

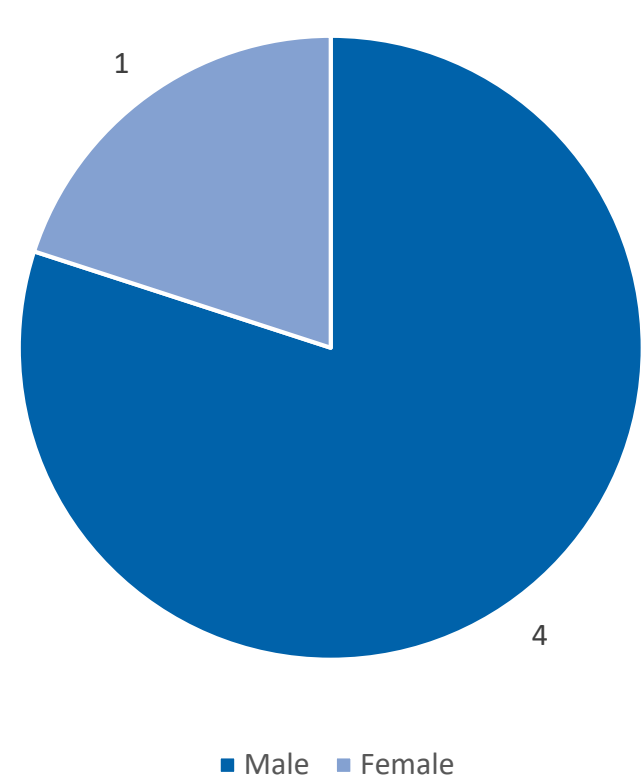
Introduction

- Sojourner Health Clinic (SHC) serves the underserved patients of downtown Kansas City. Through the Patient Assistance Program (PAP), SHC is able to provide free inhalers from Merck Pharmaceuticals to patients with chronic respiratory conditions.
- Due to the lack of access to quality healthcare, homeless and underserved patients are most in need for medications to treat their chronic conditions.¹
- Respiratory conditions cause a heavy burden on the healthcare system as the prevalence of asthma and chronic obstructive pulmonary disease (COPD) continues to rise but management has not significantly improved.^{2,3}
- The Asthma Control Test (ACT) and COPD Assessment Test (CAT) serve as a simplified tool for monitoring the control of asthma and COPD respectively in patients with a diagnosis of obstructive lung disease.^{2,3}
- The purpose of the study was to identify the impact of asthma and COPD on the quality of life of SHC patients enrolled in PAP, with the use of the questionnaires.

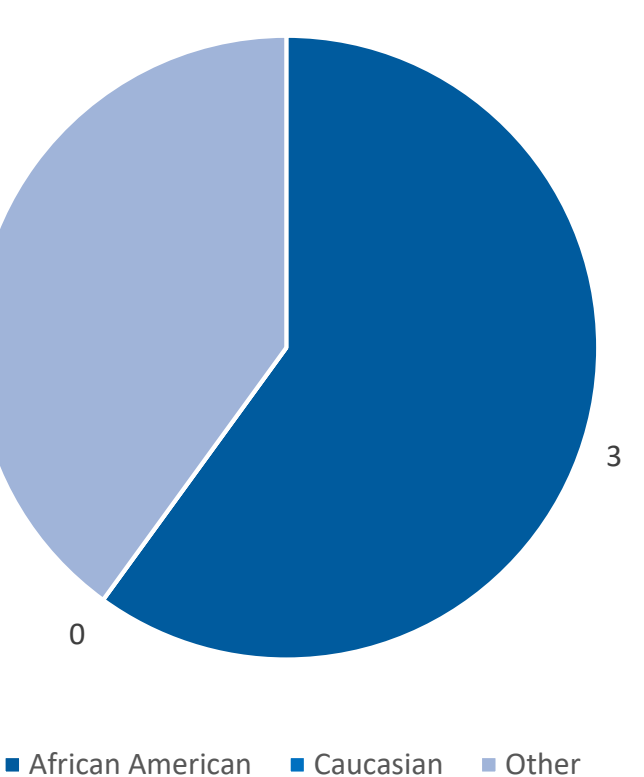
Methodology

- Participants included SHC patients, enrolled in PAP for a minimum of three months or that received a minimum of three refills of their prescribed inhalers.
- A tentative diagnosis of either asthma or COPD was assigned based on past medical history, duration of symptoms, and tobacco use.
- A composite score was calculated based on the numerical sum and used to classify the disease process based on previously established parameters.²⁻⁴
- Follow-up surveys were completed by patients every 4 weeks (ACT) or every 2-3 months (CAT).^{3,4}

