

Improving Patient Diagnostic Testing to Decrease COPD Exacerbation Hospital Readmissions

Steven Colby, DO, Radhika Shah, MD

Problem/Background

As healthcare expenditure continues to increase every year, it is important to minimize factors that contribute to unnecessary burden on the already strained healthcare system and most importantly are the patients who are straddled with the financial and health burdens. One such area that continues to produce such unnecessary burden is hospital readmissions. Readmissions are usually an avoidable event that can be attributed to factors within the control of the healthcare system. Typically, this is due to inappropriately managed comorbidities. As defined by the Centers for Medicare & Medicaid Services (CMS), a readmission is an admission to the hospital within 30 days of being discharged from an earlier hospital stay. COPD is a common comorbidity and is the 3rd leading cause of hospital readmission rates in the US. It is estimated that the costs to the healthcare system range from \$9,000-\$12,000 per readmission for COPD, with total costs of hospitalizations for acute exacerbations of COPD averaging \$13 billion a year in the US. A study in 2012 showed patients that were hospitalized for COPD had a 22.6%. This data put COPD in the Medicare Hospital Readmission Reduction Program (HRRP), which would penalize hospitals for all-cause readmissions after and admission for COPD. There are several factors that play into a patient being readmitted for COPD. One of the most controllable factors is outpatient follow up and management. Patients who do not have appropriate follow up with either a PCP or a Pulmonologist as well as standard outpatient diagnostic work up are at risk to be readmitted to the hospital for undertreated COPD.

Current Situation

The respiratory therapy department at Erlanger has currently been following patients hospitalized with COPD and similar obstructive lung disease diagnoses, to determine the accuracy of this documentation. While performing this, it was noted that many members of the community's COPD population lack any formal diagnostic testing. By amending post-discharge follow up which is already in place for COPD patients by the respiratory therapy department, patients can receive follow up regarding following up for diagnostic testing. Patient that have formal outpatient documentation and post-discharge follow up would hopefully lead to better controlled disease and therefore less likely to have an acute exacerbation. We have discussed many interventions and tried to avoid those which would place increased burden on inpatient discharging providers. It was determined that the most appropriate intervention would be post-discharge follow up which is already in place for COPD patients by the respiratory therapy department, but to also speak directly with patients about following up for diagnostic testing.

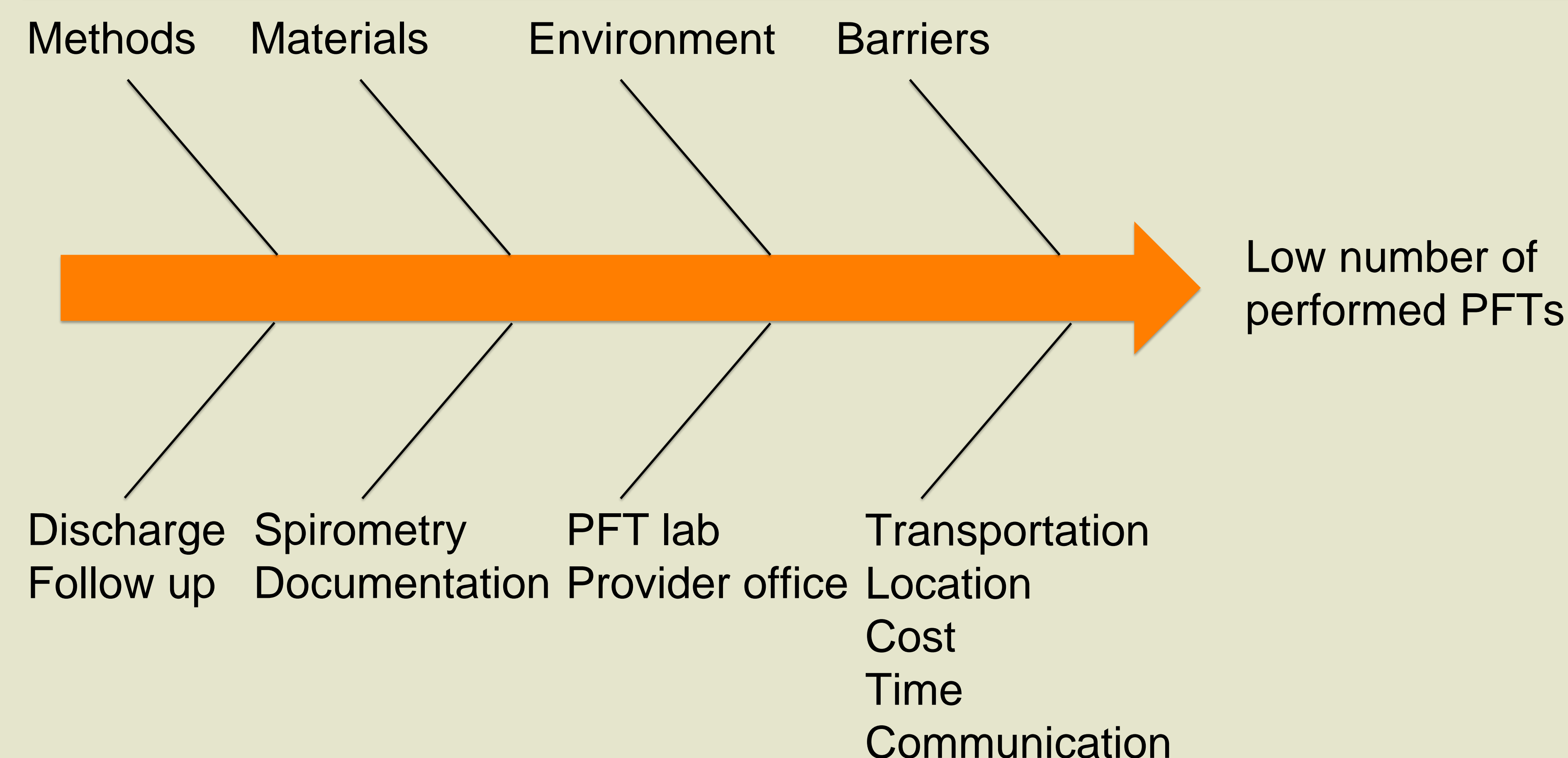
AIM and Measures

To increase outpatient follow up and diagnostic testing (PFTs) of the COPD population, transition of care follow up by respiratory therapists, in order to decrease the rates of COPD exacerbation readmissions by 15% in the COPD population from current rates in 12 months, by:

