Integration of Patient-Aligned Care Team Clinical Pharmacy Specialists in the Interdisciplinary Management of Chronic Obstructive Pulmonary Disease

Kennedy Moore, Pharm.D.; Susan Burros, Pharm.D., BCACP; Amy Cummings, Pharm.D., BCACP; Lauren Wilde, Pharm.D.; Sarah Will, Pharm.D., BCPS, BC-ADM

BACKGROUND:

Chronic Obstructive Pulmonary Disease (COPD) was the second most frequent cause for readmission for ambulatory-care-sensitive conditions in 2018-2019.[1] The estimated direct and indirect cost of COPD is $32 billion and $20.4 billion, respectively.[2] The coronavirus (COVID-19) pandemic greatly impacted the nation's health care system. The CDC includes COPD as a condition known to increase risk of severe illness from COVID-19, which is particularly concerning as approximately 5,400 Veterans have COPD at the Kansas City VA Medical Center (KCVA).[3,4]

Prior to COVID-19, COPD was identified based on facility needs for disease state expansion into PACT CPS primary care clinics. KCVA selected COPD for pharmacist disease state expansion within primary care to provide better access to preventative care and medication therapy optimization. Due to the COVID-19 pandemic, telehealth modalities such as VA Video Connect (VVC) were encouraged as in-person visits were limited.

METHODS:

This was a single-center, non-randomized, retrospective quality improvement project that was completed from September 2020 to March 2021. Four PACT CPS, who had previously piloted COPD disease state expansion, lead the diffusion process for COPD at the KCVA. The designated PACT CPS Coaches outlined a detailed expansion and training plan. The COPD Academic Detailing Dashboard was utilized to identify and recruit Veterans with COPD into PACT CPS clinics. Population health efforts were led by a clinical pharmacy technician (CPhT). Integration of COPD was a multidisciplinary effort involving registered nurses, primary care providers, medical support assistants, telehealth clinical technicians (TCTs) and pharmacy trainees. The primary outcome was change in number of COPD interventions post-integration into PACT CPS primary care clinics, which was reported by the Pharmacists Achieve Results with Medications Documentation (PhARMD) tool. Secondary outcome measures included change in inhaler technique scores and change in COPD Assessment Test (CAT) scores, which were assessed by manual chart review. Additional secondary outcome measures identified from the VA Academic Detailing Dashboard included inhaler quality indicators such as: rescue inhaler overuse, duplicate inhaler therapy, inhaled corticosteroid (ICS) use without long-acting beta-agonist (LABA) and long-acting muscarinic antagonist (LAMA) therapy, ICS de-escalation candidates, COPD patients with exacerbation without LABA or LAMA therapy, and COPD patients with inhaler streamline opportunity. Primary and secondary outcomes were assessed in October 2020, January 2021, and March 2021. Final data analysis completed April 2021.

RESULTS:

Eighty-four patients were recruited for PACT CPS COPD management with fifty-seven of those patients being recruited by the CPhT and pharmacy trainees. Of the patients recruited by CPhT and pharmacy trainees, 21% of initial COPD encounters were scheduled as VVC visits. COPD interventions increased from 104 interventions in quarter three (April-June) of fiscal year 2020 to 255 interventions in quarter two (January-March) of fiscal year 2021. Most recently, PACT CPS COPD health factor interventions doubled since July 2020, with an average number of monthly interventions in July 2020 of 33.7, to an average of 67.3 monthly interventions in January 2021. COPD disease state management by PACT CPS increased from four CPS (33%) to all twelve CPS (100%) as of April 2021. Secondary outcomes have also improved. Following at least one PACT CPS intervention, CAT scores decreased by 26%,with an average initial CAT score of 18.3 to an average follow-up CAT score of 13.5. An inhaler technique assessment scale was utilized and showed a 20% increase in inhaler technique score following at least one PACT CPS encounter. COPD inhaler quality indicators showed improvements in 4 of the 6 metrics since integration of COPD into PACT CPS clinics. Specifically, percent change in frequency of each metric showed a reduction of 31% for rescue inhaler overuse, 18% for inhaler streamline opportunity, 15% for duplicate inhaler therapy, and 5% for ICS without LABA or LAMA. Over 80 inhalers were initiated and 60 inhalers discontinued since diffusion of PACT CPS COPD management.

CONCLUSION:

COPD disease state expansion into PACT CPS primary care clinics increased access to care, improved CAT and inhaler technique scores, and improved population-based inhaler quality indicators. Incorporation of VVC visits not only allowed for increased use of telehealth modalities, but provided a way for PACT CPS to visualize inhaler technique. This multidisciplinary approach emphasized preventative care and established a foundation for PACT CPS to provide effective medication management to Veterans with COPD in the primary care setting.

REFERENCES:

1. ACSC Spells by Condition, Classification and Length of Stay. National Health Service Website. Ambulatory Care Sensitive Conditions (ACSC) - NHS Digital. Updated September 28, 2020. Accessed February 22, 2020.
2. Global Strategy for the Diagnosis, Management, and Prevention of COPD. Global Initiative for Chronic Obstructive Lung Disease Website. GOLD-REPORT-2021-v1.1-25Nov20_WMV.pdf (goldcopd.org). 2021 Report. Accessed March 10,2021.
3. COVID-19 Cases & Data. Centers for Disease Control and Prevention Website. Coronavirus Disease 2019 (COVID-19) | CDC. Accessed February 22, 2020
4. COPD Dashboard. Academic Detailing Service Data Resources Website. Reporting Services - COPD_Dashboard (va.gov). Updated March 4, 2021. Accessed March 5, 2021.