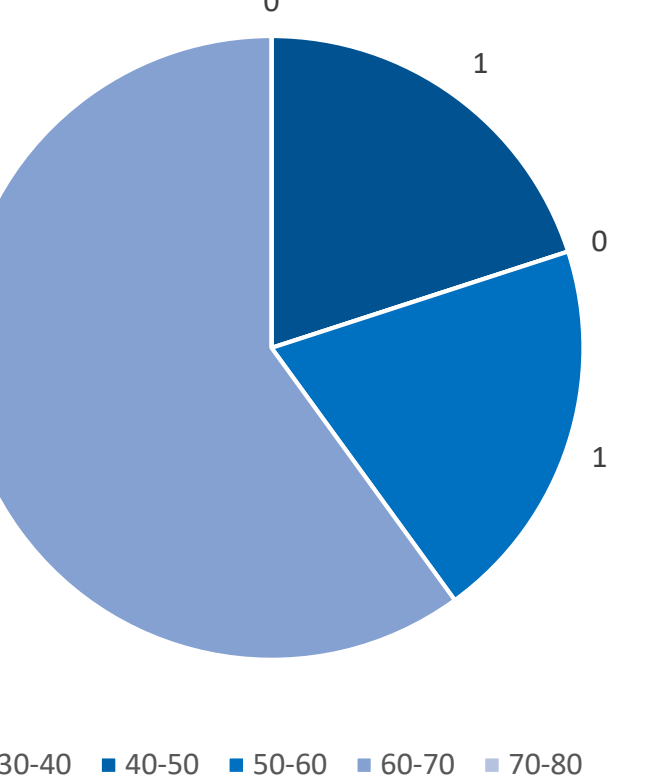
Asthma Patients by Gender



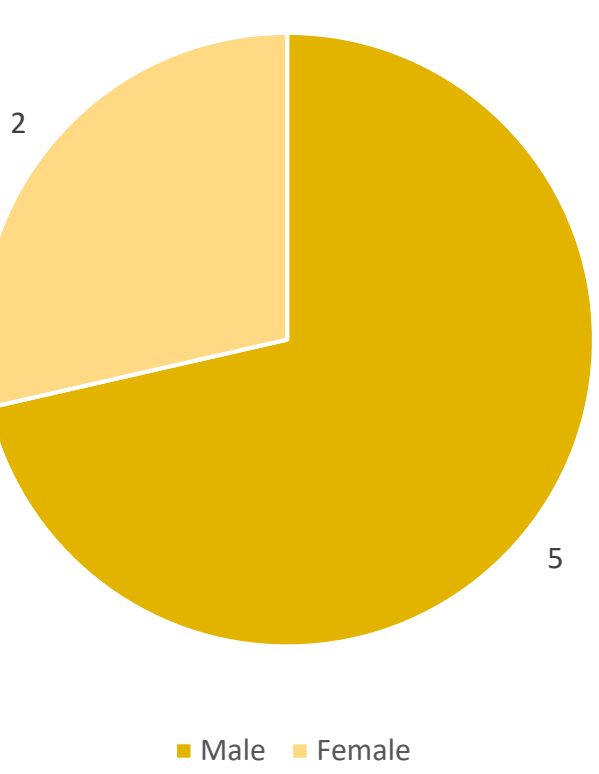
Asthma Patients by Race



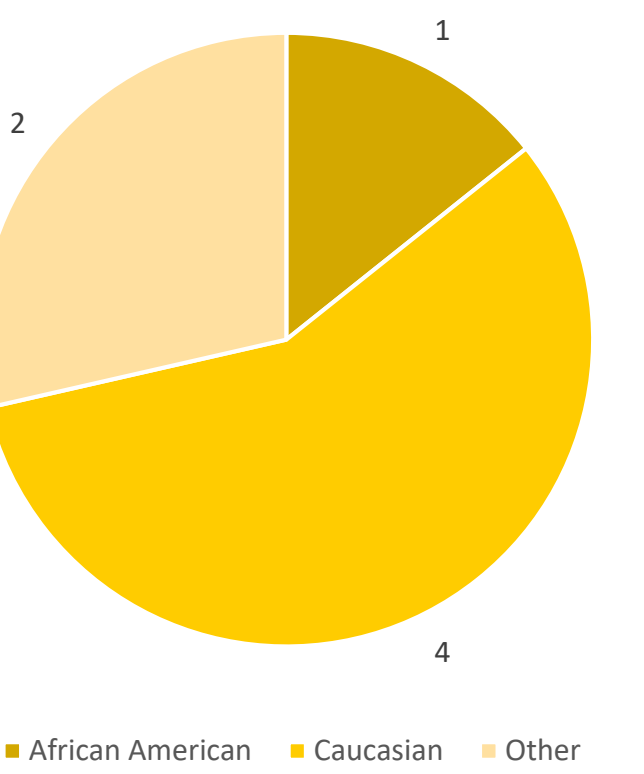
