

Assessment of Clinical Pharmacist-Delivered Education as part of Patient Self-Management of Chronic Obstructive Pulmonary Disease in Internal Medicine Patients: A Pilot Project

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Background

- Patient self-management programs, which include structured patient education, are a common component of chronic disease management including in Chronic Obstructive Pulmonary Disease (COPD)
- These programs have been shown to reduce COPD-related hospital admissions and emergency department visits
- Interior Health clinical pharmacists currently provide structured and unstructured education to patients with COPD as part of hospital care
- The feasibility and effectiveness of clinical pharmacists' delivering structured education to hospitalized patients with COPD and the level of patient satisfaction after receiving this education are unclear

Objectives

- To determine the feasibility of structured education delivered to internal medicine patients with COPD by a clinical pharmacist
- To determine the level of patient satisfaction with structured education delivered to them by a clinical pharmacist while admitted to an internal medicine ward

Methods

Design

- Prospective pilot project that included a cohort of internal medicine patients with COPD on the internal medicine wards at KGH, KLH, EKRH and PRH for 12 weeks between January and April 2014
- Education feasibility was assessed via a 10 minute electronic survey to clinical pharmacists after the end of the study enrolment period
- Patient satisfaction with education was assessed via a 10 minute telephone questionnaire to patients two weeks after hospital discharge. Patients were asked if they recalled receiving education and if they answered yes, they completed remainder of questionnaire

Inclusion Criteria

- Patients on internal medicine ward with a documented diagnosis of COPD regardless of reason for admission, using salbutamol PRN plus ≥ 1 other inhaler prior to admission and on discharge, able to sit through structured education session
- Clinical pharmacists who worked on internal medicine ward

Exclusion Criteria

- Patients who declined or were unable to receive education, were receiving oxygen therapy prior to admission, had a language barrier, dementia, delirium or confusion, or was palliative

Primary Outcome

- % of clinical pharmacists who respond agree/strongly agree to each survey statement regarding the feasibility of structured education

Secondary Outcome:

- % of patients who agree with each questionnaire statement regarding their satisfaction with the structured education provided to them

Structured Patient Education Session Content

- All education materials were developed in accordance with guidelines for medication education materials at study site
- Clinical pharmacists provided structured education, designed to take 20 minutes, to COPD patients during hospital admission
- Each patient was provided with
 - COPD disease state pamphlet which included COPD signs and symptoms, smoking cessation information, resources for patients
 - COPD medication pamphlet for each medication patient was receiving, which included reason(s) for use, administration technique, dosing instructions, adverse effects, monitoring
- Clinical pharmacist reviewed patient's inhaler technique and pamphlet information and answered patient questions

