

## Introduction

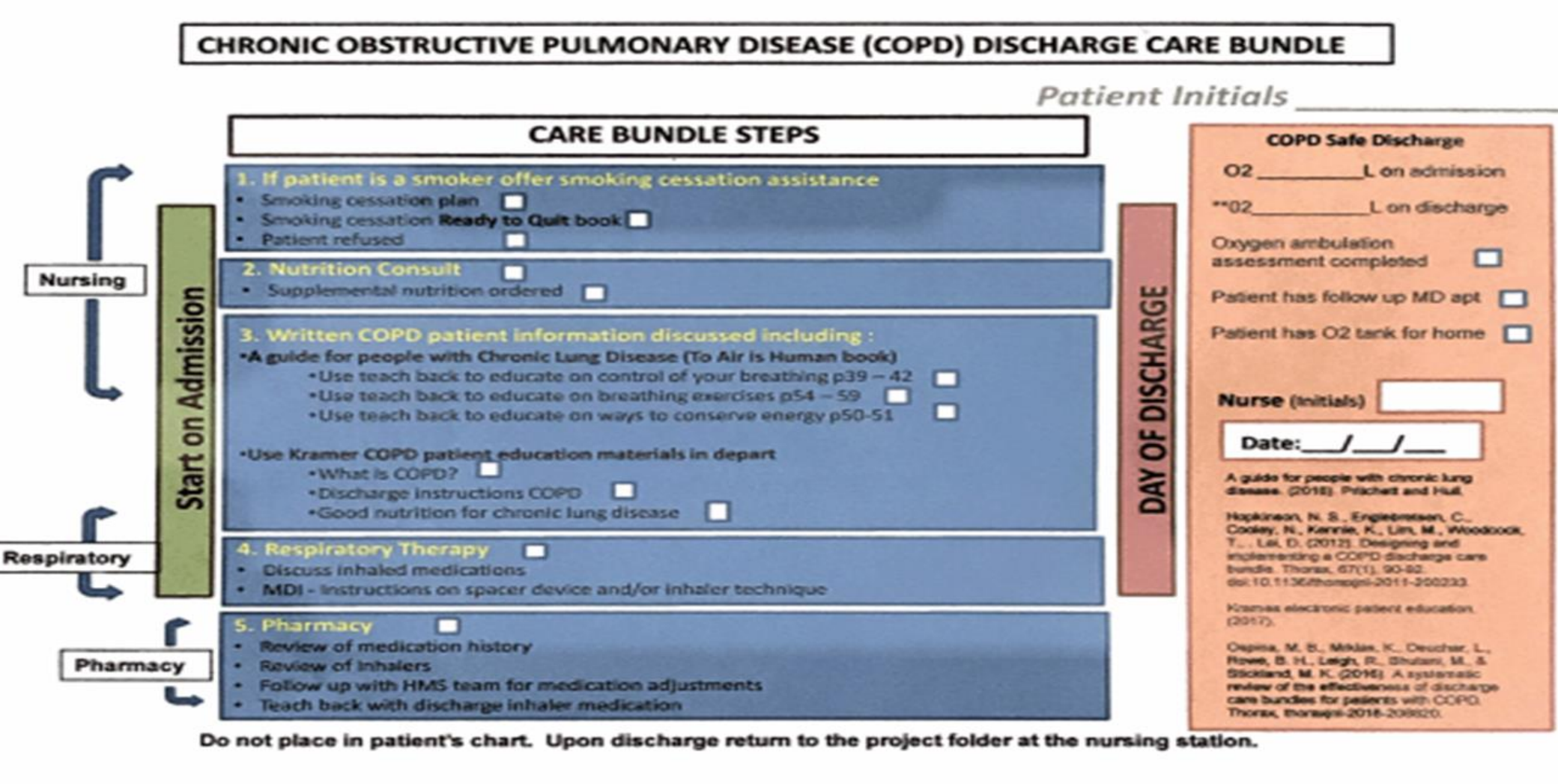
- The impact of chronic obstructive pulmonary disease (COPD) expenditure on the U.S. health system is \$49.6 billion, and 23% accounts for hospital readmission (Harris, 2016).
- COPD readmissions occur due to knowledge deficit and lack of recognition of exacerbation symptoms (Harris, 2016).
- An interprofessional approach and patient partnership are required to achieve improved self-management skills (Lin, Wu, & Huang, 2015; Ospina et al., 2016).
- Hopkinson et al. (2012) study revealed increased COPD bundle compliance with smoking cessation programs (18.2% to 100%), self-management planning (54.6% to 97.9%), and 30%-day readmission rate was reduced to 10.8% from 16.3%.
- The COPD patient population admitted to the participating hospital in the quality improvement project did not have a specific discharge preparation education plan.