Asthma Patients by Age



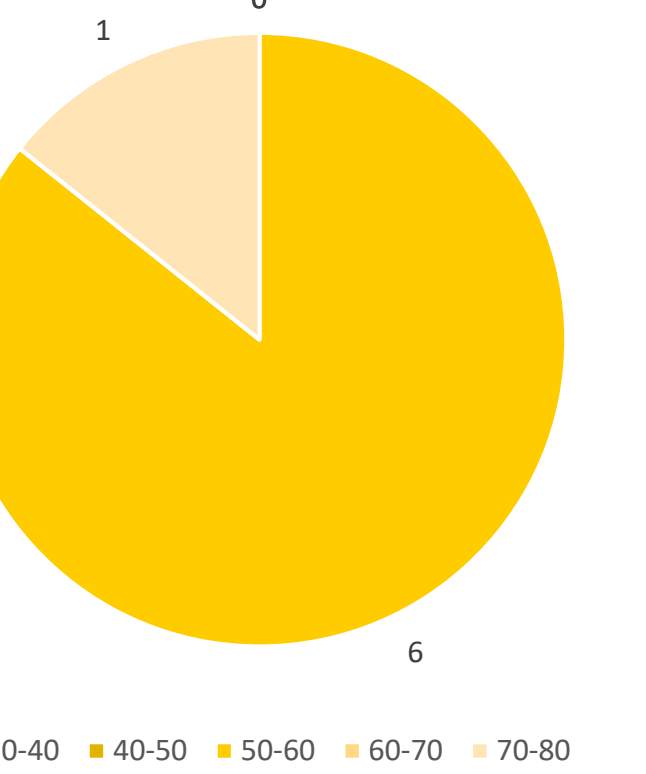
COPD Patients by Gender



COPD Patients by Race



COPD Patients by Age

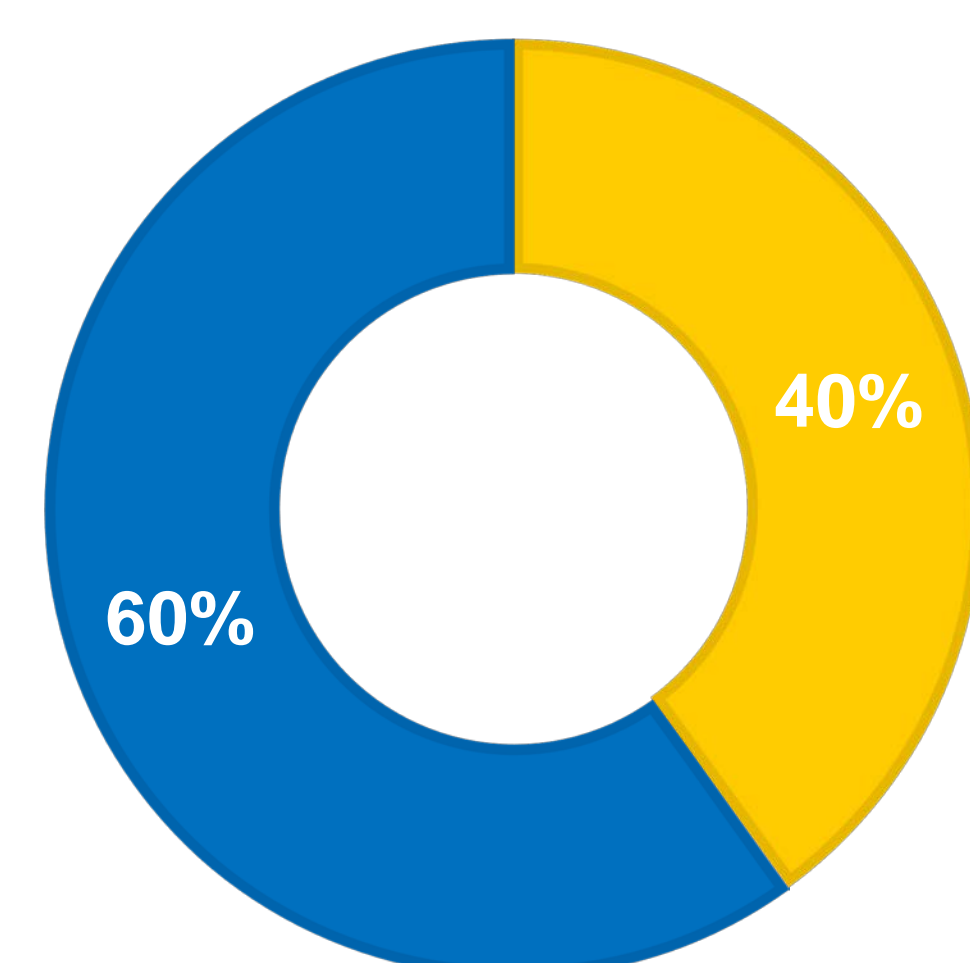


Asthma Control Test Results

Patient	Score	Date	Repeat Score	Date
1	15	9/9/18	20	2/3/18
2	21	9/9/18		
3	20	9/9/18		
4	16	9/16/18	18	1/27/19
5	15	11/11/18	13	2/3/18

