

# Impact of Health System Specialty Pharmacy Management on Clinical Outcomes in Patients with Asthma

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## BACKGROUND

- Health system specialty pharmacy (HSSP) pharmacists are uniquely positioned to assist with medication cost, adherence, insurance approval, and medication access in patients with asthma.
- The Asthma Control Test (ACT) is a validated tool to measure asthma control over time.<sup>1</sup>
- A three-point change in ACT is considered a minimally important difference (MID) and signifies a clinically meaningful change.<sup>2</sup>
- HSSP pharmacists embedded within specialty clinics work closely with patients to optimize asthma control by improving adherence to therapies, addressing medication concerns, and intervening when unwarranted outcomes, such as worsening ACT scores, occur.

## OBJECTIVES

To evaluate the impact of HSSP clinical management on clinical outcomes in patients with asthma.

## METHODS

### Study Design

This multicenter, retrospective study was conducted across pharmacist embedded HSSP partner sites. Patients who were prescribed a biologic therapy and clinically managed by an HSSP pharmacist between July 2019 and December 2022 were included.

### INCLUSION CRITERIA

- Patients with an asthma diagnosis as indicated by International Classification of Diseases 10<sup>th</sup> revision (ICD-10) codes, J45.0-J45.998
- Patients prescribed at least one of the following biologic therapies for asthma during the study period: dupilumab, benralizumab, mepolizumab, omalizumab, or tezepelumab-ekko
- Receiving clinical management by embedded HSSP allergy and pulmonary specialists

### EXCLUSION CRITERIA

- Patients < 18 years of age
- Patients with therapies placed on hold during study period
- Patients who did not have two or more documented ACT scores

## DATA COLLECTION AND ENDPOINTS

ACT scores and pharmacist interventions documented in Arbor<sup>®</sup> specialty pharmacy technology platform were extracted from clinical dashboards and analyzed using descriptive statistics.

### Endpoints

- Mean baseline ACT scores were compared to mean scores from most recent assessment.
- Patients achieving a MID ( $\geq 3$  points) in ACT score were calculated.
- Asthma control was assessed using ACT scores and categorized as may not be well controlled (ACT score < 19) or well controlled (ACT score  $\geq 20$ ).
- Top six pharmacist intervention reasons and corresponding outcomes (Accepted/Declined/Pending) were evaluated.

## RESULTS

- In total, 648 patients met inclusion criteria and 1,296 ACT assessments completed by HSSP pharmacists were analyzed.
- 85.3% of patients were diagnosed with either moderate (30.2%) or severe (55.1%) asthma.
- 451 pharmacist interventions were completed for included patients during the study period.

