Optimizing Heart Failure Management by Enhancing Discharge Instructions for Heart Failure Patients: A Quality Improvement Project

L. Alexander, DNP, FNP-C, AACC and T. Johnson-Glover, DNP, MSN Ed, RN

UMC UNIVERSITY MEDICAL CENTER

BACKGROUND

Heart failure (HF)

- remains as one of the leading causes of heart disease mortality in the United States (Rizzuto et al., 2022)
- In 2022, HF has affected **~6.2 million adults** while in a more recent study in 2024, it has increased to **~6.7 million** (Rizzuto et al., 2022; Bozkurt et al., 2025).
- Despite advancements in treatment, **HF-related readmissions remain high at 21%** (Rizzuto et al., 2022).

Discharge Education

Optimizing **discharge education** is an essential strategy for enhancing self-care management and reducing hospital readmissions (Rice et al., 2018). However, gaps may be present that can hinder effective discharge education which needs to be addressed to deliver better discharge education. The practicum site, a Las Vegas hospital, recognized such gaps including lack of educational resources, nurse training, and protocol adherence.

PURPOSE

Project Aim:

Implement an evidence-based practice discharge protocol for a Cardiovascular Care Unit to provide better discharge education to heart failure patients

Project Objectives:

1. Develop a nurse training curriculum and program based on the *HEART program and teach-back method
   **HEART - Heart failure care for Enhancing self-management At home by Reinforcing discharge education with Teach-back method*
1. Administer a 1-day nurse training seminar based on the training curriculum developed
2. Implement a standardized discharge education protocol based on the HEART program
3. Develop a heart failure education pamphlet for heart failure patients ready for discharge
4. Improve self-care and self-care efficacy of patients by 50% after 1 week of discharge to be evaluated using the Self-Care of Heart Failure Index (Riegel et al., 2019) and self-care self-efficacy scale (Yu et al., 2021)

METHODS

The **Plan-Do-Study-Act (PDSA) Model** was used as the implementation framework of the quality improvement project. It is a 4-stage cycle that aids in continuous quality improvement methods, emphasizing on learning and adaptability.

Population

- Direct Population
  - Registered nurses (RNs) and nurse practitioners (NPs) of the Cardiology Department
- Indirect Population
  - HF patients and their family and/or caregivers
  - Cardiology Department physicians
  - Administrators

Setting

University Medical Center Southern Nevada (UMCSN)

- Government-owned, short term acute care hospital in Las Vegas, Nevada
- Electronic Health Record (EHR) system in place
- Bed Capacity: 537
- Consists of a Board of Trustees, nine Governing Board Members, CEO and several Chief Officers for different departments

UMCSN Cardiology Department

- Staff: cardiologists, NPs, nurses, and other medical professionals
- 2023 Admission: 3000 patients
  - ~700-800 were HF patients

Ethics

Project participation was voluntary and privacy and confidentiality were ensured. No IRB approval was required.

Project Timeline

- *Pre-implementation*
  - Develop a **standardized discharge education protocol** and **nurse training curriculum and program** based on the HEART program and teach-back method
  - Develop a **heart failure education pamphlet** for HF patients ready for discharge
- *Weeks 1-2*
  - Administer **nurse training seminar** with administration of **pre- and post-training evaluation surveys**
  - Implementation of the **standardized discharge education protocol** with use of **standardized discharge checklist** for nurse compliance monitoring
  - **Monitor self-care and self-care efficacy** of patients using the Self-Care of Heart Failure Index and self-care self-efficacy scale
  - Data gathering was started
- *Weeks 3-4*
  - Continue protocol implementation, nurse compliance monitoring, and patient self-care and self-care efficacy monitoring (including **follow-up calls**)
  - Data gathering continued
- *Week 5*
  - Final data gathering
  - Data summarization and analysis

RESULTS

Table 1
Pre- and Post-Training Evaluation Paired T-test Results

Outcome Variable	Pre-training		Post-Training		CI (95%)	t(24)	p-value	eta squared statistic
	M	SD	M	SD				
Training Evaluation Scores	6.70	2.35	9.81	1.56	−4.06 to −2.16	−6.736	<0.001	0.65

Table 2
Nurse Compliance Contingency Table and Fisher's Exact Test Results

	Non-compliant	Compliant	Total	Fisher's Exact Test p-value
Pre-intervention	5	0	5	0.008
Post-intervention	0	5	5	
Total	5	5	10	

Table 3
Self-care Maintenance Wilcoxon Signed Rank Test Results

Outcome Variable	T0 (at discharge)	T1 (1 week after discharge)	z	p-value	effect size (r)
	Md	Md			
Self-care Maintenance (SM)	2.4	3.8	-2.06	0.039	0.65

Table 4
Self-care Management, Symptom Perception, and Self-care Efficacy Paired T-test Results

Outcome Variable	T0 (at discharge)		T1 (1 week after discharge)		CI (95%)	t(4)	p-value	eta squared statistic
	M	SD	M	SD				
Self-care Management (SMG)	2.49	0.16	3.46	0.19	-1.12 to -0.82	-18.14	<0.001	.99
Symptom Perception (SP)	2.25	0.50	3.45	0.51	-1.54 to -0.86	-9.80	<0.001	.96
Self-care Efficacy (SE)	3.02	0.73	4.64	0.41	-2.18 to -1.06	-8.06	0.001	.94

Pre- and Post-Training Evaluations
- Knowledge scores significantly increased after training administrations.

Nurse Compliance
- Significantly improved compliance after protocol implementation.

Patient Self-care and Self-care Efficacy
- Significantly increased after 1 week of discharge and administration of discharge education.

CONCLUSIONS

The training and discharge education protocol were able to **effectively improve nursing competency** and **address the inadequate discharge education process** in the practicum site. Moreover, it was able to foster a **patient-centered approach** consequently leading to improved health outcomes and patient satisfaction which may potentially lead to lower readmission rates. Lastly, the project became an avenue to **streamline discharge education process** in the organization. Despite the positive outcomes, several limitations were recognized including the short timeline and small sample size. Nonetheless, sustainability plans include continuation of protocol in the department and dissemination of results.

REFERENCES

See poster author for reference list.

PATHWAY DESIGNATED