

Asthma Action Plans in the Emergency Department for Low Acuity Pediatric Patients

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Problem Statement

- In one Mid Atlantic emergency department (ED), pediatric patients presenting for low acuity asthma complaints receive no tailored education on asthma upon discharge. About 10 such patients are seen each month in this ED.
- Asthma action plans (AAPs) provide important education about asthma triggers and signs of deterioration with the goal of improving patient asthma control.
- Published evidence supports the distribution of AAPs from the ED setting, noting improved asthma control measures, improved patient and caregiver understanding of asthma, and decreased ED utilization.

Purpose of Project

- The purpose of this quality improvement (QI) initiative was to implement AAPs upon discharge from the ED for lower acuity pediatric patients presenting with an asthma-related complaint over a 15-week period in the fall of 2022.
- Process goals:** 100% of pediatric patients meeting inclusion criteria between September 13, 2022 and December 14, 2022 will:
 - receive peak flow training
 - have a documented height
 - have a documented electronic asthma action plan included in their after-visit-summary

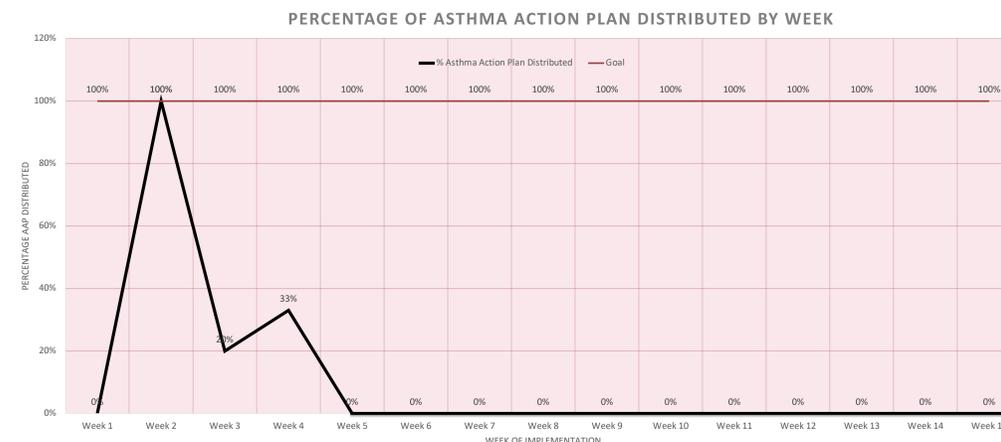
Methods

- Setting:** One local community emergency department (ED) in the Mid-Atlantic area
- Target Population:** Patients evaluated and discharged for an asthma related complaint in the ED who were between the ages of 2 and 17 and had no history or evidence of structural lung disease.

Methods Continued...

- Implementation:** Education of staff was initiated prior to project implementation. Staff received training to take a measured height at triage, how to teach pediatric patients to take peak flow measurements and how to educate the patient/family using the AAP. Pediatric providers were taught how to fill out the electronic AAP.
- Upon decision to discharge, the pediatric provider completed the electronic AAP and printed it along with the after-visit summary. Eligible patients/families were educated by either the nurse or pediatric provider on AAP directives.
- Data were collected weekly on the number of patients who had a height documented during their visit, teaching of peak flow, and receipt of an AAP at discharge. Weekly rounding and positive reinforcement for project behaviors reinforced project goals.

Figures



Results

- A total of 41 patients presented meeting inclusion criteria within the 15-week period of project implementation.
- 7% of patients meeting inclusion criteria had a peak flow completed, 15% had a height documented, and 7% had an AAP distributed upon their discharge from the ED.
- 78% of patients meeting inclusion criteria tested positive for a viral infection during their ED visit.

Discussion

- Project adherence was minimal during the months of implementation in the context of unusually high unit census and acuity within this facility and nationwide.
- These findings differ from the previous efforts in the literature and highlight the influence of concurrent viral respiratory infection precipitating an asthma flare.
- Peak flow education was noted to be particularly time consuming and unachievable for younger patients.
- Providers demonstrated resistance to changing their usual form of delivering asthma education to patients.

Conclusions

- Ongoing discussion is warranted with pediatric providers to discuss interpretation for goals of care when patients have an asthma exacerbation triggered by respiratory infection.
- Sustainability may be improved if this project were attempted during periods of lower census, e.g. summer months when fewer respiratory infections are anticipated.
- Future research could evaluate QI implementation in a post-pandemic health care system where resource utilization, staffing, and burnout rates may be different.

References / Acknowledgement



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