

Nurse Management Improves Outcomes in Minority Heart Failure Patients

Sisk JE, Hebert PL, Horowitz CR, et al. Effects of nurse management on the quality of heart failure care in minority communities: a randomized trial. *Ann Intern Med* 2006;145:273–83.

Study Overview

Objective. To compare the effects of a nurse-led intervention to address known management problems with usual care among ethnically diverse patients with systolic dysfunction heart failure.

Design. Randomized controlled trial.

Setting and participants. From September 2000 to September 2002, 4 hospitals in Harlem, NY, enrolled 406 adults aged ≥ 18 years with systolic dysfunction who were community-dwelling, English- or Spanish-language speakers in ambulatory care practices. 45.8% were non-Hispanic black adults, 32.5% were Hispanic adults, 46.3% were women, and 36.7% were aged ≥ 65 years. Patients were randomized to receive either nurse-led heart failure management ($n = 203$) or usual care ($n = 203$). Through an initial visit and regularly scheduled follow-up telephone calls over 12 months, 3 bilingual nurses provided intervention group patients with counseling on diet and medication adherence and self-management of symptoms and provided information to patients' physicians regarding changes to medications. The usual care group received guidelines for managing systolic dysfunction.

Main outcome measures. Hospitalizations for heart failure and self-reported functioning using the Short Form-12 (SF-12) and the Minnesota Living with Heart Failure Questionnaire (MLHF) at 12 months.

Main results. At 12 months, the nurse management patients had fewer hospitalizations compared with usual care patients (143 hospitalizations versus 180 hospitalizations; adjusted difference, -0.13 hospitalizations/person-year [95% confidence interval (CI), -0.25 to -0.001 hospitalizations/person-year]). Further, the SF-12 score was 39.9 for those in the nurse management arm versus 36.3 for those in usual care (difference, 3.6 [95% CI, 1.2 – 6.1]). The MLHF score was 38.6 versus 47.3 for nurse-managed and usual care patients, respectively (difference, -8.8 [95% CI, -15.3 to -2.2]). Over 12 months, 22 deaths occurred in each group, and percentages of patients

who were hospitalized at least once were similar (30.5% of nurse-managed versus 36.5% of usual care patients; adjusted difference, -7.1% [95% CI, -16.9% to 2.6%]).

Conclusion. Nurse management in the ambulatory care setting can improve functioning and lower hospitalizations in ethnically diverse patients with systolic dysfunction heart failure. Continual nurse contact is likely required for sustained improvement.

Commentary

Morbidity and mortality from heart failure remain high despite major advances in treatment and evidence-based treatment guidelines [1]. Approximately, 25% to 50% of hospitalized patients with heart failure are readmitted within 6 months, with poor adherence to medications or dietary salt restrictions or suboptimal medical therapy the most frequent causes for acute exacerbations [2,3]. Physicians also may not adhere to established treatment guidelines or may not intensify medications appropriately [4]. Sisk and colleagues first identified shortfalls in patient self-management and clinical care in Harlem, NY, and then designed a comprehensive nurse management intervention to increase patient adherence to lifestyle changes and to intensify treatment that followed evidence-based guidelines.

The results of the Sisk et al study showed that nurse management of heart failure in an ethnically diverse population can decrease hospitalization and improve functioning. During the 12 months of active intervention, there were 37 fewer hospitalizations as well as a 3-point increase in the SF-12 score and a 7-point decrease in the MLHF score in the nurse management group. After the intervention was stopped, these gains gradually eroded over the following 6 months. The results obtained were better than results seen in a similar trial performed among Kaiser Permanente patients, which did not show a decrease in readmissions. However, differences in patient selection and health care system could have accounted for the lack of effect. Despite the restricted geographic location and the limited number of nurses delivering the intervention in this study by Sisk et al, a targeted nurse management intervention was effective in

reducing the burden of heart failure.

Applications for Clinical Practice

Nurse management can decrease hospital readmission and improve patient function in patients with heart failure, but a sustained effect appears to require continual nurse contact.

—Review by Mark S. Horng, MD

References

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