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 States.
• Updated GINA guidelines recommend budesonide/formoterol instead of albuterol as the preferred reliever therapy for adults.
• We aim to optimize guided 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. A medication order for budesonide/formoterol was pended for provider signature and any duplicate asthma medications were marked for discontinuation.

Results

Table 1: Baseline Demographics

<table>
<thead>
<tr>
<th>Diagnosis</th>
<th>n</th>
<th>(%)</th>
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<tbody>
<tr>
<td>Asthma</td>
<td>67</td>
<td>100%</td>
</tr>
<tr>
<td>COPD</td>
<td>18</td>
<td>27%</td>
</tr>
<tr>
<td>Mixed Asthma/COPD</td>
<td>3</td>
<td>5%</td>
</tr>
</tbody>
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Age in years, mean +/- SD: 48 +/- 13
Female sex, n (%): 48 (71.6%)
Smoking status:
- Past Smoker, n (%): 22 (32.8%)
- Current Smoker, n: 29 (29.9%)
- Asthma Exacerbation, n (%): 27 (40%)

Table 2: 30-Day Follow-up (n=67)

<table>
<thead>
<tr>
<th>Acceptance of recommendations, n (%)</th>
<th>5 (7.5%)</th>
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<td>Appointment within follow-up period, n (%)</td>
<td>15 (22.4%)</td>
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Changes to maintenance therapy recommendations:
- Budesonide/formoterol, n (%): 41 (61.2%)
- No change, n (%): 9 (13.4%)
- Maintenance not indicated, n (%): 17 (25.4%)

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

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.

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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 costs.
• 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


The authors have nothing to disclose.

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