

Background

- Medication adherence in asthma is associated with better disease control and health outcomes.
- Identifying potential barriers to therapy along with patient perceptions is crucial to effectively address adherence.
- Specialty clinical pharmacists at Outpatient Pharmacy Services at Yale New Haven Health, an integrated health system specialty pharmacy (IHSSP), conduct clinical assessments to assess asthma control using Asthma Control Test (ACT).
- In May 2023, IHSSP transitioned to a new clinical documentation platform which improved reporting visibility and clinical management.

Objective

- To evaluate asthma control in patients on biologics using ACT scores, with the goal of optimizing therapeutic strategies.

Methods

A retrospective chart review of patients with asthma who filled a biologic medication at the IHSSP between May 1st, 2023, to March 31st, 2024, was conducted.

Patients received the usual course of care as defined by the patient management program (PMP).

Primary outcome was to evaluate asthma control based on ACT scores. ACT scores were categorized as
Well controlled (>19)
Not well controlled (16-19)
Very poorly controlled (<16)

Secondary outcome was patient reported adherence during clinical assessment follow-up.

Patients categorized as very poorly controlled were further reviewed to identify barriers to better asthma control.

Results

Figure 1: Workflow

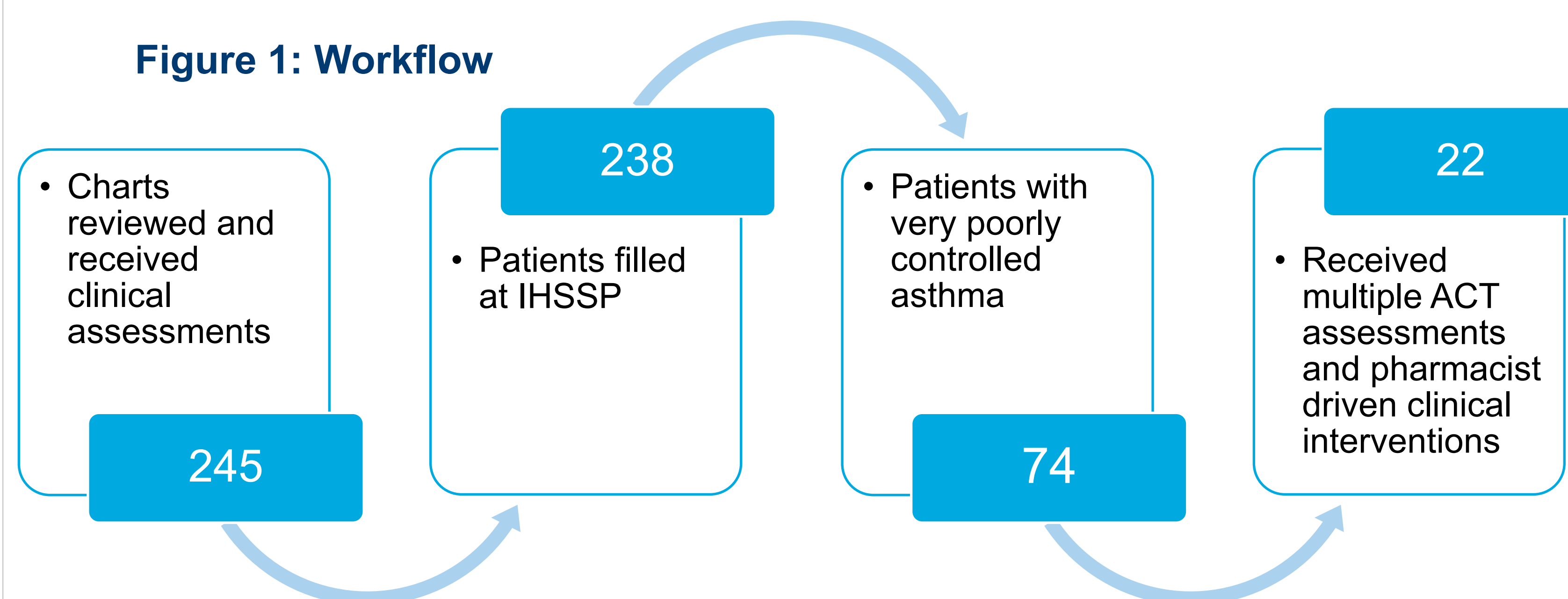


Table 1: Demographics

Sex Assigned at Birth (n=245)	
Female	179
Male	66
Smoking Demographics (n=22)	
Non-smokers	10
Current Smokers	2
Former Smokers	10

