



The Impact of Palliative Care on Hospitalization and Readmission in Heart Failure



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INTRODUCTION

- Palliative care (PC) is an essential component of holistic heart failure (HF) management.
- The 2022 ACC/AHA/HFSA guidelines recommend the integration of PC throughout the disease course.
- Utilizes a patient-centered approach to reduce symptom burden, improve quality of life, provide psychosocial support, define goals of care, and reduce suffering.
- There is little data on the impact PC has on outcomes such as hospitalization and readmission.

METHODS

- Study Design**
 - Retrospective cross-sectional observational analysis of 22,763 patients with a primary diagnosis of heart failure.
 - Grouped based on the presence or absence of PC.
- Inclusion Criteria**
 - Twelve months of electronic health record data, including comorbidities, code statuses, and demographic data including age, sex, and race.
- Exclusion Criteria**
 - Missing data, history of heart transplantation, and history of advanced mechanical circulatory support.
- Analysis**
 - Zero-inflated negative binomial regression was used to compare the number of admissions.
 - Adjusted Cox regression models were used to calculate hazard ratios for admissions.
 - Subgroup analysis was performed on patients that died during the study interval.

RESULTS

- The non-PC group's expected number of admissions was 1.24, 1.40, and 1.61 times higher than the PC group at 12, 24, and 36 months.
- The PC group's mean number of admissions at 12 months was 0.430 vs. 1.002, 0.525 vs. 1.374 at 24 months, and 0.572 vs. 1.631 at 36 months.
- The non-PC group had an increased hazard of readmission (HR = 1.355, 95% CI, 1.203-1.527, $P < 0.001$) in the whole population and matched population (HR = 1.412, 95% CI, 1.222-1.632; $P < 0.001$).
- Kaplan-Meier curves were generated for the time until readmission for the whole population (Figure 1) as well as in patients that died during the study interval (Figure 2).

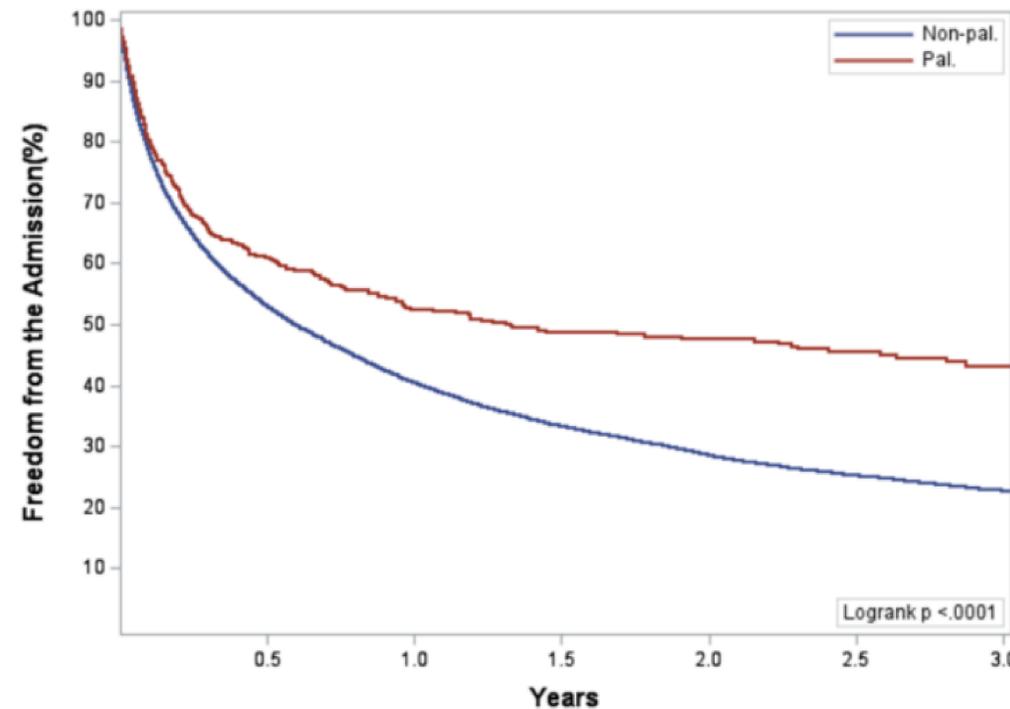


Figure 1. Kaplan-Meier curve of Time to Readmission in All Patients Admitted with Heart Failure.