Table 1. Patient Enrolment and Characteristics

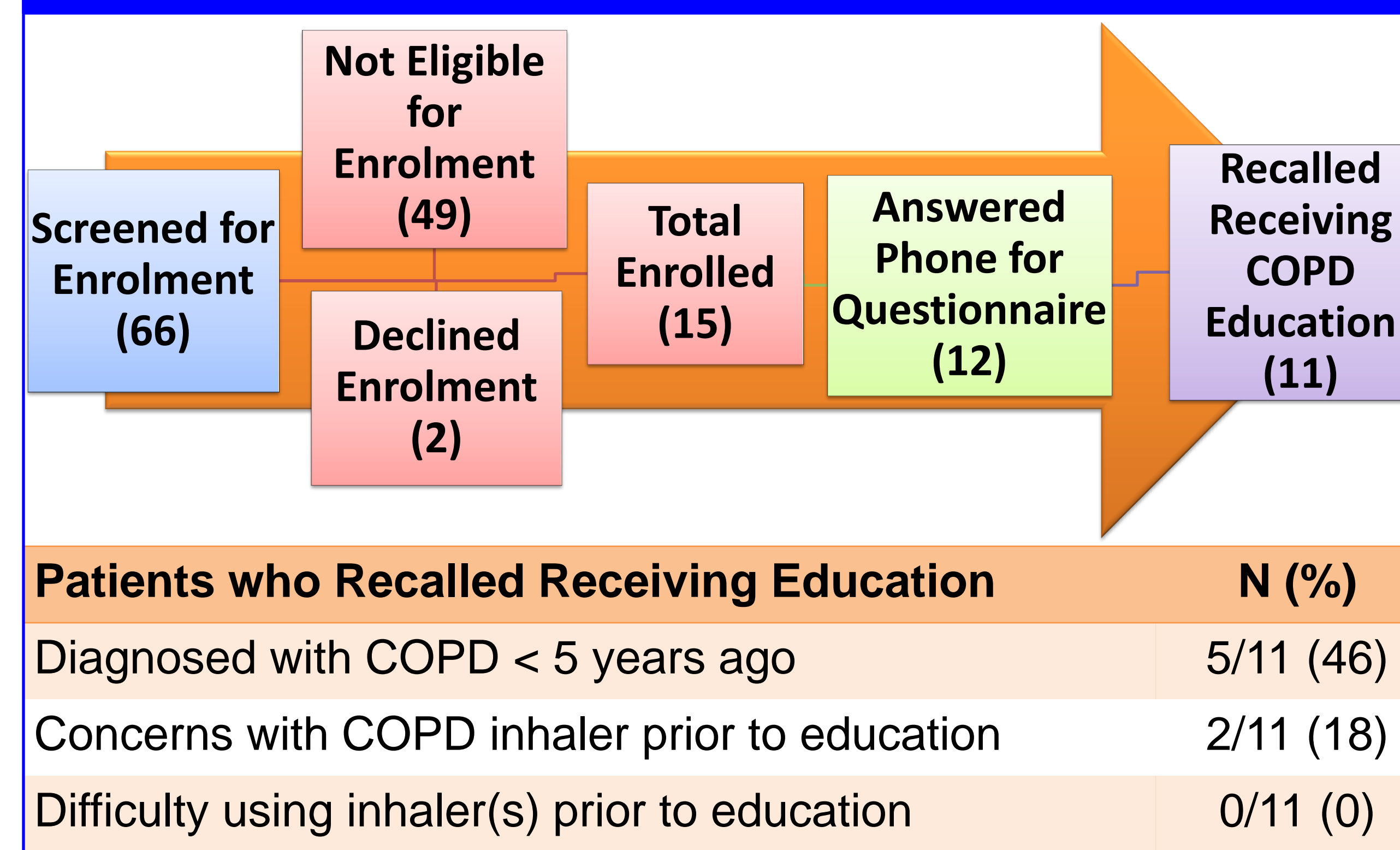


Table 2. Clinical Pharmacist Survey Responses

Clinical Pharmacist Responses	N (%)
Survey Response	6 (100)
Daily Patient Load	
11-20 Patients	2 (33)
21-30 Patients	4 (67)
Reported Education Time Commitment	
Education Delivery Time < 20 minutes	4 (67)
Education Delivery Time 20-40 minutes	2 (33)
Education Preparation Time < 20 minutes	6 (100)
Education Sessions per Week	
0-2	5 (83)
3-5	1 (17)
Barriers to Providing Structured Education	
Inadequate Training	0 (0)
Patients Not Wishing to Receive Education	0 (0)
Competing Priorities in Practice Setting	4 (67)
Lack of Time	2 (33)

