

Integrating Student Pharmacists to Address Asthma Population Health Care Gaps

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Introduction

Asthma for adults and especially children remains a frequent cause for emergency department visits and hospitalizations. The use of claims data can be utilized to identify patterns of poor controller adherence in high-risk patients and offers an opportunity to make interventions in patient therapy.

AMR (Asthma Medication Ratio) (number of controller medications / [number of controller medications + number of rescue medications]) is an important population health medication management tool used to identify patients, ages 5-64, with persistent asthma and a ratio of controller medication fills to total asthma medication fills of 0.5 or greater during the measurement year. AMR is used to determine medication adherence, albuterol overuse, and appropriate controller therapy to prevent exacerbations.

Objectives

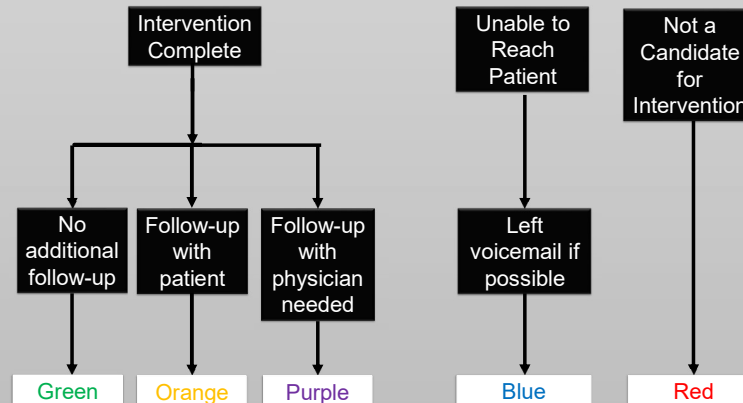
- Participate in the patient care process by:
 - Educating patients on adherence and inhaler use
 - Making evidence-based recommendations to a healthcare team
- Analyze all identified patients requiring intervention
- Measure data based on complete or incomplete intervention and intervention type
- Assess data based on number of patients per intervention type

Methods

Pharmacy students were integrated into this project during APPE rotations. Students were given a data sheet including all identified patients requiring intervention that was provided by one major payor within the accountable care organization. The intervention data sheet also provided a way to hand off patients between APPE rotation students.

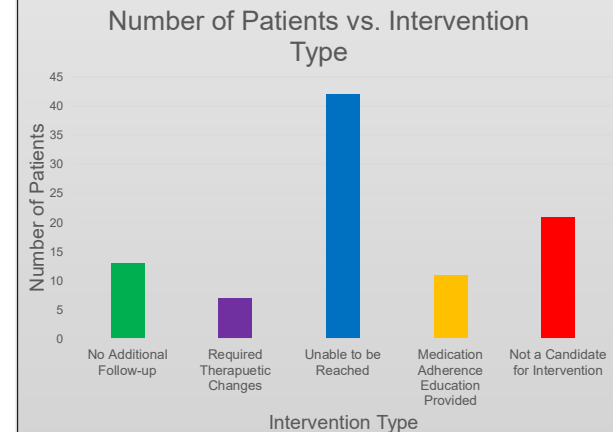
Student pharmacists contacted patients on this list, interviewed them about their inhaler use and identified whether interventions were needed for better asthma control. Interventions may have included: therapy recommendations, educating patients on medication adherence, and discussing asthma triggers. The process was clearly outlined for the students using a quick reference document and training and oversight was provided by the preceptor.

If therapy change recommendations were needed, students sent messages through the electronic medical record to physicians to make these recommendations and followed up with patients. Pharmacy students completed the intervention data sheet, identifying patients as either intervention complete, unable to reach, or not a candidate for intervention and these were outcomes reported during the intervention period. Intervention completed patients could be followed up within a few weeks to assess adherence or control and patients that were not candidates for intervention could be removed from the AMR process.



Results

During a one-month APPE rotation, students evaluated 96 patients. Of these, 7 required therapeutic changes, 13 did not require follow-up, 42 were unable to be reached, 13 were counseled on medication adherence, and 21 were not candidates for intervention.



Conclusions

Implementing a process to involve student pharmacists in AMR provided an opportunity to participate in the patient care process by educating patients and making recommendations to the healthcare team involved with the patients. Student pharmacists can play an important role in outreaching to asthma patients and identifying potential interventions for better asthma control.

References

1. Andrews, Annie; Lintzenich, et al. "A Longitudinal Examination of the Asthma Medication Ratio in Children." *AJMC*, 11 June 2018, <https://www.ajmc.com/view/a-longitudinal-examination-of-the-asthma-medication-ratio-in-children>.
2. Global Initiative for Asthma - Global Strategy for Asthma Management and Prevention, 2021. <https://ginasthma.org/wp-content/uploads/2021/05/GINA-Main-Report-2021-V2-WMS.pdf>.