# FOLLOW UP CARE FOR HEART FAILURE PATIENTS AND ASSOCIATION WITH HOSPITAL READMISSIONS

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## Background

Heart Failure patients admitted to Valley Baptist (VB) are readmitted 26% of the time, which is close to the national average of 23%. The Standard of care for HF patients is follow up care (FU) for 30 days from discharge. Hospitalization for any reason within 30 days is considered a "readmission". On 10-1-2019 at VB, remote nursing care changed from weekly house visits to weekly phone calls. The aim is to evaluate the effectiveness of this policy change on readmission rates.

## Methods

Retrospective chart review using 170 patients admitted with HF from 8-1-2019 to 1-31-2020 at VB. Descriptive statistics [mean (SD) and n (%)] were created overall and stratified by readmission. Binary logistic regression assessed the association with readmission and time to admission.

**Table 1A: Simple Descriptive Statistics - Overall**

| Variable | min | Max | Mean | Med | SD |
|---|---|---|---|---|---|
| Age | 24 | 94 | 68.8 | 72.5 | 14.8 |
| Length of Stay (LOS) | 0 | 46 | 5.5 | 4 | 4.9 |
| | | | | | |
| Variable | Class | n (%) | | | |
| Readmission | No<br>Yes | 127 (74.7)<br>43 (25.3) | | | |
| Follow-Up Protocol | In Person<br>Phone Follow up | 88 (51.8)<br>82 (48.2) | | | |
| HF Education in Hospital | No<br>Yes | 78 (45.9)<br>92 (54.1) | | | |
| Nurse Education (In Hospital) * | No<br>Yes | 65 (70.7)<br>27 (29.4) | | | |

*only calculated for those who received education in hospital

**Table1B: Simple Descriptive Statistics - By Readmission**

| | Readmission = No n=127 | | | | | Readmission = Yes n=43 | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Var | min | Max | Mean | Med | SD | min | Max | Mean | Med | SD |
| Age | 24 | 94 | 69.7 | 73 | 14.6 | 27 | 91 | 66.4 | 66 | 15.4 |
| Length of Stay (LOS) | 1 | 46 | 5.9 | 4 | 5.4 | 0 | 12 | 4.4 | 4 | 3.0 |
| | | | | | | | | | | |
| Var | Class | n (%) | | | | Class | n (%) | | | |
| FU Protocol | In Person<br>Phone Follow up | 71 (55.9)<br>56 (44.1) | | | | In Person<br>Phone FU | 17 (39.5)<br>26 (60.5) | | | |
| HF Education In Hospital | No<br>Yes | 57 (44.9)<br>70 (55.1) | | | | No<br>Yes | 21 (48.8)<br>22 (51.2) | | | |
| Nurse Education (In Hospital) * | No<br>Yes | 48 (68.6)<br>22 (31.4) | | | | No<br>Yes | 17 (77.3)<br>5 (22.7) | | | |

*only calculated for those who received education in hospital; FU = follow-up

**Table 2 - Readmission Rates by Follow-Up Protocol**

| Follow-Up | Readmission | | |
|---|---|---|---|
| | No | Yes | Total |
| Phone Calls (Oct 1 or Later) | 71 (80.7) | 17 (19.3) | 88 |
| In-Home Visits (Before Oct 1) | 56 (68.3) | 26 (31.7) | 82 |
| Total | 127 | 43 | 170 |

**p-value =0.0633**

## Results

The average age of patients was 68.8 years with the mean length of stay of 5.5 days. During the hospital stay, 54.1% (92/170) of all patients received HF education before discharge either by a designated educator in the Progressive Coronary Care Unit (PCCU) or by their primary nurse. In those who received education through an educator, 18.5% were readmitted versus 26.1% readmitted amongst those who received education from their nurse (p= 0.43). Readmission rates were 31.7 % with remote nursing care with weekly house visits and 19.3% after the change to weekly phone calls (p = 0.0633). There was no evidence FU Care produces a disparity in readmission rates after adjustment (in-home visits vs phone calls) OR = 1.75 (p = 0.1363).

## Conclusion

The FU change produced no disparity in readmission rates, which may result in lower costs to FU with the new policy. In-home visits were more prevalent with re-admissions than phone calls. CHF severity likely determined who received in-hospital education from skilled nursing staff which could have introduced selection bias.