The purpose of this project was to develop and implement a COPD discharge care bundle that will increase nursing's effectiveness to prepare the soon-to-be-discharged COPD patient with self-management skills that will reduce readmissions.

## Methods

- Registered nurses (RN) from three medical units completed the pre-test Bristol COPD knowledge questionnaire and Nursing COPD Patient Discharge Education Survey.
- RNs attended education sessions on COPD and the utilization of the discharge self-management care bundle.
- The COPD discharge bundle was available on the units post completion of all education sessions.
- After eight weeks, the RNs completed the post-knowledge questionnaire and survey.

## Materials



## Results

- Pre-and post-test Bristol COPD Knowledge Questionnaire results showed significant improvement in knowledge from 62% to 70% (n=21).

**Pre-Nursing COPD Patient Discharge Education Survey Questions** - designed to evaluate the nurses' current practice for discharging COPD patients.

- Respondents revealed that 42% (n=24) occasionally provided education on dyspnea management, breathing exercises, and how to reduce shortness of breath (Q-4 & Q-5).
- 42% of the respondents rarely requested nutritional consult (Q-6).

Pre-Nursing COPD Patient Discharge Education Survey Questions	Total	Very frequently (%)	Frequently (%)	Occasionally (%)	Rarely (%)	Very rarely (%)	Total
1. How often do you educate COPD patients on their disease, and self-management plan within 24 hours of admission?	24	8%	25%	46%	13%	8%	100%
2. How often do you offer a currently smoking COPD patient a cessation plan?	24	17%	21%	33%	25%	4%	100%
3. How often do you evaluate if the COPD patient can demonstrate use of inhalers?	24	8%	8%	21%	42%	21%	100%
4. How often do you provide education on dyspnea management and breathing exercises?	24	13%	21%	42%	25%	0%	100%
5. How often do you provide education on how to reduce shortness of breath?	24	17%	29%	42%	13%	0%	100%
6. How often do you request a nutritional consult for COPD patients?	24	0%	13%	25%	42%	21%	100%
7. How often are your COPD patients on home oxygen re-evaluated for their oxygen requirements during discharge?	24	25%	33%	25%	8%	8%	100%