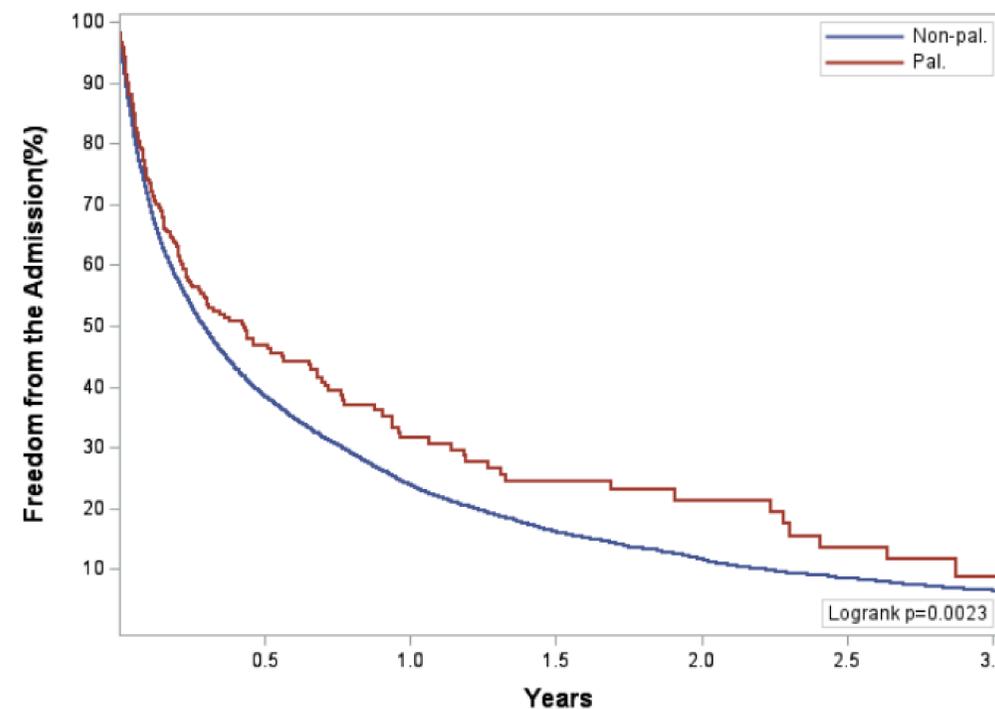


Figure 2. Kaplan-Meier curve of Time to Readmission in Patients Admitted with Heart Failure that Died.

STRENGTHS

- Utilized real-world, observational data from an extensive health system in a diverse cohort of patients.
- Included both inpatient consultations and outpatient palliative care visits which better captured the totality of HF management and the patient experience.
- Performed subgroup analysis of decedents to gain insight into end-of-life care.

STRENGTHS

- ICD codes were used for data collection; although validated in the study of HF, this creates opportunities for coding errors.
- There was a significant number of patients excluded from the analysis due to missing data, creating opportunities for sampling bias.
- Not all facilities have access to PC services, limiting the study's external validity and applicability across geographic regions.

DISCUSSION

- The impact of PC on outcomes in the HF population requires further research.
- Potential contributing factors to a lower hazard of readmission in the PC group include:
 - The general preference of patients for less aggressive interventions near the end of life.
 - The ability of palliative care experts to utilize family and patient-centered approaches to understand patients' goals of care.
 - Implementation of advance directives.

CONCLUSION

- HF progression is marked by worsening symptom burden and complex disease-state management decisions such as inotrope dependence, transplantation, and recurrent hospitalization.
- Palliative care is underutilized in the heart failure population.
- Expert palliative care consultation was associated with a reduced likelihood of readmission in this large cohort of patients with HF.