Digital Quality Improvement

Efficiently and Effectively Building Operational Frameworks to Improve Severe Asthma Specialty Referral Practices in the Primary Care Setting

Vanessa Senatore, CHCP[1], Natasha Mitchner, PhD[1], Katlyn Cooper, CHCP[1], and Njira Lugogo, MD[2]
[1]Academy for Continued Healthcare Learning (ACHL), [2]Unviersity of Michigan

INTRODUCTION

Up to 10% of patients with asthma can be classified as having severe asthma. Guidelines recommend referral to a specialist so patients can receive add-on therapies and reduce exposure to AEs associated with chronic use of oral corticosteroids. Yet, evidence indicates that referral rates are suboptimal, and that specialty care is underutilized. Eliminating the cycle of misdiagnosis, undertreatment, and underestimation of disease severity by PCPs requires better operational infrastructures to facilitate recognition and referral practices. This is best achieved through quality improvement (QI) interventions, yet the time, cost, and resources required to successfully implement is a deterrent for many smaller resourced clinical practices. To overcome these barriers, digital QI frameworks offer broader, equitable access and timetables that take the theoretical and make them actionable.

ACTIVITY DETAILS

Using this simple, systematic approach to quality improvement, intended for easy access and application in any practice setting, PCPs are offered the framework and tools needed to assess asthma control, recognize severe and/or uncontrolled asthma, and provide referrals to a specialist. The open-source activity is accredited for physicians for *AMA PRA Category 1 Credit™* and ABIM MOC Part IV credit and is available January 31, 2024 -July 31, 2025.

Digital QI
www.SevereAsthmaReferral.org/
Toolkit/Interventions
https://Toolkit.SevereAsthmaReferral.org/

Njira Lugogo, MD
Professor of Medicine
Department of Medicine, Division of Pulmonary, Critical Care Medicine
University of Michigan
Ann Arbor, MI

Neil Skolnik, MD
Professor of Family and Community Medicine, Sidney Kimmel Medical College
Thomas Jefferson University
Associate Director, Family Medicine Residency Program
Jefferson Health, Abington
Jenkintown, PA

DIGITAL QI DESIGN

The "out-of-the-box" QI experience draws from the Plan-Do-Study-Act (PDSA) model of success and creates a framework for realizing the benefits of QI in a cost-effective and high impact way.

1 Digital Assessment (Clinic Level)

Eight process-focused quality measures were developed considerate of evidence, scientific acceptability, feasibility, and usability with intent to introduce system-level changes for improving severe asthma recognition and referral. Adapting the Institute for Healthcare Innovation Assessment of Chronic Illness Care inventory, a 1-100 numeric ranking continuum offers sites an avenue to rank their current processes and workflows. A score of 1 corresponds to "no process", while a score of 100 corresponds to a highly optimized process. Results are tabulated as a report card to inform areas to prioritize for goal setting.

2 Educational and Practical Interventions

The QI platform dynamically leads clinical teams through action planning, intervention selection (pre-developed) and testing. Sites are allowed to supplement their action plan with additional goals and opportunities for change.

- Downloadable Slide Decks and Moderator Guides
- Patient Education
- EMR Integration Guides
- Severe Asthma Assessment Tools
- Guides for Process Improvement and Referrals

3 Follow-Up Data Collection

Clinics who participate in the digital QI are tracked and reminded when they are eligible to return and complete the QI to measure process improvements relative to selected targets.

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Quality Targets

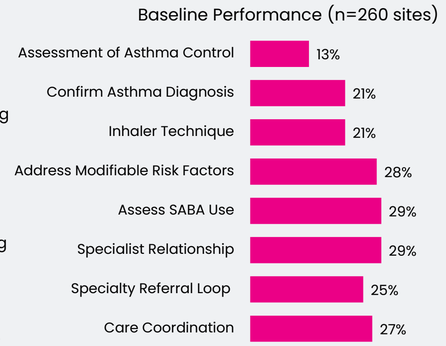
- **Assessment of Asthma Control** — A standardized process for assessing asthma control and identifying severe asthma
- **Confirm Asthma Diagnosis** — A process to confirm asthma diagnoses
- **Inhaler Technique** — A process to check and correct inhaler technique and adherence
- **Address Modifiable Risk Factors** — Ensure that modifiable risk factors and triggers are addressed
- **Assess SABA Use** — A process to assess overuse of SABA relievers
- **Specialist Relationship** — Specialist(s) pre-identified for referral of patients with severe and/or uncontrolled asthma
- **Specialty Referral Loop** — A process for addressing gaps in the specialty loop
- **Care Coordination** — Co-management of uncontrolled and/or severe asthma with a specialist