Figure 2: ACT score Category (n=245)

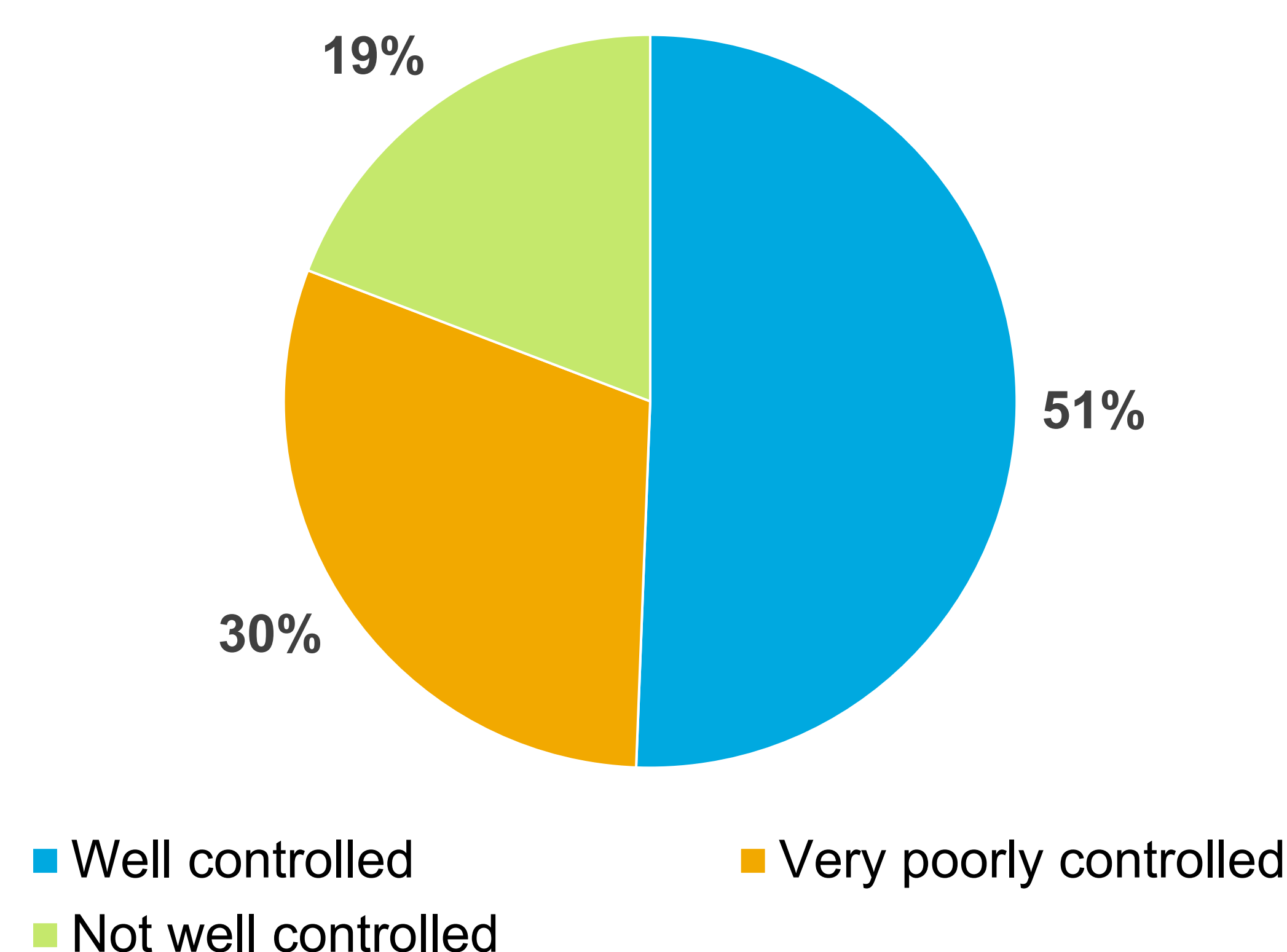


Figure 3: Clinical Interventions (n=22)