FIGURE 1: ACT Improvement

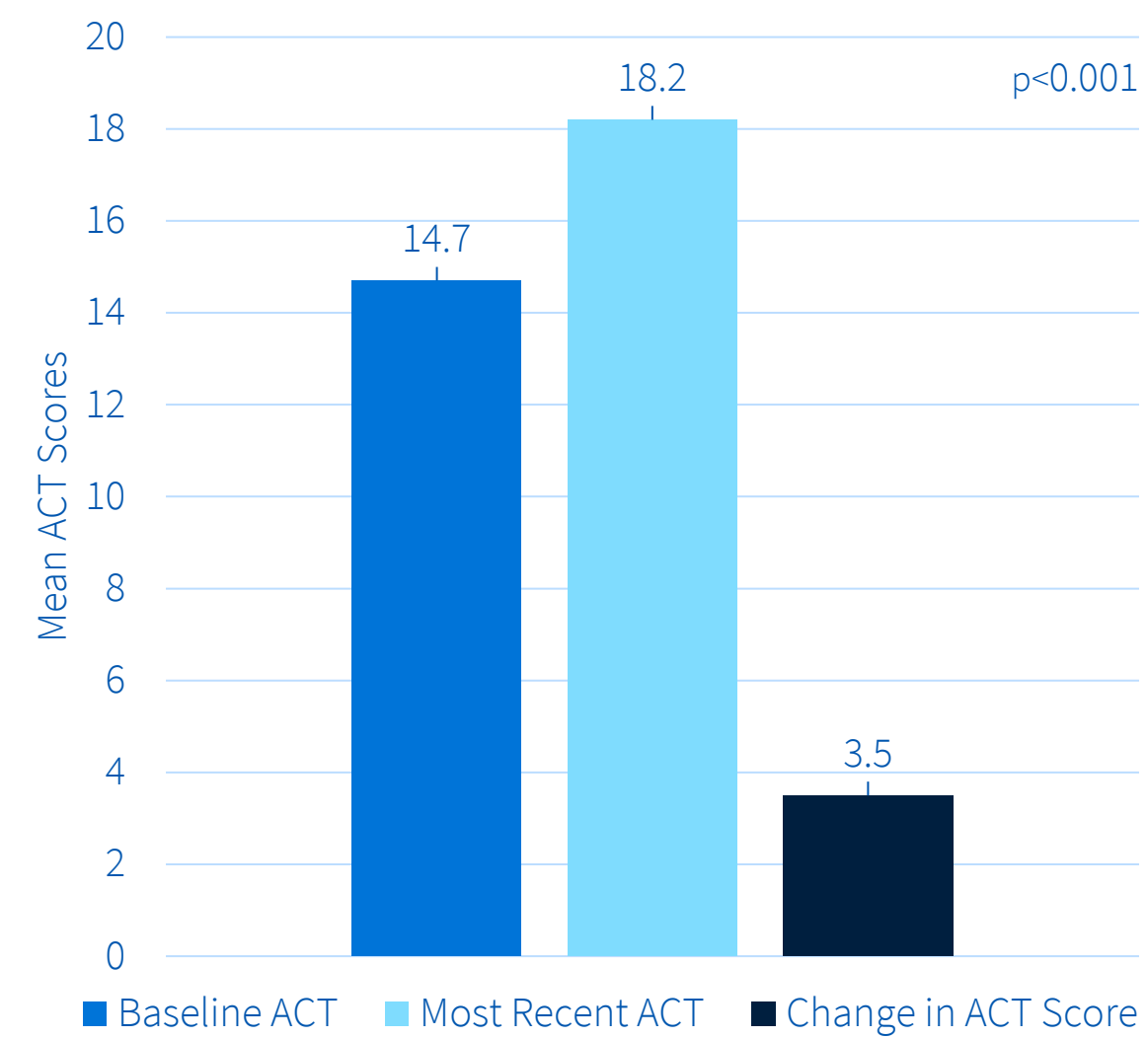


FIGURE 2: ACT MID Analysis

