

Optimizing Guideline Directed Therapy for Asthma Management and Reduce Asthma Inhaler Polypharmacy

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Introduction

- Asthma is a common, chronic respiratory condition in the United States¹
- Updated GINA guidelines recommend budesonide/formoterol instead of albuterol as the preferred reliever therapy for adults²
- We aim to optimize guideline directed therapy with budesonide/formoterol as the rescue inhaler and the effects on the rate of asthma related acute care events

Objectives

- Primary objective was to increase the number of adult patients with asthma receiving first line reliever therapy for asthma exacerbation
- Secondary objectives were to determine the impact of the change on the frequency of acute care visits and reduction in number of asthma inhalers used

Methods

Patients were identified by reviewing albuterol prescription fill history from onsite pharmacy
Retrospective chart review was conducted to determine if patients met inclusion criteria

Communication was sent to providers via electronic medical record with patient specific recommendations and patient education
A medication order for budesonide/formoterol was pending for provider signature and any duplicate asthma medications were marked for discontinuation

Chart review 30-days post recommendation to determine the rate of acceptance and associated outcomes

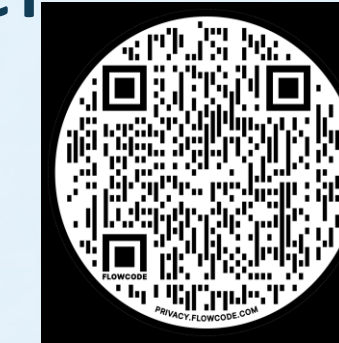
Results

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- There was a significant reduction in total number of inhalers when therapy was optimized
- Proximity of intervention to upcoming office visit is associated with higher frequency of acceptance



Results

Figure 1: Impact of Intervention Acceptance

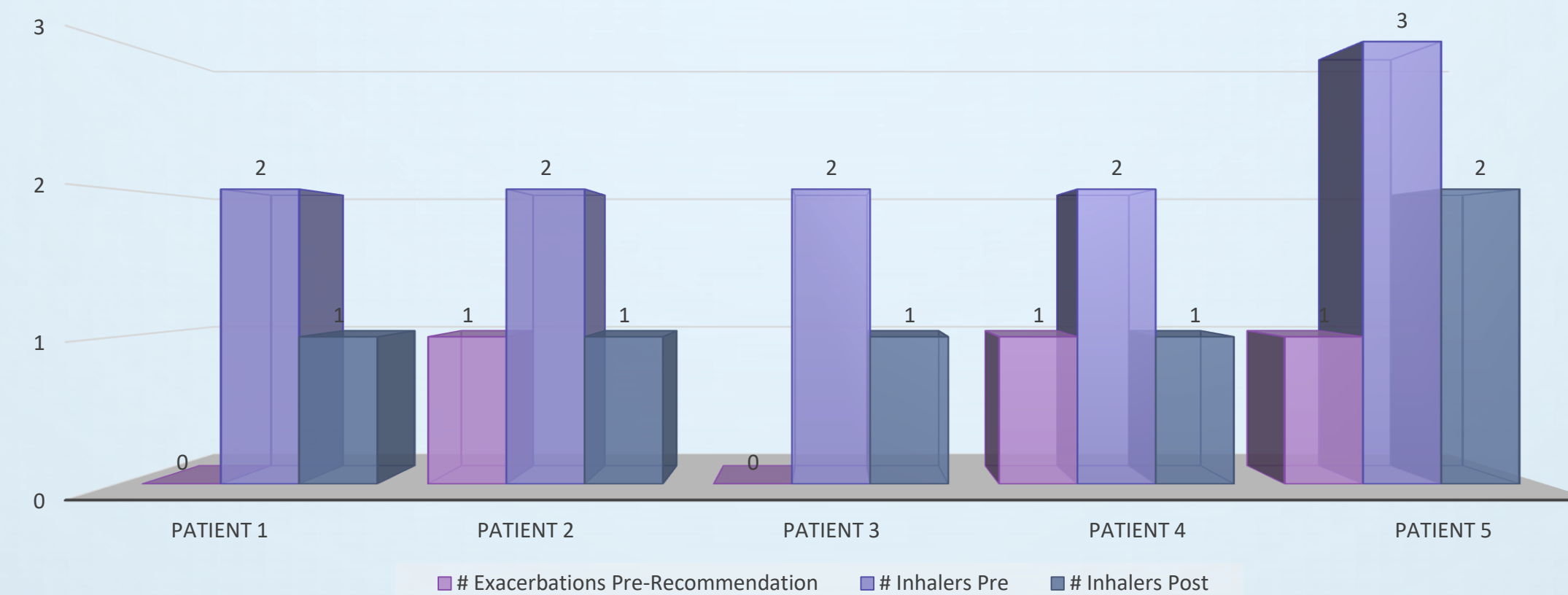
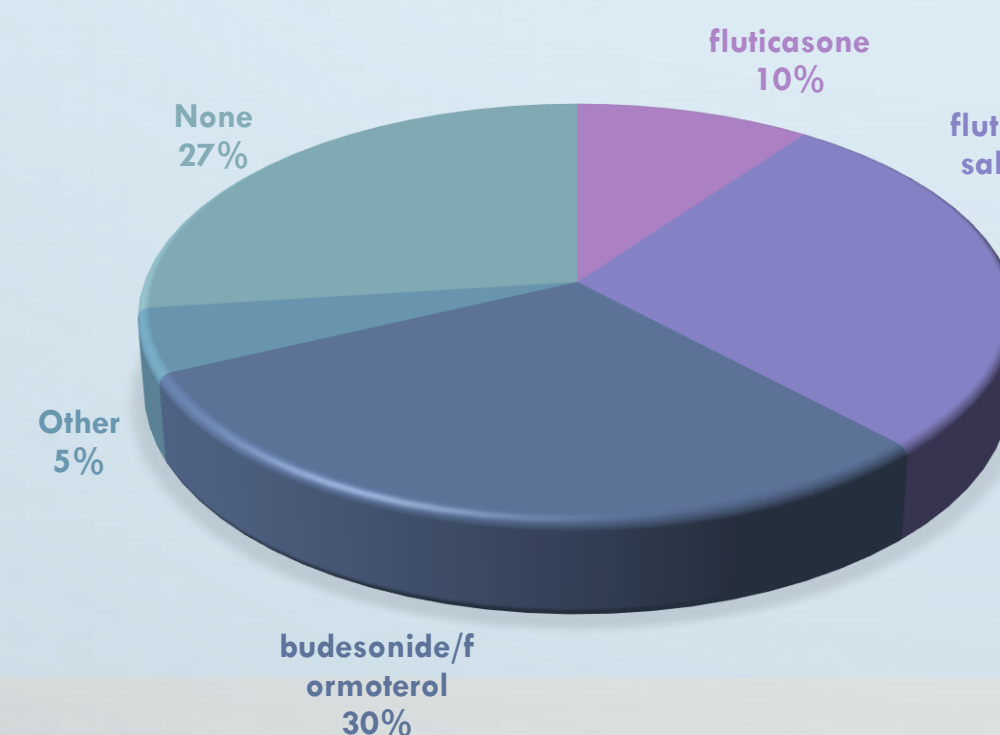