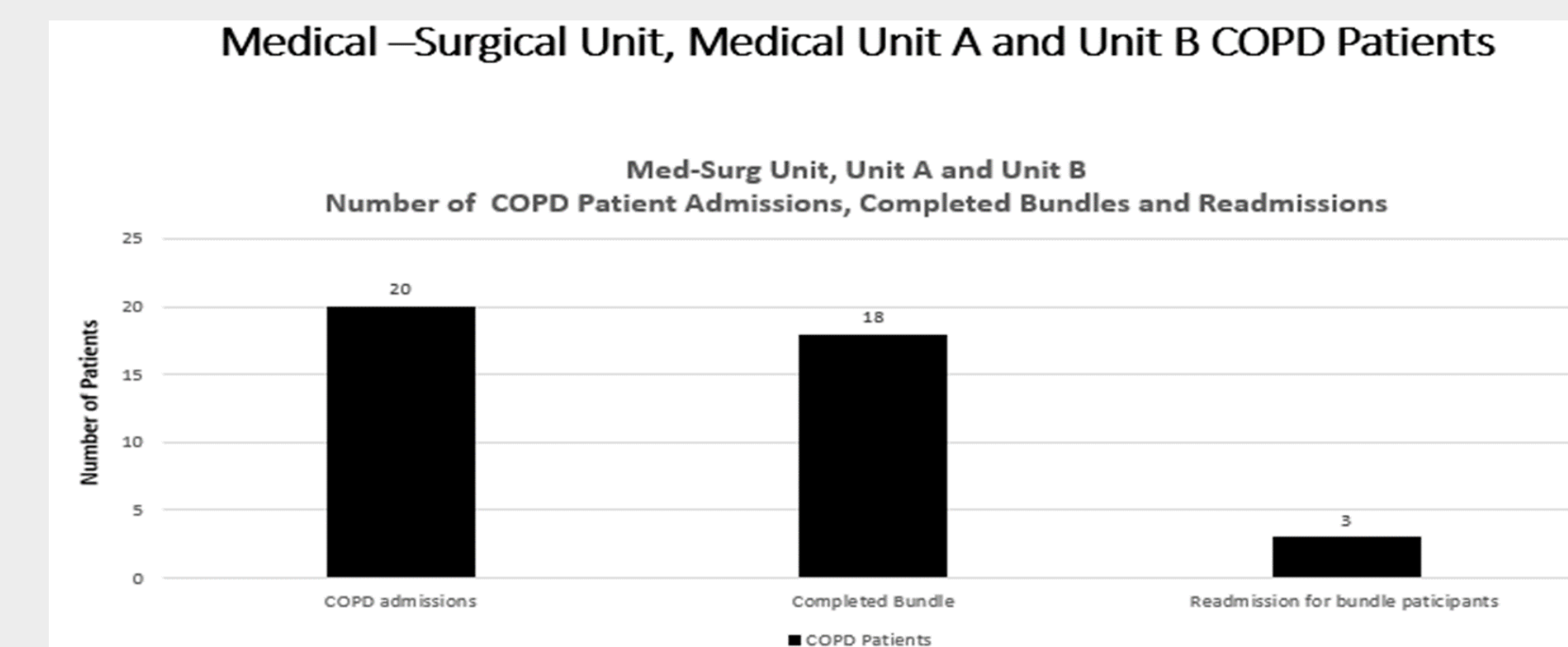
## Post-Nursing COPD Patient Discharge Education Survey Questions

- For question two (Q-2), the nurses' responses showed 65% (n=21) noted they were confident in starting to educate COPD patients on the disease within 24 hours of admission.
- The respondents were 55% confident and 25% very confident with providing (Q-5), dyspnea management, and breathing exercises.
- Respondents for (Q-7) seeking nutritional supplements and consultation were, 40% are confident, and 40% are very confident.

Post-Nursing COPD Patient Discharge Education Survey Questions	Total	Very confident (%)	Confident (%)	Somewhat confident (%)	Not confident (%)	Total
2. How confident are you post the COPD bundle education in your ability to start educating COPD patients on their disease, and self-management plan within 24 hours of admission?	20	15%	65%	20%	0%	100%
3. How confident are you post the COPD bundle education to offer a currently smoking COPD patient a cessation plan?	20	20%	55%	20%	5%	100%
4. How confident are you post the COPD bundle education in evaluating a COPD patient can demonstrate use of inhalers?	20	10%	50%	35%	5%	100%
5. How confident are you post the COPD bundle education in providing education on dyspnea management and breathing exercises?	20	25%	55%	15%	5%	100%
6. How confident are you post the COPD bundle education providing education on how to reduce shortness of breath?	20	25%	55%	20%	0%	100%
7. How confident are you post the COPD bundle education at requesting a nutritional consult for COPD patients?	20	40%	40%	20%	0%	100%
8. How confident are you post the COPD bundle education at evaluating if your COPD patients have home oxygen requirements during discharge?	20	35%	45%	15%	5%	100%

## Results Continued

- The COPD bundle was initiated on 18 patients, and three out of the 18 patients were readmitted.
- The readmission rate for the project was 17%, indicating a clinical significance compared to the national COPD readmission rate of 20% for 30-day readmissions.



## Conclusions

- The bundle will provide the nursing staff with a structured process for COPD self-management education and discharge preparation that will improve patient care outcomes.
- Implementing the bundle will promote interprofessional collaboration, improve COPD knowledge, and reduce readmission rates.

## References

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