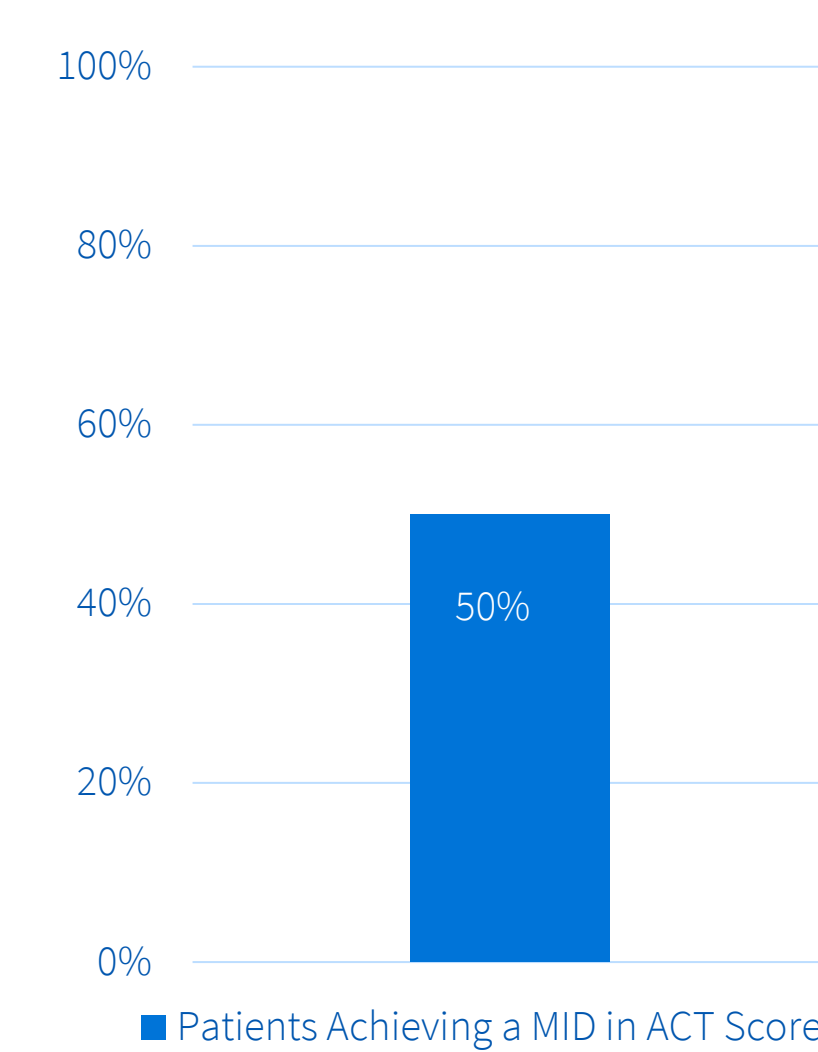
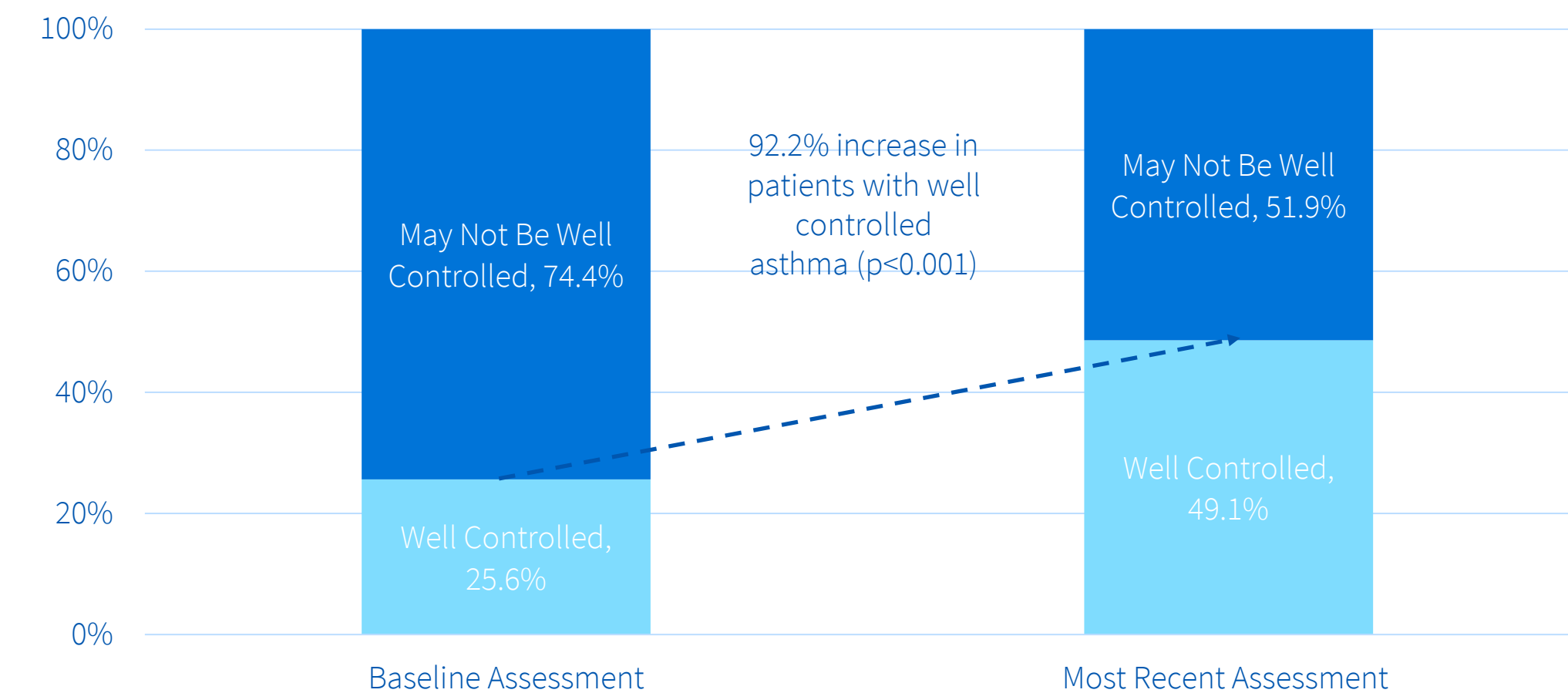