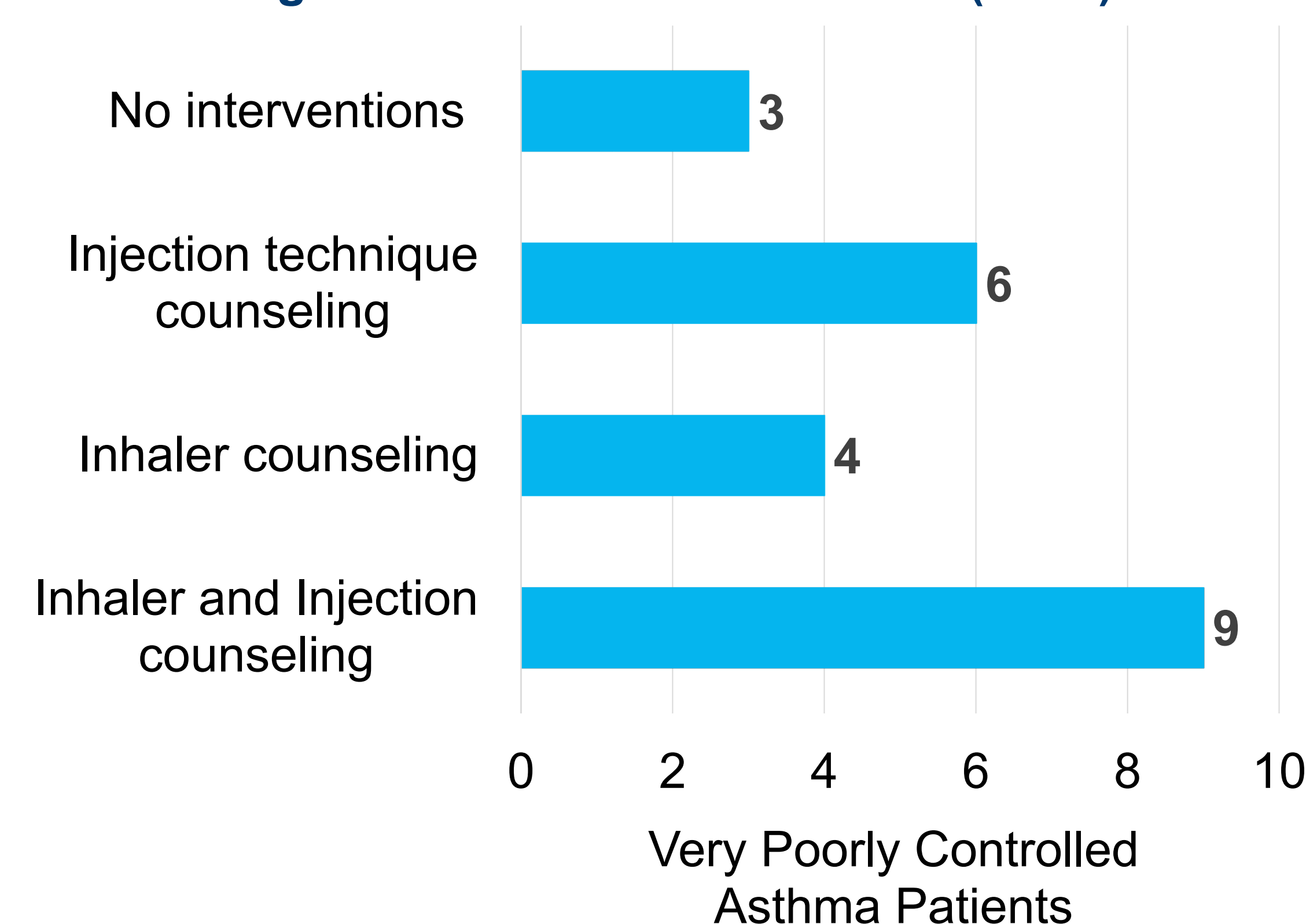


Figure 4: Adherence to Biologics (n=238)

