

Don't Drop the Ball, Make the Call! Does follow up communication decrease number of 30-day readmissions of patients living with Heart Failure?

Monette Mabolo

Heart failure is one of the most common discharge diagnoses and one of the leading cause of hospitalizations and readmissions among adults over 65 years of age and the rate of admissions to treat this condition has increased progressively over the past several years. The Heart Disease and Stroke statistics Report (2016) from the American Heart Association estimated the prevalence of heart failure is about 5.7 million, and an estimated 1 million hospital stays were attributable to congestive heart failure (CHF). The rate of readmissions or re-hospitalizations range from 29 to 47 percent within three to six months of the initial discharge (Gooding, J. and Jett, AM). Furthermore, factors such as noncompliance with medications and diet and social factors, such as social isolation, frequently contribute to early readmissions, suggesting that many such readmission could be prevented (Vinson, JM, Reich, MW, Sperry, JC et al).

In 2014, US health care cost accounted for 17.5% of the gross domestic product (GDP) (\$3.0 trillion) compared to 9.18% of the GDP (\$260 billion) in 1980. At this current rate, by 2040, the cost of health care could reach 30% of the GDP. In 2014, Medicaid paid \$173 billion on outpatient and inpatient services to 4,700 hospitals, a 4% increase from the year before. The American Heart Association estimates that the total direct cost (defined as medical spending) for treating CHF will rise to \$53 billion in 2030, more than double the \$30.7 billion in 2012 (Heidenreich, PA, Albert, NM, Allen, LA et al). Hospital readmissions consume significant resources and are a financial burden on the U.S. health care system.

Reducing hospital readmission for heart failure patients is a major focus for health care organization to improve quality and reduce cost, following Center for Medicare and Medicaid rule to lower reimbursement to hospitals with increased readmissions for heart attack, heart failure & pneumonia.

The affordable care act (ACA) created the Hospital Readmission Reduction Program (HRRP), imposed a financial penalty capped at 3% of total Medicare payments for hospitals and excessive readmissions from 2015 and beyond (Ziaelan, B. and Fonarow, G.C.). At the initiation of the HRRP in 2012, CMS predicted that >2/3 of hospitals would be receiving fines, accounting for up to 1% of their Medicare reimbursement (Joynt, KE, Jha, AK).

The Center for Medicaid and Medicare (CMS) lowered reimbursements to hospitals with increased 30-day readmissions of heart failure patients. According to CMS, a "readmission" is defined as an admission to a hospital within 30 days of a discharge from the same hospital or another hospital.

We hypothesized, that a comprehensive discharge teaching combined with a discharge follow-up by phone or e-mail could significantly reduce the number of hospital readmissions of patients living with heart failure within 30 days of their discharge, compared to just a comprehensive discharge teaching only. We then conducted a quantitative non-experimental comparative study of 2 groups of heart failure patients, to assess the effect of the intervention in the number of hospital readmission where a control group received standard discharge teachings and an intervention group received standard discharge teachings and a discharge follow up call or e-mail 72 hours post discharge from the hospital.

This study established statistically significant relationship between discharge follow-up and heart failure patients 30-day readmission by describing correlation and causation based on objective measurement and observation (Hammer & Collinson, 2006). A non-probability convenience sample of 99 patients who were admitted to a heart failure unit, where 53 patients

was randomly selected to be in the control group. They received standard discharge instructions, while 46 patients on the intervention group received standard discharge instructions and discharge follow-up call or email 72 hours post discharge from the hospital. The study was initiated in June 2018 until September 2018. Inclusion criteria were patients age 18 and above with primary diagnosis of heart failure; comorbidities of less than 3. Exclusion criteria were non-English speaking patients; those going to Skilled Nursing Facility or Assisted Living Facility; patients who failed to respond to follow-up calls/e-mails after two attempts; patient who died.

Data was analyzed using the statistical software IBM SPSS version 23.0. Descriptive statistics was used to describe the characteristics of the patients and Chi-square test, a non-parametric test was used to analyze the variables that were measured on a categorical level (Kim & Mallory, 2014). The test showed there was a statistical significance in the reduction of 30-day hospital readmission in the intervention group. 16 out of 43 patients were excluded from the intervention group because they failed to respond to the follow-up call or e-mail. Three out of 30 patients (10%) were readmitted 30 days post discharge, while 6 out of 53 patients in the control group, (11.3%) experienced readmission. The study also revealed gender has no statistical significance in both groups' hospital readmission. Despite the difference of only 1.3% in readmissions between the two groups, this could mean a \$1.5 million-dollar savings in Medicare reimbursement for the hospital.

A meta-analysis of interventions for older heart failure patients found that comprehensive discharge follow-up reduces heart failure readmissions and improves outcomes without increasing costs (Phillips, CO, et al.).

Robust data collection and review of post discharge follow-up is vital if we hope to impact hospital readmissions of heart failure patients.

References:

- Gooding, J., Jett, AM Hospital readmissions among the elderly, J AM Geriatric Soc 1985; 33; 595-601
- Heidenreich, PA, Albert, NM, Allen, LA et al. Forecasting the impact of heart failure in the United States; a policy statement from the American Heart Association. Circ Heart Fail. 2013, 6(3); 606-619.
- Joynt, KE, Jha, AK, A path forward on Medicare readmissions N England Journal of Medicine, 2013; 368; 1175-1177.
- Krumholz, H.M., Merrill, A.R., Schone, E. M., Schreiner, G.C., Chen, J., Bradley, E., & Rapp, M.T. (2009). Patterns of hospital performance in acute myocardial infarction and heart failure 30-day mortality and readmission. Circulation: Cardiovascular Quality and Outcomes. Sep;2(5):407-13.
- Phillips CO, et al. Comprehensive discharge planning with post discharge support for older patients with congestive heart failure: a meta-analysis. JAMA.2004;291:1358-1367.
- Vinson, JM, Rich, MW, Sperry, JC, Shah, AS, McNamara, T. Early readmission of elderly patients with congestive heart failure. JM Geriatric Soc 1990; 38; 1290-1295
- Ziaelan, B. and Fonarow, G.C. The prevention of hospital readmissions for heart failure. Prog. Cardiovascular Dis. 2016;58(4) 379-385.

Monette Mabolo

The Moses H Cone Memorial Hospital, USA