
<td>2 years</td>
<td>Disease-specific education using teach-back from patient educator, with hospital-scheduled cardiology follow-up appointments made before hospital discharge</td>
<td>Readmission rate in post-intervention group decreased to 12% compared to 25.8% in the pre-intervention group (n=189, ( p=0.02 )).</td>
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<tr>
<td>Haney &amp; Shepherd, 2014</td>
<td>Reduce 30-day readmissions for HF using teach-back education.</td>
<td>23 high-risk patients with HF and readmission within 30 days of prior discharge, two or more admissions for HF within last year, score above 25% on Yale Readmission Risk score for HF</td>
<td>180 days</td>
<td>60-minute teach-back session covering HF self-management in home setting, signs and symptoms of HF, daily weights, importance of adherence to medication/diet regimen</td>
<td>Three of 23 patients readmitted within 30 days, but only one related to HF; readmission rate decreased to 13% during intervention period. Ten patients reported dietary changes, better adherence to daily weight monitoring because of the teach-back session.</td>
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<tr>
<td>White et al., 2013</td>
<td>Determine if hospitalized patients educated with teach-back retain educational information and decrease readmissions.</td>
<td>276 patients over age 65 with HF</td>
<td>13 months</td>
<td>Teach-back education provided by two registered nurses (average duration 34 min)</td>
<td>Greater time spent teaching patients was associated significantly with correctly answered questions after teach-back sessions (( p&lt;0.001 )). Patients answering questions correctly while hospitalized and during follow up related to nonsignificant (( p=0.775 ) and 0.609) reductions in all-cause 30-day hospital readmission rates; however, a trend toward significance (( p=0.15 )) was found in patients readmitted for HF.</td>
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<tr>
<td>Dinh et al., 2016</td>
<td>Assess effectiveness of teach-back method on adherence, self-management, disease-specific knowledge, readmission, knowledge retention, self-efficacy, and quality of life in adult patients with chronic health conditions.</td>
<td>10 studies (( N=1,285 ) adults with at least one chronic condition) reviewed on use of teach-back method</td>
<td>Individual study duration not specified</td>
<td>Use of teach-back education regarding chronic health conditions; length, type of teach-back education varied by study. One study used teach-back as part of routine care; in all others, teach-back was studied intervention. Teach-back conducted in single brief sessions to multiple sessions lasting hours.</td>
<td>Effects of teach-back method positive but not always statistically significant. Disease-specific knowledge increased significantly in four studies. Several studies hypothesized a reduction in readmission rates, but without significance. Dietary/medication adherence was statistically significant (( p&lt;0.001 )).</td>
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CABG = coronary artery bypass graft; HF = heart failure; STAAR = State Action on Avoidable Rehospitalizations
with the teach-back method identified as an effective tool to use when assessing a patient’s knowledge of a chronic condition (White et al., 2013). The use of teach-back education throughout a patient’s hospitalization can help prepare him or her for self-care after discharge (Haney & Shepherd, 2014).

Nurses in the hospital setting could hold teach-back sessions at multiple times during their shifts, including a different component of self-care during each session. For example, while administering medications, a nurse could discuss the importance of taking medications as prescribed, as well as indications for and side effects of the patient’s prescribed medications. These sessions will assess the patient’s understanding of the medication regimen, and may increase patient adherence and knowledge about medications to manage complex disease processes. During office visits, advanced practice nurses could use teach-back education at each encounter, especially when changing the plan of care or when prescribing new medications.

Nevertheless, consistent and strong evidence is lacking to support use of the teach-back method alone to reduce readmissions. The use of teach-back could be one of many strategies organizations could implement to address the growing problem of frequent readmissions. Organizational leaders should consider policies that include the use of teach-back education in combination with other interventions when developing their readmission strategic planning.

The reviewed studies had limitations, such as small sample sizes and inability to control the study groups. In addition, some staff members currently used the teach-back method for patient education; others provided educational sessions inconsistently. Further research, including randomized controlled trials, is needed to confirm a potential role for the teach-back method in patient education for chronic conditions such as HF.

Conclusion

Some studies in this review found a reduction in readmissions when using the teach-back method of education. The use of the teach-back method should be combined with other initiatives to reduce readmissions (Bates et al., 2014). It can have a positive effect on health outcomes, self-care, and increase in disease-specific knowledge; when combined with other readmission reduction interventions, it also may impact an organization’s 30-day readmission outcomes (Dinh et al., 2016). Teach-back education sessions are low cost, require very little extra staff time, and can have positive impact on a patient’s life when management of HF is understood.
Using Teach-Back Method
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