

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

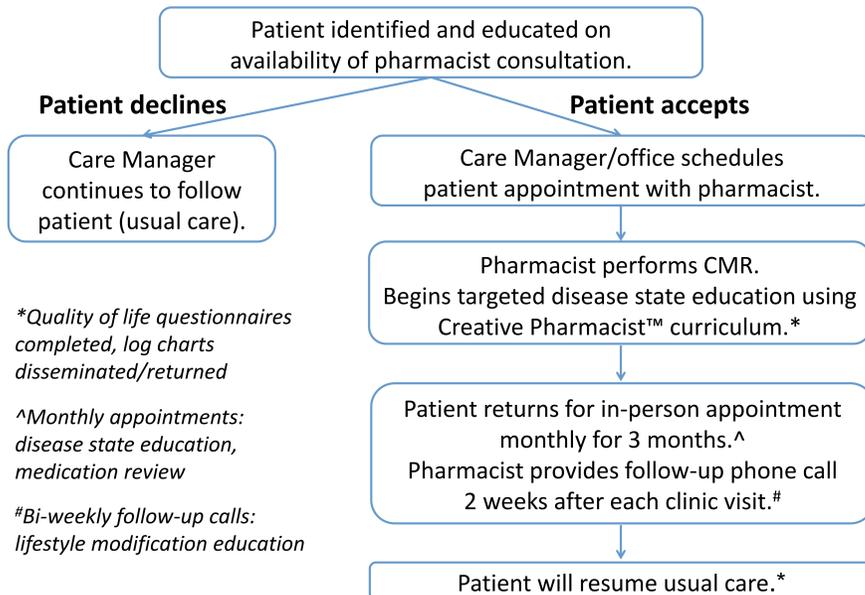
- Realo Discount Drugs is a group of 18 community pharmacies serving eastern North Carolina with enhanced services.
- Coastal Carolina Health Care, PA (CCHC) is a multi-specialty group practice in the Coastal Carolina Quality Care Accountable Care Organization in Craven County, North Carolina that includes a network of physicians, nurses, and care managers.
- Individuals with COPD or heart failure are at high risk for hospital readmission, with the national readmission data approximating 20% for these conditions in the year 2013.
- Previous studies have shown pharmacist intervention with disease state education has improved symptom control and medication adherence.
- The Minnesota Living with Heart Failure Questionnaire (MLHFQ) and the St. George Respiratory Questionnaire for COPD (SGRQ-c) are used in clinical practice to assess quality of life in heart failure and COPD patients.

OBJECTIVES

- **Primary:** Assess the impact of pharmacist-led disease state education on disease specific quality of life and symptom control.
- **Secondary:** Assess impact of pharmacist intervention on medication adherence.

METHODS

Study Design: 120-day, prospective, cohort study at 3 outpatient CCHC clinics
Inclusion Criteria: Patients ≥18 years, English-speaking, with COPD or heart failure, enrolled in Medicare or were Medicare-eligible
Exclusion Criteria: Patients who were cognitively impaired
Methods:



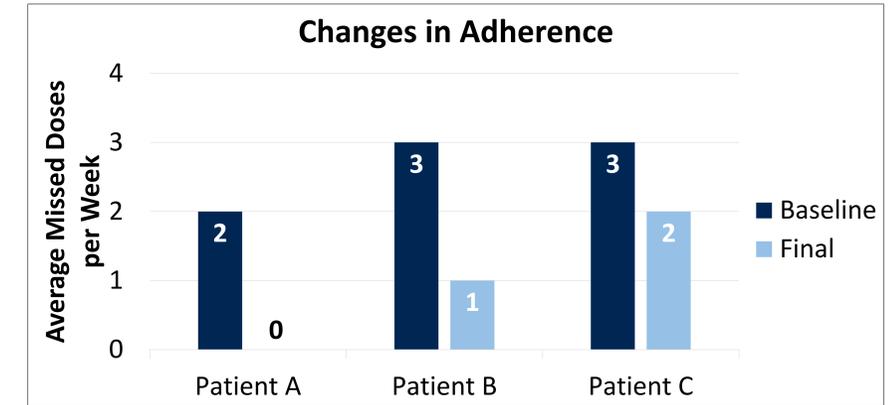
Analysis: Descriptive statistics assessed changes in quality of life questionnaire scores with clinical significance set as a change in MLHFQ score by 5 points and SGRQ-c scores by 0.250%, symptom control, and medication adherence