Figure 2: Pre vs Post Intervention Maintenance Therapies

BASELINE MAINTENANCE THERAPIES



MAINTENANCE THERAPIES POST INTERVENTION

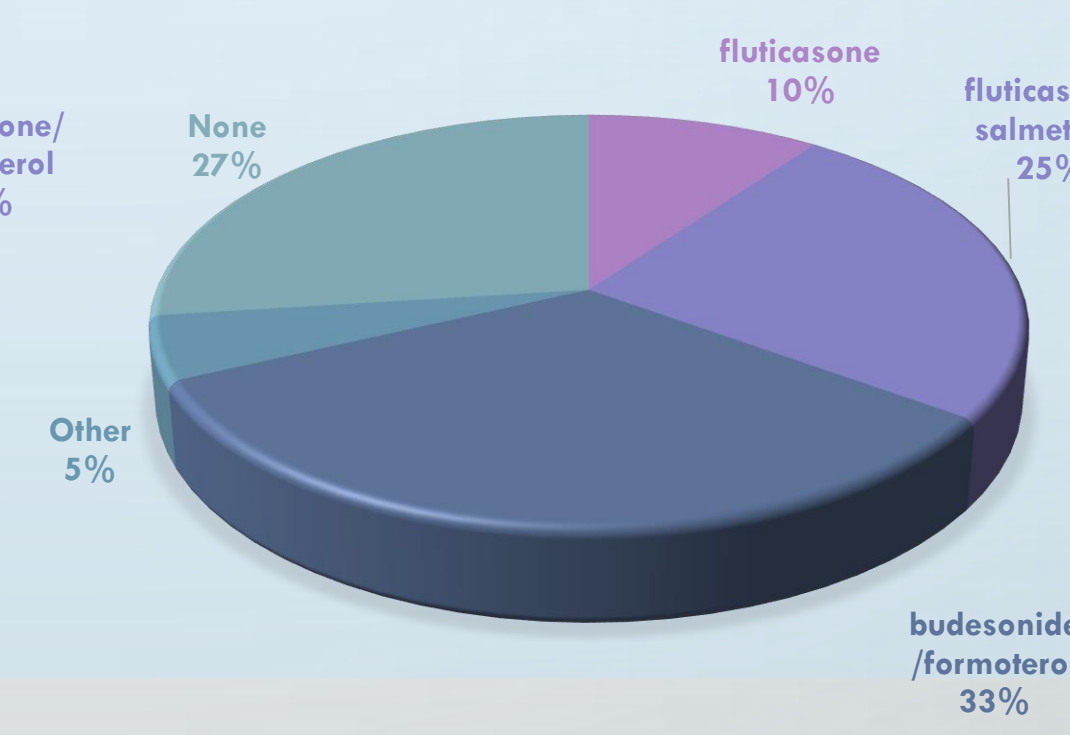
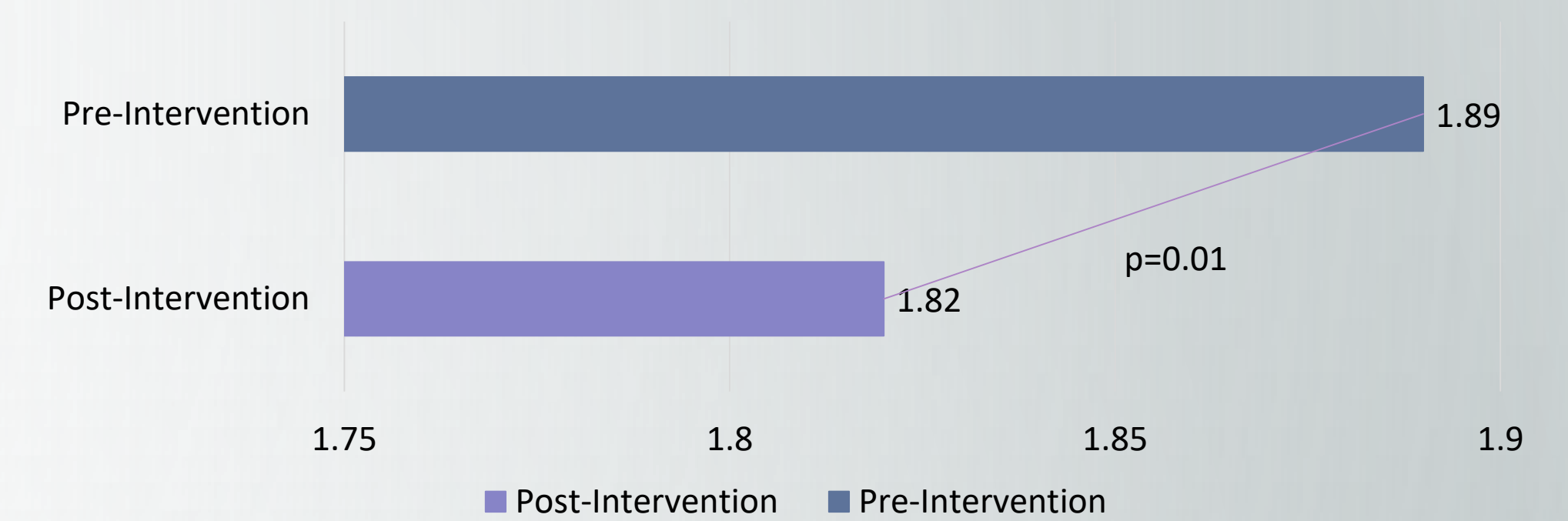


Figure 3: Average Number of Asthma Medications



- A weak correlation exist between office visit post intervention and frequency of acceptance of recommendation. ($r(67) = 0.26, p=0.04$)
- No significant correlation between frequency of asthma exacerbation prior to intervention and acceptance of recommendation ($r(65) = .11, p=0.36$)
- No reported acute care visits in the 30 days post intervention time

Conclusions

- Pharmacist intervention has the potential to optimize guideline directed therapy and reduce asthma inhaler polypharmacy

Discussion

- Pharmacist intervention is helpful to optimize guideline directed therapy for patients with asthma
- Limitations include: small sample size, short follow up period, and single center
- Providers may be hesitant to change a patient's therapy until their next scheduled follow up appointment
- Of those patients who did have a change in their rescue inhaler, this change resulted in less asthma inhalers being prescribed and therefore may result in increased adherence and reduced out-of-pocket cost
- Expanding the follow-up timeframe and inclusion of additional clinics to implement the intervention would allow for positively impacting a greater number of patients

References

- Centers for Disease Control and Prevention: Most recent National Asthma Data. https://www.cdc.gov/asthma/most_recent_national_asthma_data.htm Accessed 8/17/23
- 2023 Global Initiative for Asthma: Global Strategy for Asthma Management and Prevention *Lancet Respir Med.* 2023;11(7):589. doi: 10.1016/S2213-2600 (23)00230-8.

The authors have nothing to disclose

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