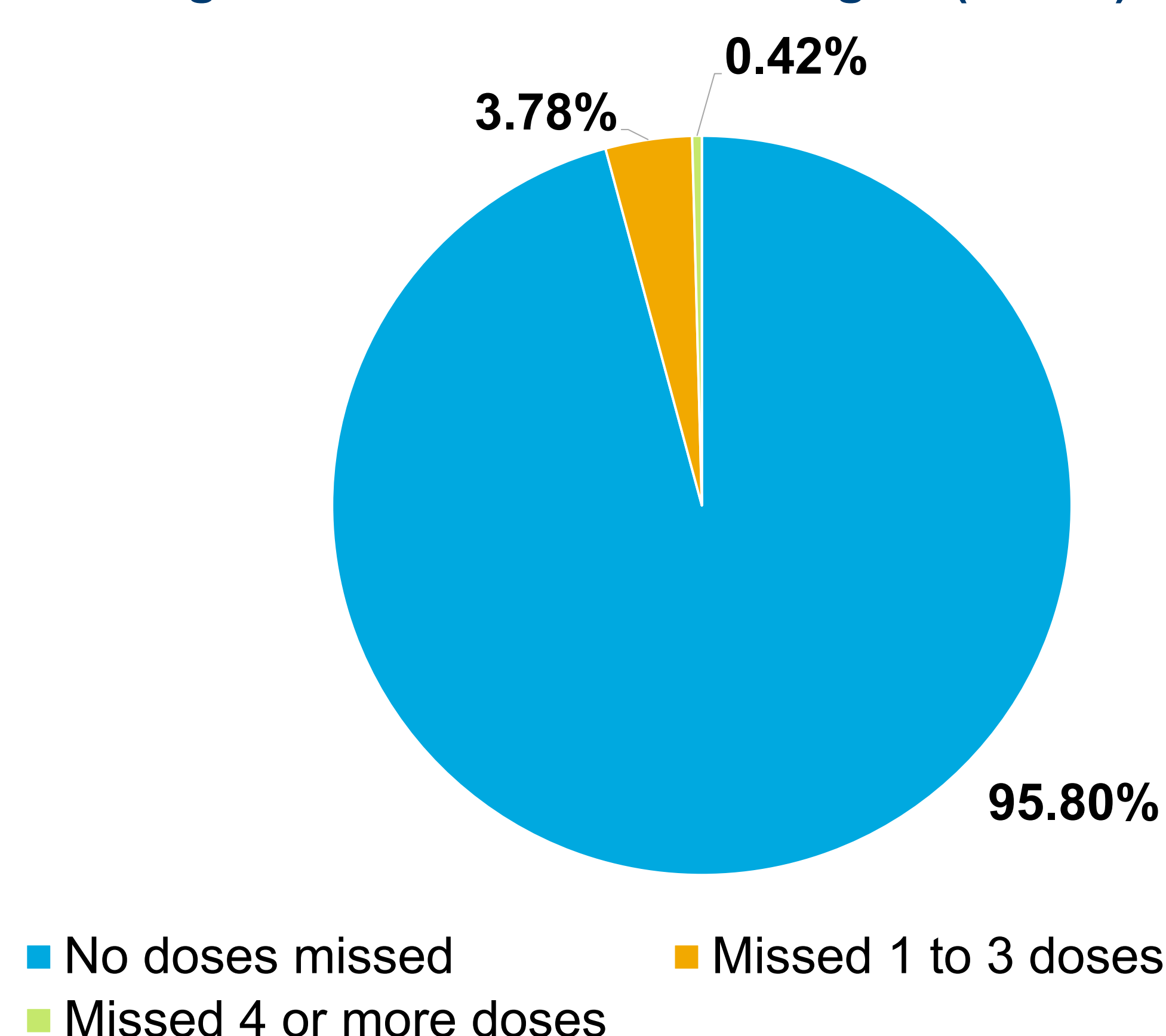
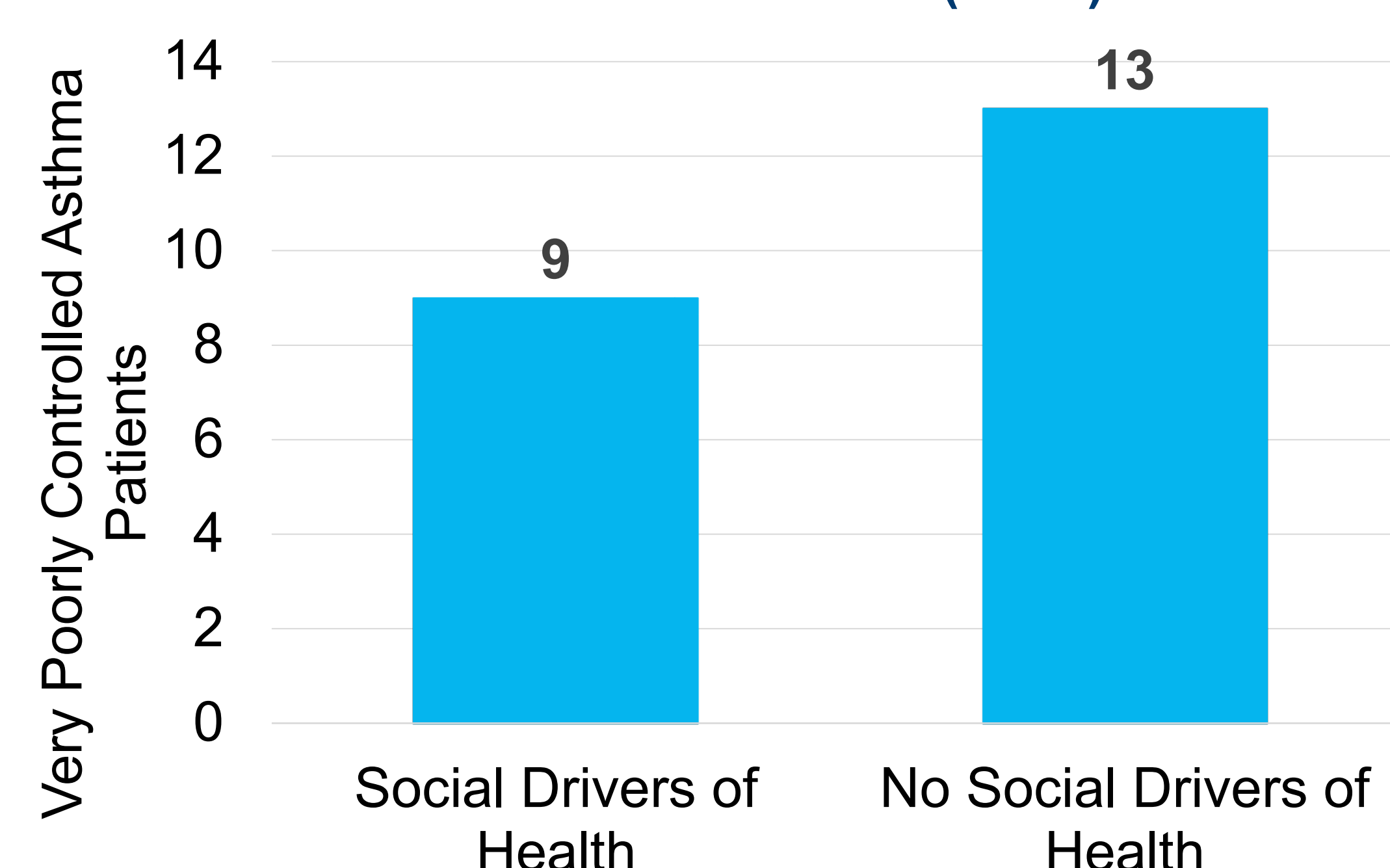


