Effect of Community Pharmacist-Led Disease State Education on Quality of Life and Symptom Control for Patients with COPD and Heart Failure

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Background: Community pharmacists can be valuable partners with health systems in providing care to persons at risk for hospital readmission. National readmission data approximated 20% for individuals with COPD or heart failure in 2013. Previous studies have shown pharmacist intervention with disease state education has improved symptom control and medication adherence. The Minnesota Living Heart Questionnaire (MLHFQ) and the St. George Respiratory Questionnaire for COPD (SGRQ-c) are used in clinical practice to assess quality of life for heart failure and COPD patients, respectively.

Objectives: The primary objective of this study was to assess the impact of pharmacist-led disease education on disease-specific quality of life and symptom control in patients with COPD or heart failure. A secondary objective was to assess the impact of pharmacist intervention on medication adherence.

Methods: This prospective cohort study was conducted over the span of 90 days by an independent community pharmacy in partnership with three clinics affiliated with a healthcare facility in North Carolina. Eligible patients were ≥18 years of age, English-speaking, with a diagnosis of COPD or heart failure, and enrolled in Medicare or were Medicare-eligible. Cognitively impaired patients were excluded. Nurses or care managers identified eligible patients during a transition of care visit and referred patients to the pharmacist for disease state education. Upon enrollment in the program, a pharmacist completed a comprehensive medication review, provided disease education and a symptom control logchart, and had the patient complete either the MLHFQ or SGRQ-c. The pharmacist reinforced knowledge and assessed medication adherence through follow-up at week 2 (phone), week 4 (in-person), week 6 (phone), week 8 (in-person), and week 10 (phone) post-enrollment. Upon study completion, patients again completed the MLHFQ or SGRQ-c. Pre-post quality of life, symptom control, and adherence data was analyzed using descriptive statistics.

Results: Five patients were identified as meeting inclusion criteria and were introduced to the study. Of all study participants, 80% (n=4) had COPD and 20% (n=1) had heart failure. Study participants were a mean of 68.4 years old, 20% (n=1) reported active tobacco smoking, 60% (n=3) were on guideline recommended therapy, and had a mean of 3 drug therapy problems. Two COPD patients were lost to follow up and failed to complete a post-SGRQ-c questionnaire. The participant with heart failure experienced a clinically significant 29-point decrease in pre- and post-MLHFQ score, equating to a 50.8% improvement in quality of life over 60 days. Individuals with COPD who completed the study demonstrated a clinically significant mean decrease in pre- and post-SGRQ-c of 3.5% over 60 days. According to pre- and post-evaluation data, participants experienced a mean decrease of 1.6 missed doses of medication per week.

Implications/Conclusions: Pharmacist-provided disease state education to patients with COPD or heart failure may improve patient reported quality of life and symptom control, as well as reduce missed doses of medications.