FIGURE 3: Asthma Control



## RESULTS

FIGURE 4: Top Six Intervention Reasons

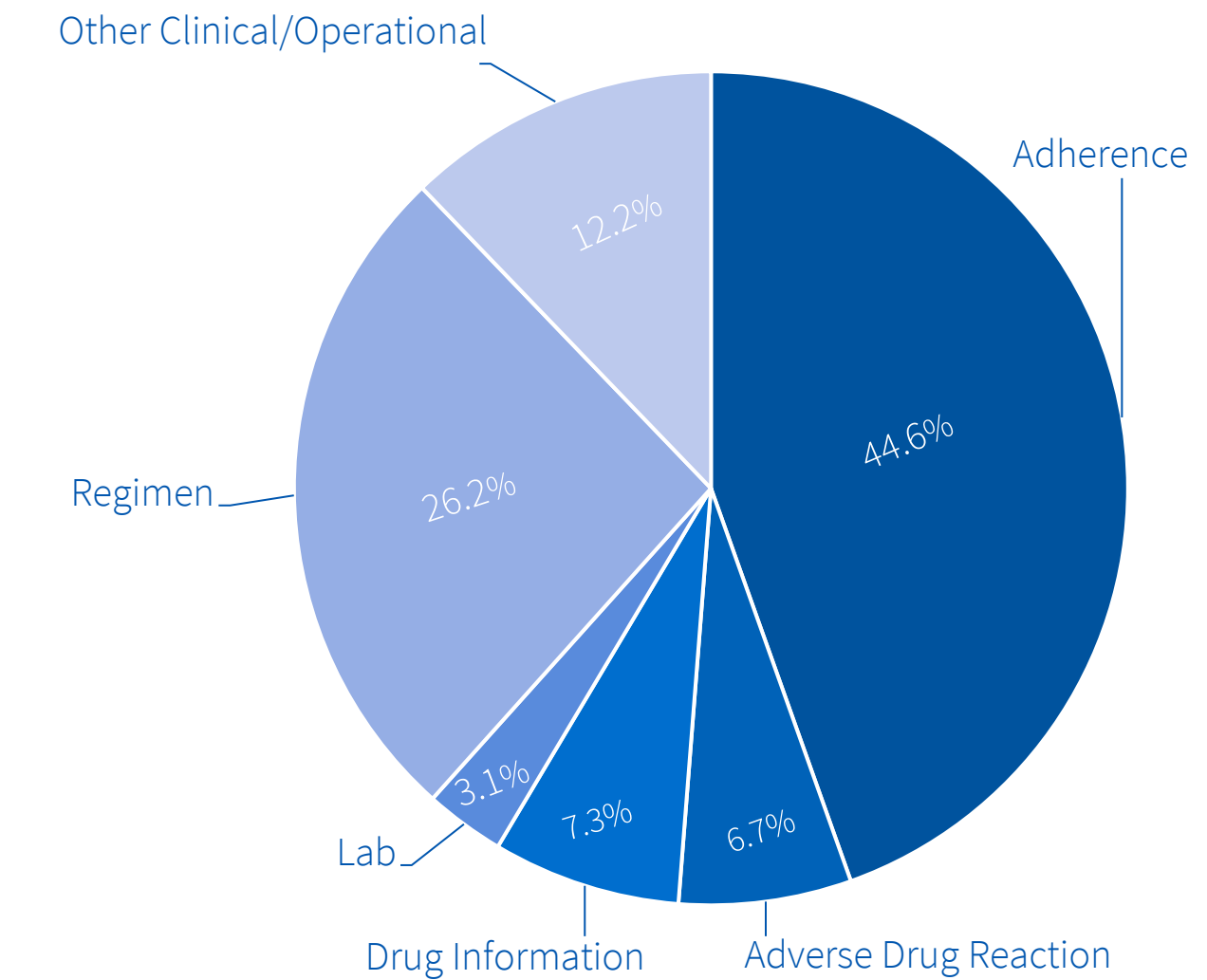
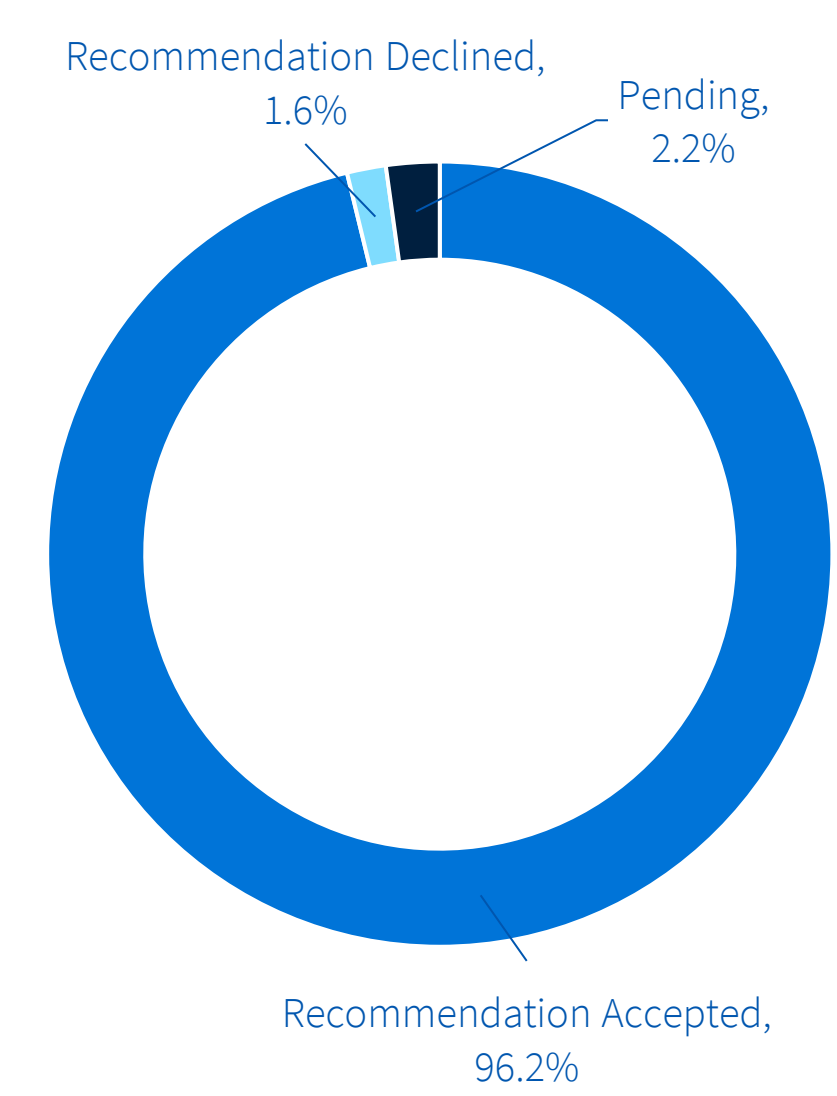


FIGURE 5: Intervention Outcomes



## DISCUSSION AND CONCLUSION

- A clinically significant improvement in mean ACT scores was observed among patients receiving clinical management by embedded HSSP pulmonary specialists.
- For patients prescribed biologic therapy, the percentage achieving asthma control was higher than previously reported in literature.<sup>3</sup>
- Pharmacist interventions are important to address clinical issues, such as poor adherence and inappropriate drug regimen, which help improve patients' asthma control.
- In most cases, pharmacist interventions were accepted, which speaks to the value of embedding HSSP pharmacists into specialty clinics.
- In the embedded HSSP setting, patients with asthma receive the individualized patient care needed to ensure optimal outcomes are achieved.

## REFERENCES

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