

## Long-term effectiveness of a nurse-led 7-step transitional intervention programme in heart failure

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**Background:** Reduction of 30-day readmission in heart failure (HF) patients is a main goal of health-care systems. Programmes to decrease 30-day readmission have successfully reduced it but have failed to neither maintain benefit afterwards nor decrease mortality. Moreover, in many cases the price of reducing 30-day readmission is a mortality increase.

**Purpose:** Evaluate whether the impact of a fully nurse-led HF programme directed to reduce 30-day readmission and mortality extends to longer periods of time, including 90 days and 180 days after discharge.

**Methods:** We evaluated all patients discharged from hospital with HF as primary diagnosis between January 2017 and January 2019. We compared outcomes between patients discharged during Period #1 (pre-programme; Jan 2017 - Aug 2017) and those discharged during Period #2 (HF programme; Sept 2017 - Jan 2019).

Primary endpoint was the combined endpoint of all-cause death or all-cause hospitalization 90 days and 180 days after discharge from the index hospitalization.

**Results:** The study enrolled 440 patients: 123 in Period #1 and 317 in

Period #2.

Mean age was 75±9 years. There was a higher proportion of female patients in Period #2 (38.2% vs 26.8%, p=0.025), with no differences in other baseline characteristics.

The combined endpoint of all cause-death and all-cause hospitalization was significantly reduced in patients in the HF programme group, both at 90 days [OR 0.37 (0.22–0.63), p<0.001] and at 180 days [OR 0.27 (CI 0.17–0.43), p<0.001]. Such a decrease was at expense of a reduction in cardiovascular (CV) hospitalization and HF hospitalization.

There were no differences between groups in mortality [OR 0.96 (0.18–5.00), p=0.293].

**Conclusions:** A fully nurse-led HF programme reduces the combined endpoint of all-cause death and all-cause hospitalization both at 90 days and 180 days after an index discharge for HF.

Such a decrease is driven by a reduction of CV and HF hospitalization, which are maintained over time. There were no differences between groups in mortality.

	90 Days		180 Days	
	OR (CI)	p	OR (CI)	p
All-cause death or hospitalization	0.36 (0.22–0.59)	<0.001	0.29 (0.18–0.45)	<0.001
All-cause hospitalization	0.35 (0.21–0.58)	<0.001	0.28 (0.18–0.43)	<0.001
HF hospitalization	0.19 (0.11–0.35)	<0.001	0.17 (0.10–0.28)	<0.001
CV hospitalization	0.21 (0.12–0.37)	<0.001	0.18 (0.11–0.29)	<0.001
All-cause death	0.96 (0.18–5.00)	0.960	0.53 (0.16–1.69)	0.293

OR: odds ratio; CI: confidence interval; HF: heart failure; CV: cardiovascular.

