

Heidi Pang, DO¹; Vivian Yang, MD¹; Jessy Tsang, DO¹; Avneet Kaur, MD¹; Gulraiz Matlub, MD¹; Zahra Sherazi, MD¹; Karen Fourie, MD¹; Nicole Syed, MD¹; Rajagopal Krishnan, MD² Departments of Family Medicine¹ and Cardiology², Riverside University Health System Medical Center, Moreno Valley, CA

Objective

The objective of this study is to reduce Heart Failure readmission rate by at least 50% within 30 and 90 days from hospitalization through resident physician-initiated phone calls.

Introduction

Heart failure (HF) is a common disorder whereby the lifetime risk of development is 20% for Americans >/= 40 years old.¹ Today, approximately 5 million people have been diagnosed with HF and the number is steadily on the rise, with about 0.5 million new cases diagnosed per year.² According to one study on the prevalence of HF in the elderly Medicare population, it has increased from 90 to 121 in 1000 within one decade.³ Furthermore, 20% of Americans will be > 65 years old by the year 2050, thereby increasing the burden of this disease.⁴ It is a disease that is associated with significant morbidity, mortality, and cost.⁵⁻⁷

HF is the primary diagnosis in >1 million hospitalizations annually.² In California, 25% of patients with a HF exacerbation are re-admitted within 30 days.⁸ This is higher than the national average of 21.9%.⁹ At Riverside University Health System, the risk-adjusted 30-day readmission rate for HF was 21.6% from 2011 through 2014, similar to national average. The excess readmission ratio was 1.0167.⁹

As part of the pilot study to continue the HF-RRR project from last year, in which to reduce readmission rate by at least 50% within 30 and 90 days from hospitalization through resident physician-initiated phone calls, this effort aims to maintain the reduction rate as well as to shred light into barriers that will impact the implementation of the this study into the RUHS heart failure clinic in the future.

Methods

This prospective study continues to enroll patients hospitalized with acute decompensated heart failure (ADHF) and echocardiographic evidence of HF with reduced ejection fraction (HFrEF). Different from last year's study, no control group was included. All patients who were enrolled automatically received the phone calls made by the resident physicians at 7, 30, and 90 days after discharge for a total of three phone calls to assess if they understood their diagnosis, had any symptoms of exacerbation, and adhered to medication and dietary recommendations. The patients' charts were reviewed to determine if readmission for HF occurred at RUHS. The study protocol was renewed by the RUHS IRB.

Exclusion criteria:

- Patients with dementia or other cognitive disorders
- Patients admitted with known, reversible cause of HF exacerbation
- MI within last 6 weeks - valvular stenosis
- tachyarrhythmia
- Inmates or other institutionalized patients
- Patients who are pregnant
- Patients who are terminally ill

The Heart Failure Readmission Rate Reduction Project (HF-RRR): Resident Physician initiated Patient Support System to Educate and Monitor Post Hospitalization Follow-up Data Presentation on a Pilot Study Year II









Results

We have enrolled total of 82 patients in this study

34 patients completed follow-up at the 30-day call per protocol. Compared to the readmission rate from last year at 9.1% (2 of 22), the readmission rate this year is currently at 35% (12 of 34).

17 patients this year completed follow up at the 90-day call per protocol. Compared to the readmission rate from last year at 13.6% (3 of 22), the readmission rate this year is currently at 29% (5 of 17).



Readmission rate at 30 day and 90 day intervals

	>5
ered	
laster Excel 2018- of MRN to prevent lment	40-5
Consent the patient involving the following steps: provide the patient a copy of all pages f the consent form keep the originals in folder in the ocked cabinet Ensure patient does not meet	 We were unable to to last year Unable to identify in our study group Our results demon patient population
exclusion criteria	HF related hospitaliza

1.Djousse L, Driver JA, Gaziano JM. Relation between modifiable lifestyle factors and lifetime risk of heart failure. JAMA. 2009;302:394–400.

- 2011.
- *J.* 1997;133703-712

- ca/california_statewide_readmission_report.pdf
- 9. Hospital Readmissions Reduction Program.



>50%

40-50%



ble to meet our objective of decreasing readmission rate by 50% compared

ntify specifically reason for readmission given multiple confounding factors

emonstrated that close physician phone visits may not be beneficial to all ations to prevent readmission

Discussion

italizations more than tripled from 1.2 million in 1979 to 3.8 million in 2004. It is clear that this is a growing issue, particularly as our population continues aging. Research has been focused on reasons for readmission/ decompensation and how to further optimize outcomes in patients diagnosed with HF.

Comparing the patient cohorts between the two years of study, no significant difference in gender, language barrier, or ejection fraction were noted. Other possible factors that could have impacted the higher readmission rate this year include advanced age, level of education/understanding of the disease, severity of the condition at the time of admission along with comorbidities, as well as support system at home. To better capture a more comprehensive evaluation of this quality improvement project with the goal of reducing readmission rate at our institution, we should collect the confounding factors (history of drug use, age, homelessness etc) during the initial enrollment process.

References

2.Go AS, Mozaffarian D, Roger VL, et al. Heart disease and stroke statistics–2013 update: a report from the American Heart Association. Circulation. 2013;127:e6–245.

3.Curtis LH, Whellan DJ, Hammill BG, et al. Incidence and prevalence of heart failure in elderly persons, 1994–2003. Arch Intern Med. 2008;168:418–24

4. The Booming Dynamics of Aging: From Awareness to Action. The White House

Conference on Aging. Washington, DC: US Department of Health and Human Services;

5.Krumholz HMParent EMTu N et al. Readmission after hospitalization for CHF among Medicare beneficaries. Arch Intern Med. 1997;15799-104

6.Massie BMShah NB Evolving trends in the epidemiologic factors of heart failure: rationale for preventive strategies and comprehensive disease management. Am Heart

7.O'Connell JB The economic burden of heart failure. *Clin Cardiol.* 2000;23116-1110 8.https://www.hsag.com/globalassets/providers/nplh-