Figure 5: Pharmacist Identified Social Drivers of Health (n=22)



- Social drivers of health identified included language, finance, transportation and tobacco use

Discussion

- After pharmacist interventions, 50% of patients had improved ACT scores.
- ACT scores improved with patients receiving frequent clinical management and interventions by specialty clinical pharmacists at IHSSP.
- Currently, the PMP does not dictate a specific cadence for clinical assessment follow-up based on the ACT scores.
- Each specialty pharmacist clinical intervention should review adherence, appropriate use of biologic therapies, ACT screening tests, inhaler and injection technique and a written asthma action plan.
- Strengths
 - New care management application
 - Integrated electronic health record with pulmonary providers
 - PMP provides guidance on minimum timeframe for assessment cadence
 - Pharmacists spoke in real time to patients during clinical assessments and interventions

Limitations/Barriers

- Limited retrospective data due to software conversion.
- Limited visibility to adherence and ongoing clinical assessment for patients who had to transfer script out after initial fill.

Conclusion

- Specialty clinical pharmacist interventions can improve ACT scores, however closer monitoring and follow up of patients warrants ACT scores to be incorporated in PMP at the IHSSP.

Future Directions

- Evaluate if ACT score should determine clinical assessment follow-up cadence
- Analyze adherence based on patient reported missed doses during technician refill outreach

References

- Nathan RA, Sorkness CA, Kosinski M, et al. Development of the asthma control test: a survey for assessing asthma control. *J Allergy Clin Immunol.* 2004;113(1):59-65. doi:10.1016/j.jaci.2003.09.008
- Schatz M, Sorkness CA, Li JT, et al. Asthma Control Test: reliability, validity, and responsiveness in patients not previously followed by asthma specialists. *J Allergy Clin Immunol.* 2006;117(3):549-556. doi:10.1016/j.jaci.2006.01.011