Rescue Packs Reduce Readmission rates and ED Bounce Back for Chronic Pulmonary Disease (COPD)

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Background

Despite national efforts to reduce the burden of COPD, hospitalizations and ED visits over the past decade have increased for COPD in the US. Patients who require readmission following hospitalization for COPD present increased risk of mortality and negative patient outcomes. According to the Centers for Disease Control, COPD was the third leading cause of death in 2014 in the United States. As a result, the National Institutes of Health released the COPD National Action Plan that includes a patient-centered road map. The action plan states the number two goal is to improve the diagnosis, prevention, treatment and management of COPD by improving the quality of care delivered across the health care continuum.

Study Objectives

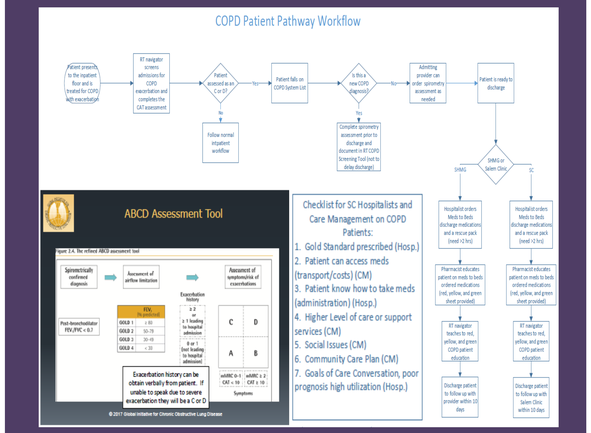
Across hospitals nationwide, readmission rates for COPD patients average approximately 20%. Our goal at Salem health is to decrease readmission rates and ED bounce back for COPD exacerbations by two main processes. The first process was to create an interdisciplinary team consisting of physicians, pharmacists, respiratory therapists, finance and care managers. The second was to ensure that all COPD patients at our institution receive a 'Rescue Pack' at discharge as well as education from a qualified transition of care specialist pharmacist. These two measures are specific to each patient's COPD needs. We anticipate that this unique interdisciplinary approach that serves COPD patients' hospital wide can help reduce readmission rates and thus help our patients in the community visit the ED and/or be admitted to the hospital less often.

Methods

Pharmacy transition of care team collaborated with Hospitalists and Respiratory therapists to create a rescue pack that consists of (Albuterol inhaler, spacer and a Prednisone burst 20mg daily for 5 days and an action plan). This pack is to be dispensed to (COPD GOLD group C or D) patients at discharge who were admitted to the hospital for COPD exacerbations.
Transition of care pharmacists at discharge counsel on the use of the pack and utilization of the action plan to self-manage future exacerbations.
Patients were tracked for 30 days post discharge for ED- bounce back or hospital readmissions for COPD exacerbation events.

Workflow:

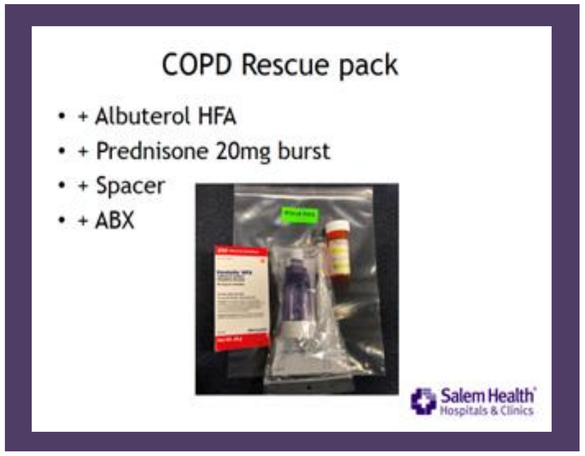
- Patients identified as being admitted for COPD exacerbations are assessed by a respiratory therapist.
- Respiratory navigators assess and qualify patients according to GOLD guidelines for C or D group utilizing the CAT scoring tool that was implemented in Epic.
- Once the patient qualifies, RPH or bed side RN communicates with provider to order the Rescue Pack as part of the COPD Discharge Orders.
- At discharge transition of care pharmacists confirms Rescue pack and communicates with provider the rescue pack ordering with addition of antibiotics as needed.
- Rescue pack is filled and delivered to patient in room and RPH counsels on use and action plan instructions.
- Instructions are given on what to do and when to call provider after a COPD flare up.



COPD Action Plan

Green Zone: I am doing well today	Actions: Continue Daily Routine
• Usual activity and exercise level • Usual amounts of cough and phlegm/mucus • Sleep well at night • Appetite is good	• Take daily medicines :_____ _____ • Use oxygen as prescribed : _____L/min. • Continue regular exercise/diet plan
Yellow Zone: I am having a bad day/COPD flare	**Actions: Use "Rescue Pack" See Back Page**
• More breathless than usual • I have less energy for my daily activities • Increased or thicker phlegm/mucus • My medicine is not helping	• Continue daily medication (listed in green zone) • Use oxygen as prescribed (listed in green zone) • Contact your care provider for follow up • Get plenty of rest • Use pursed lip breathing
Red Zone: I need urgent medical care	**Actions: Call 911**
• Severe shortness of breath/wheezing even at rest • Not able to do any activity because of breathing • Fever or shaking chills • Feeling confused or very drowsy • Chest tightness • Coughing up blood • Increased night symptoms cough/wheezing	• If use more than 16 puffs of rescue inhaler and/or more than 5 rescue nebulizer treatments over 24 hours – **Call 911** or seek medical care immediately

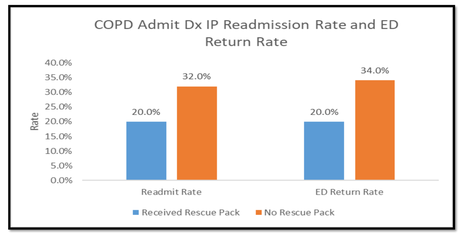
At all times avoid cigarette smoke, inhaled irritants



Results

TOC Population: June 2018-Dec 2018

TOC Population	Cases	Readmit Rate	ED Return Rate
Received Rescue Pack	50	20.0%	20.0%
No Rescue Pack	50	32.0%	34.0%



Conclusion

100 total patients were identified as candidates to receive a rescue pack between July and December 2018, accounting for 26% of the identified COPD patient population. Throughout the test of change, including our peak respiratory season of November to December 2018, the COPD affinity patient readmissions were 20% for those who received the rescue pack. In stark contrast, when patients in the affinity group did not receive a rescue pack and education before discharge, readmissions were 32%. Utilizing the Rescue pack to manage flare up at home has shown a 12% reduction in Salem hospital readmission rates which is statistically significant.

References

1. National Institute for Health and Clinical Excellence. Chronic Obstructive Pulmonary Disease (Update). Clinical guideline 101. 2010.
2. Wilkinson T, Donaldson GC, Hurst JR, et al. Early therapy improves outcomes of exacerbations of chronic obstructive pulmonary disease. Am J Respir Crit Care Med 2004;169:1298e303.
3- Salem health Hospital formulary and pharmacy guidelines and COPD affinity group.
4- Global Strategy for the Diagnosis, Management and Prevention of COPD, Global Initiative for Chronic Obstructive Lung Disease (GOLD) 2017. Available from: http://goldcopd.org.
5- Miravitlles M, Moragas A, Hernandez S, Bayona C, Llor C. Is it possibly to identify exacerbations of mild to moderate COPD that do not require antibiotic treatment? CHEST. 2013;144(5):1571-1577. DOI:10.1378/chest.13-0518.

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