Standardizing Asthma Management in Primary Care

Michael Vernon Chmielewski
University of Vermont Larner College of Medicine

Follow this and additional works at: https://scholarworks.uvm.edu/fmclerk

Part of the Medical Education Commons, and the Primary Care Commons

Recommended Citation
Chmielewski, Michael Vernon, "Standardizing Asthma Management in Primary Care" (2019). Family Medicine Clerkship Student Projects. 531.
https://scholarworks.uvm.edu/fmclerk/531

This Book is brought to you for free and open access by the Larner College of Medicine at ScholarWorks @ UVM. It has been accepted for inclusion in Family Medicine Clerkship Student Projects by an authorized administrator of ScholarWorks @ UVM. For more information, please contact donna.omalley@uvm.edu.
STANDARDIZING ASTHMA MANAGEMENT IN PRIMARY CARE

Michael Chmielewski, MS3
October-November, 2019
CVPH Family Medicine
Project mentors: Dr. Cabrera, Dr. Wilhelm, Dr. Worczak, Dr. Heintz
The Problem

- Estimated 25 million persons with asthma in US; 6.0 million are children\(^1\)
- Prevalence increasing: 7.3% in 2001 to 7.9% in 2017\(^1\)
- Asthma is a relapsing-remitting, chronic disease
- There is clear morbidity and mortality associated with uncontrolled asthma\(^2,3\)
- Rural, ethnic, impoverished populations are affected disproportionately\(^1,4-6\)
- New York state: 1.4 million adults, 315,000 children with diagnosis of asthma\(^7\)
  - Estimated 9.2% current prevalence in 2017\(^7\)
  - Estimated 129.9 per 1000 in Clinton County (tied for third highest prevalence in state)\(^7\)
Public Health Cost

United States
- Average annual cost per individual: $3266
- Estimated $81.9 billion total in US in 2013
  - $3 billion in missed work and school days
  - $29 billion in mortality secondary to asthma
  - $50.3 billion in healthcare costs

New York State
- $1.3 billion in 2014
Community Perspective

◦ “There is currently no standardization or protocol for managing asthma at [CVPH Family Medicine]”

◦ “Asthma is a perfect model for having a system of care and standardization”

◦ “Providers think they’re delivering the best asthma care, but this is not necessarily true without protocols or standardization to help guide us.”

–Steven Heintz, MD, CVPH Family Medicine Attending

◦ “There is a need for standardization [of asthma management at CVPH family medicine], especially in our pediatric patients, since this practice recently started accepting pediatric patients in 2017.”

◦ “Each provider has their own way of managing asthma”

–Marianna Worczak, MD, CVPH Family Medicine Residency Director
Intervention and Methodology


- Systematic review recommending guidelines for diagnosis and management of asthma
- Guidelines associated with improved patient outcomes

**University of Vermont Child Health Advances Measured in Practice (CHAMP) quality improvement project in 2015**

- Nine recommendations for primary care practices to standardize and improve asthma care in Vermont using evidence-based guidelines

Need identified at CVPH Family Medicine: **standardization of asthma management protocol**
Response

- Developed and distributed checklist and reference guide for faculty and residents to use for each asthma visit
- Presented PowerPoint, checklist and reference guide to residents and faculty
- Reference guide contents:
  - Classifying asthma severity
  - Assessing asthma control and adjusting therapy
  - Stepwise approach to managing asthma
  - Asthma Control Test (ACT)
  - Asthma Action Plan Template
  - Inhaled Steroid Dosing Chart Link

Asthma Quality Improvement Quick Reference Checklist and Guidelines

- Asthma documented as intermittent or persistent
- Controller medication prescribed if asthma is persistent (page 4)
- Asthma control assessed with a validated tool (page 5)
- Asthma action plan reviewed/updated within past 12 months (page 6)
- Planned asthma visit within next six months
- Tobacco use/exposure assessed
- Education about asthma
- Instruction on device use
- Spirometry or pulmonary function tests on file
Effectiveness and Limitations

Proposed Evaluation of Effectiveness

Collect data regarding proportion of patients that have:

- Asthma correctly documented in EMR
- Appropriate medications prescribed based on severity of disease
- Asthma control assessed with a validated tool
- Updated asthma action plan and regular office visits
- Tobacco use/exposure assessment
- Education about asthma and medications

Limitations

- No outcomes measured
- Short duration of project
- Potentially creates more work for providers

Link to outcomes (hospitalizations, ED visits)
Recommendations for Future Interventions

◦ Build checklist into EPIC EMR (dot phrase?)
◦ Track outcomes (ED visits and hospitalizations) for patients with asthma using chart review
◦ Clinic-wide training session (spirometry, device education, EMR training)
References