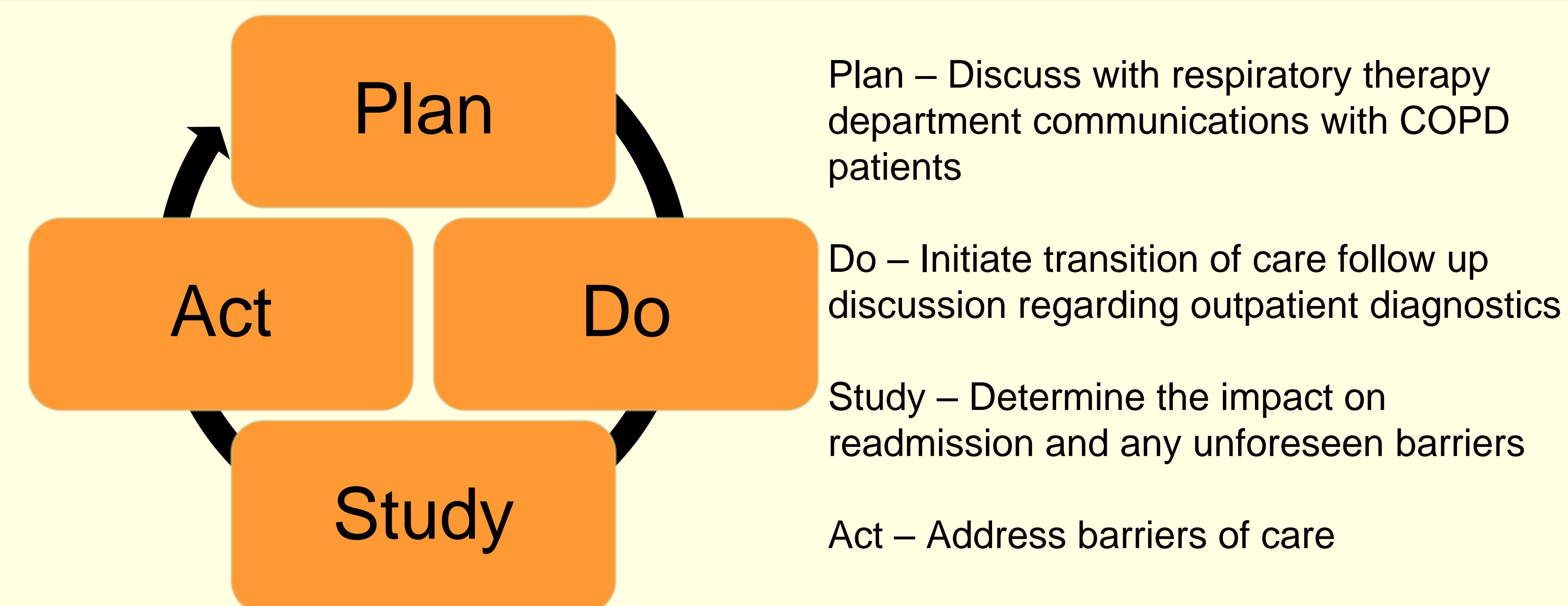
- Identifying current rates of COPD readmissions
- Provide information for patients after discharge regarding diagnosis as well as necessary follow up with outpatient care.
- Ensure that all patients discharged with a COPD diagnosis obtain proper follow up with detailed plans including establishment with PCP/pulmonology for diagnostic testing (PFTs)
- Educate respiratory therapist on contacting discharged COPD patients for evaluation of PFTs in outpatient setting.

Outcomes will be measured by rates of hospital readmission due to COPD exacerbation in patients with a diagnosis of COPD, use of bronchodilator therapy, documentation of PFTs, and outpatient evaluation from 1/1/2022-12/31/2022. Post-intervention we will collect data on the rate of COPD readmissions as well as rates of PFT diagnostics in outpatient setting and compare that data between the years 2021 and 2022.

Cause Analysis



Change Ideas



References

- Press VG, Konezka RT, White SR. Insights about the economic impact of chronic obstructive pulmonary disease readmissions post implementation of the hospital readmission reduction program. *Curr Opin Pulm Med* 2018;24:138–46. 10.1097/MCP.0000000000000454 <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5810972/>
- Mayo Foundation for Medical Education and Research. (n.d.). *About us readmission rates*. Mayo Clinic. Retrieved February 9, 2022, from <https://www.mayoclinic.org/about-mayo-clinic/quality/quality-measures/readmission-rates>
- Shah T, Press VG, Huisingh-Scheetz M, White SR. COPD readmissions: addressing COPD in the era of value-based health care. *Chest* . 2016;150:916–926. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5812767/>
- Portillo EC, Wilcox A, Seckel E, et al.. Reducing COPD readmission rates: using a COPD care service during care transitions. *Fed Pract*. 2018;35(11):30-36 <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6366592/>
- Kong, C. W. (2020, April 1). *Predicting and preventing hospital readmission for exacerbations of COPD*. European Respiratory Society. <https://openres.ersjournals.com/content/6/2/00325-2019>