Figure 1. Clinical Pharmacist Feasibility of Structured Education

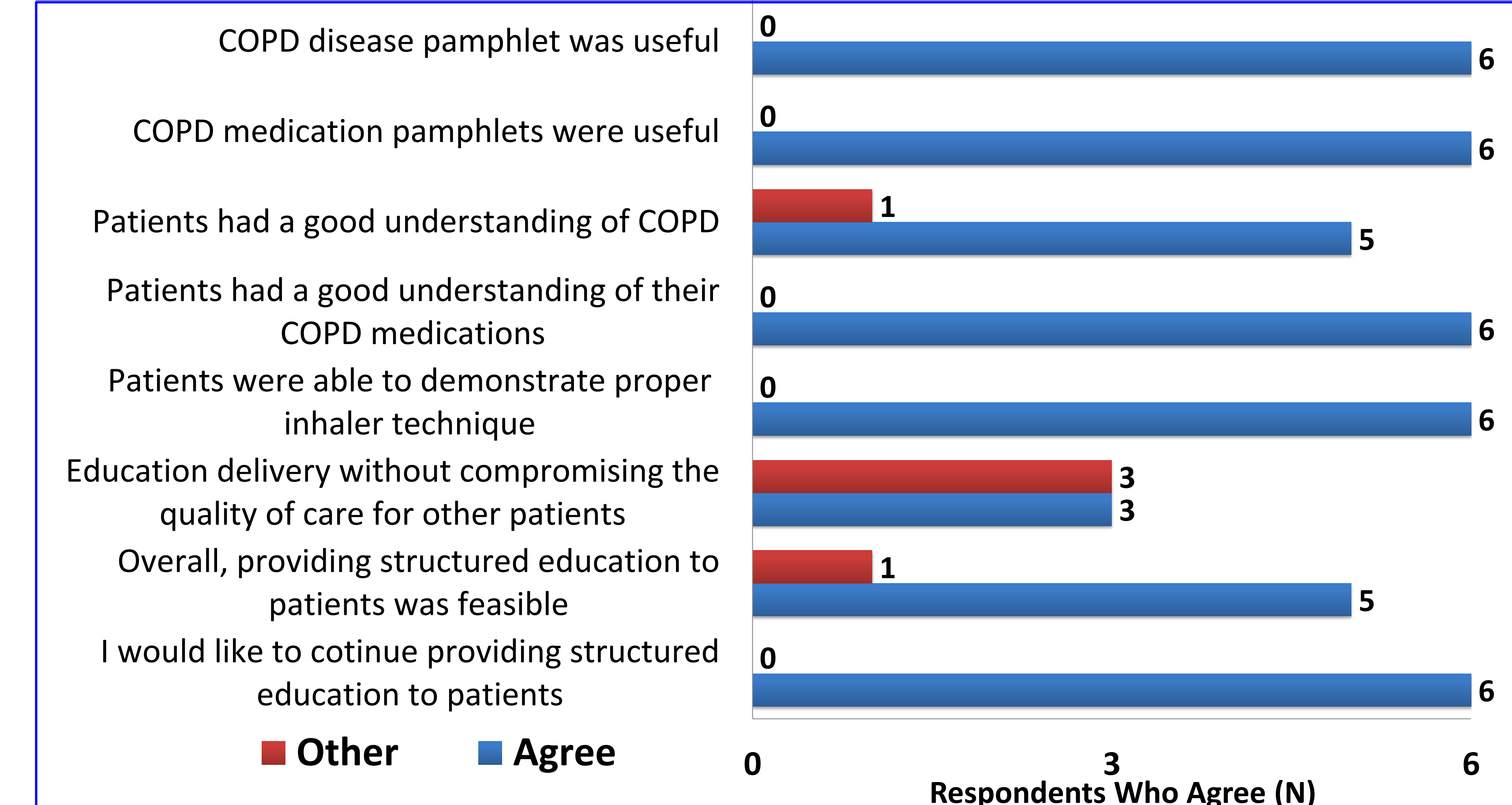


Table 4. Patient Satisfaction with Structured Education

	Patient Response	Yes N (%)
Perceived Quality of Education	Clinical pharmacist was knowledgeable about COPD	11 (100)
	Clinical pharmacist was knowledgeable about COPD medications	10 (91)
	Information was easy to understand	11 (100)
	Given an opportunity to ask questions	11 (100)
Helpfulness of the Pamphlets	Helpful to understand medical condition and medications	11 (100)
	Easy to read and follow	11 (100)
After Having Received this Education	I feel more confident in being able to use inhalers	9 (82)
	I have a better understanding of COPD	10 (91)
	I have a better understanding of COPD medications	11 (100)
Patient Satisfaction	Overall, I am satisfied with the education	11 (100)
	Clinical pharmacists should continue to provide this education to patients in the hospital	11 (100)

Limitations

- Small sample of pharmacists and patients, reliance of memory recall in patient questionnaire, results may not be generalizable to all clinical pharmacists and all patients with COPD, given small percentage of screened patients enrolled in study

Conclusions

- Most clinical pharmacists reported that it was feasible to provide structured education to patients with COPD as part of their daily practice, but that it may compromise care for other patients
- All patients were satisfied with the education they received and reported that clinical pharmacists should continue providing this service to patients in the hospital
- Future research will be conducted to determine which patients with COPD may benefit the most from structured education by a clinical pharmacist