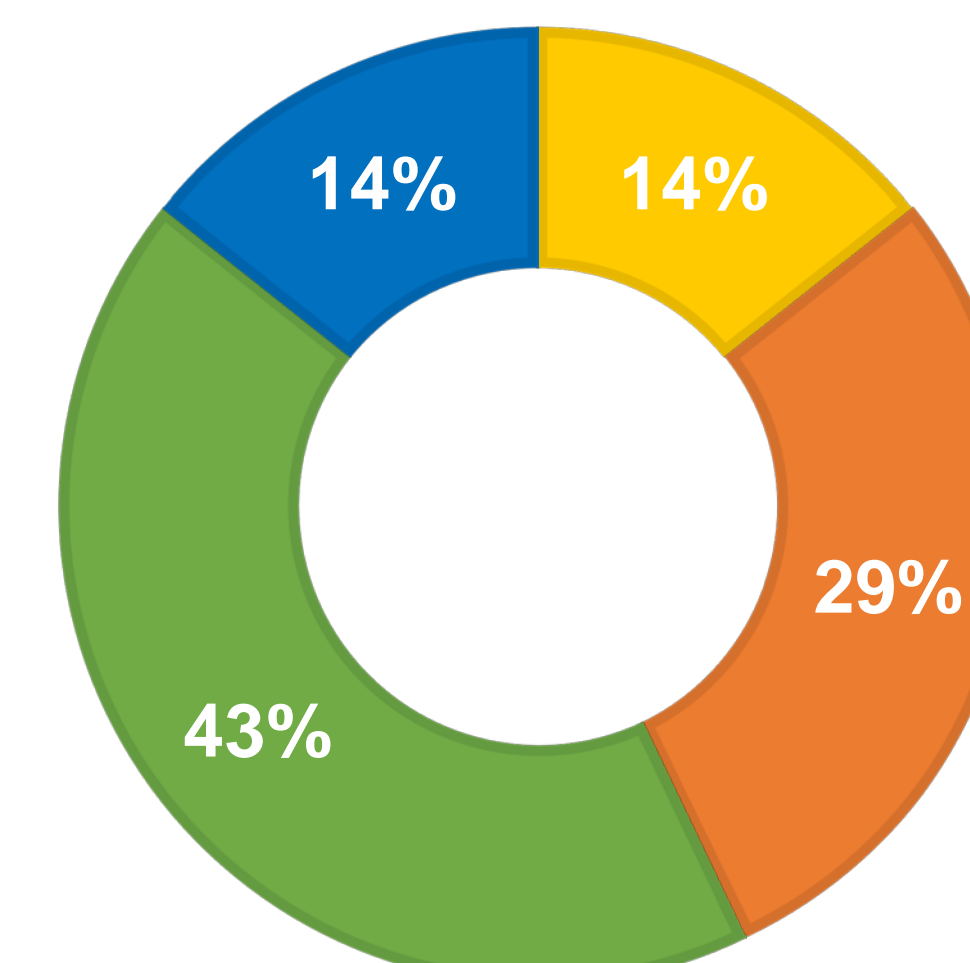
ASTHMA SEVERITY

Well Controlled Poorly Controlled



IMPACT OF COPD ON HEALTH

Low Medium High Very High



Chronic Obstructive Pulmonary Disease Assessment Test Results

Patient	Score	Date	Repeat Score	Date
6	16	9/9/18		
7	21	9/9/18		
8	25	9/9/18		
9	22	9/23/18	17	11/11/18
10	6	10/21/18	11	12/16/18
11	18	2/3/19		
12	28	9/23/18		

Results

- A demographic analysis of the patients shows that four of the asthma patients are male while one is female. Similarly, five of the COPD patients are male while two are female.
- In terms of race, three asthma patients identified as African American, while two identified as other. Four COPD patients identified as Caucasian, while one identified as African American, and two as other.
- When considering the age range of the patients, we found that two asthma patients are under the age 60, while three are age 60 or older. Of the COPD patients, six patients are under the age of 60, while one is older than 60.
- Total of 52.2% (12/23) of PAP patients completed the questionnaire.
- In a follow-up of CAT, one patient demonstrated statistically significant decline from 22 to 17, an improvement in health status. One patient demonstrated an increase of score from 6 to 11, a concern for indication of COPD exacerbation.
- In a follow-up of ACT, one patient showed an increase of ACT score from 15 to 20, indicating a statistically significant improvement in quality of life. However, one patient had a decrease in score, a concern for worsening asthma symptoms.
- A large number of patients enrolled in PAP demonstrate poor control of respiratory conditions with concerns for lack of consistent and proper use of their inhalers.

Conclusion

- Despite the opportunity for free inhaler therapy, SHC patients demonstrate poor control of asthma and COPD.
- Limitations of this study include lack of consistent follow up and small sample size.
- An explanation for poor control could be due to inaccurate inhaler use. To address this, we will utilize dispensary staff to educate patients on proper inhaler use techniques.
- For the future, we will continue to administer surveys and monitor progress of COPD and asthma in patients of SHC.

References

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2. Schatz, Michael et al. Asthma Control Test: Reliability, validity, and responsiveness in patients not previously followed by asthma specialists. *Journal of Allergy and Clinical Immunology*, Volume 117, Issue 3, 549 - 556.
3. P.W. Jones, G. Brusselle, R.W. Dal Negro, M. Ferrer, P. Kardos, M.L. Levy, T. Perez, J.J. Soler Cataluña, T. van der Molen, L. Adamek, N. Banik. Properties of the COPD assessment test in a cross-sectional European study. *European Respiratory Journal*. Jul 2011, 38 (1) 29-35; DOI: 10.1183/09031936.00177210
4. Polkey M, Vogelmeier C, Hansel N. CAT Healthcare Professional User Guide. *COPD Assessment Test*. 2016;(3).