

Collaborative Initiative between Nurses and Pharmacists as Part of Interdisciplinary Team Improves Outcome of Patients with Heart Failure

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Commentary

More than 5 million Americans are afflicted with heart failure [1]. This includes patients with chronic congestive heart failure and those with acute decompensated heart failure. The economic burden associated with this condition exceeds \$34.4 billion dollars annually, when direct and indirect costs are considered. The annual incidence of heart failure continues to increase, with approximately 550,000 new cases each year. Because of the delicate balance between a stable, compensated heart failure and an acute decompensated state, increased focus has been given to assisting heart failures transitioning from inpatient to outpatient settings in an attempt to minimize readmission rates. The multidisciplinary approach to management of heart failure has definitively provided improved outcomes in the heart failure setting.

The role of nurses and pharmacists in management of the heart failure patient is clearly supported in the literature, particularly as part of a multidisciplinary team [2]. An important role is medication reconciliation and patient education [3,4]. Jain, et al evaluated the effectiveness of a protocol driven heart failure clinic staffed by nurses and pharmacists. Of the 234 patients with one or more follow up visits, 127(57%) were receiving none or only one therapeutic agent when first seen, a number that was reduced to 25(11%) at the most recent follow-up appointment. This was accompanied by significant up titration of doses, in keeping with guidelines [5]. The number of patients on medium or high doses of agents rose from 43(18%) to 134(57%) for beta-blockers and from 129(55%) to 201(86%) for ACEI or ARBs. Clinical improvement was exhibited through reductions in functional classes III and IV, from 93(40%) to 53(23%) and in patients with moderate to severe symptoms. Up titration of treatment was associated with significant reductions in systolic and diastolic pressure. Incidence of hyperkalemia and worsening renal function was low.

Disease management pathways have been documented to effectively and efficiently improve care. Pharmacists and nurses who collaborate to develop disease management pathways to significantly impact heart failure will successfully improve patient care and decrease medical costs. Pharmacists play an important role in appropriate selection and monitoring of therapeutic agents. Nurses play an integral role in patient assessment, both subjectively and objectively. While cost effective therapies are recommended, careful monitoring for efficacy and adverse effects is critical to excellent patient care and improved patient outcomes.

Post hospital discharge follow up and clinic and home visits are essential to successful treatment of the heart failure patient. Stewart, et al. evaluated the impact of home based intervention among 97 patients with heart failure, who were discharged from an acute care hospital. The intervention was performed jointly by a nurse and pharmacist. The intervention involved a single home visit within one week post discharge. During this visit, medication was optimized, the patient was assessed for adverse effects, and a decision for further follow up was made if needed. This intervention was compared with standard care. The main outcomes were frequency of unplanned readmission and out of hospital deaths in 6 months. Patients in the intervention group had fewer unplanned readmissions (36 vs. 63) and fewer out of hospital deaths (1 vs. 5). Patients in the control group receiving standard care had significantly more days of hospitalization (452 control vs. 261 intervention group). In a follow up study the same group of investigators demonstrated fewer unplanned admissions and days of hospitalization, with fewer out of hospital deaths and lower overall costs [6].

The high morbidity and mortality associated with heart failure, along with significant associated costs only strengthen the case for collaborative efforts in patient care. Efforts to improve patient outcomes have been realized when nurses and pharmacists join together to care for these patients.

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