RESULTS

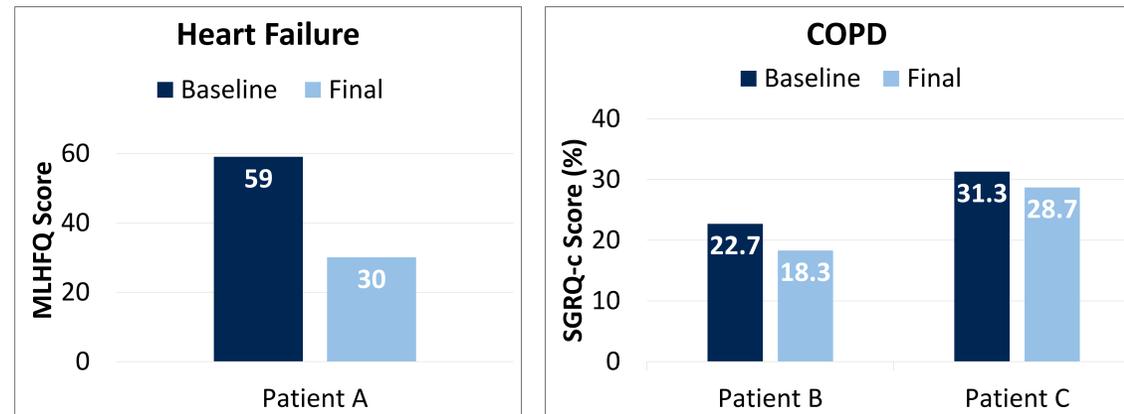
Patient Demographics

	HF (n=1)	COPD (n=4)			
Patient Identifier	A	B	C	D	E
Age	70	64	67	66	75
Gender	Female	Female	Male	Female	Female
Recent Hospitalization?	No	No	Yes	No	No
Current Smoker?	No	Yes	No	No	No
On Guideline-Recommended Therapy?	No	No	Yes	Yes	Yes
Number of DTPs Identified at First Visit	5	3	4	2	1

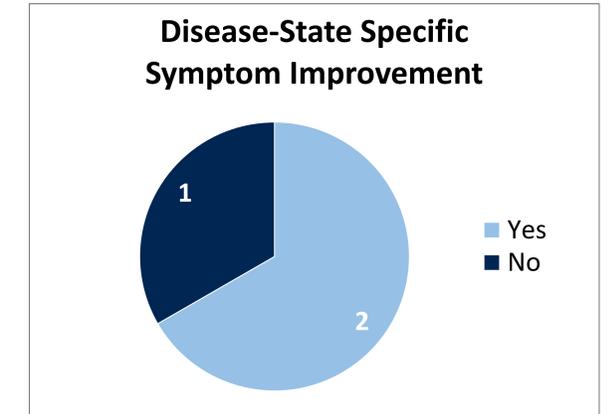
Adherence



Quality of Life Questionnaires



Symptom Control



DISCUSSION

- Patient A demonstrated a clinically significant 29 point decrease in pre- and post-MLHFQ questionnaire score, which is a 50.8% improvement on quality of life over 60 days.
- Patient B and Patient C demonstrated a clinically significant decrease in pre- and post-SGRQ-c scores by 4.4% and 2.6%, respectively, which is an average 3.5% improvement on quality of life over 60 days.
- In relation to adherence, patients reported increased adherence post-pharmacist intervention.
- Patients reported the log charts were efficient but failed to return them to the pharmacist appointment due to memory and motivational reasons.
- Positive feedback from the patients enrolled in the study consisted of improvements in disease state-specific knowledge and why they were taking the medications they were prescribed in relation to their disease state.
- Patient D and Patient E dropped out of the study due to lack of interest and inability to be contacted after first appointment.
- Strengths of the study include provider response to the involvement of a pharmacist and inter-professional collaborations.
- Some limitations of the study include the small sample size, duration of the protocol, and the educational materials used.

CONCLUSION

As a result of mean reductions in the MLHFQ of 50.8% and SGRQ-c of 3.5%, pharmacist-delivered disease state education may lead to improved quality of life and symptom control for patients with COPD and Heart Failure.

ACKNOWLEDGMENTS

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