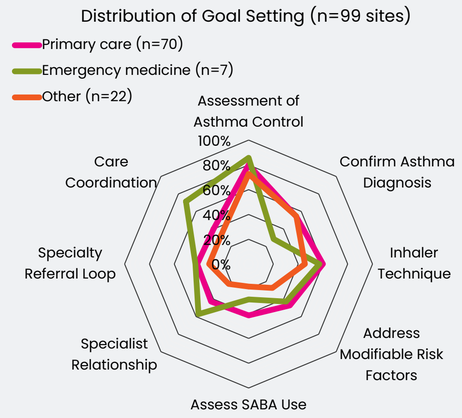
18-MONTH FINDINGS

Initiated QI and Assessed Quality Targets — 1,858 HCPs across 260 sites
Submitted an Action Plan — 861 HCPs across 99 sites
Reassessed Quality Targets — 120 HCPs across 14 sites

Baseline assessment of the participating sites (n=260) found:

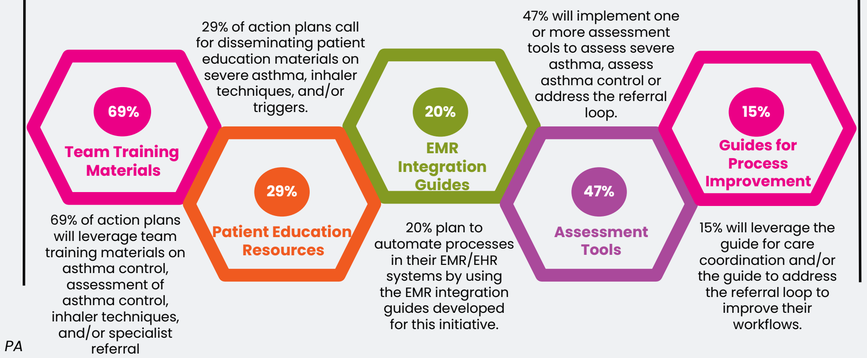
- Only 12% of sites were assessing asthma symptom control using a validated tool
- Only 22% used lung function testing or imaging to confirm asthma diagnoses
- Less than 30% addressed factors contributing to asthma symptoms/exacerbations (20% work with patients to demonstrate inhaler techniques, 29% assess triggers and modifiable risk factors, and 29% quantified SABA use).
- Processes and workflows regarding referral were also suboptimal with only 29% reporting clearly outlined expectations and referral practices, 24% reporting follow-up practices to ensure completed specialty appointments, and only 26% were operating under a shared-care model with specialists.



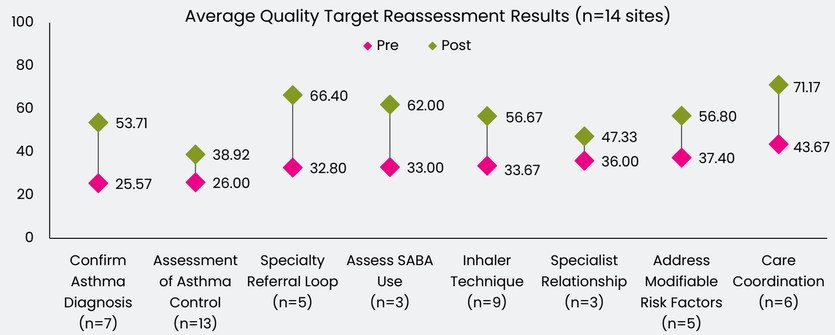


Of the 99 sites to proceed with goal setting and action plan development:

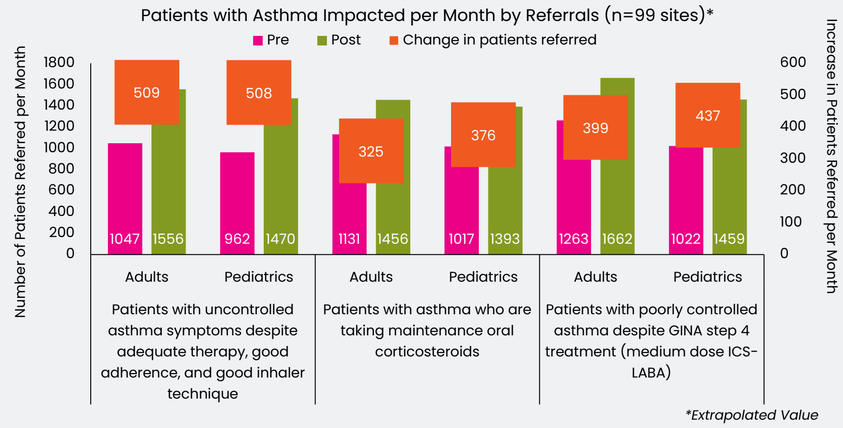
- 79% plan to improve severe asthma identification through assessments of asthma control
- 53% will improve confirmation of asthma diagnoses and 61% will address factors contributing to asthma symptoms/exacerbations such as addressing modifiable risk factors (42%), improving inhaler techniques (57%), and assessing SABA use (35%)
- 39% of sites are revisiting their relationships with specialists and 39% are working to refine the specialty referral loop
- 40% plan to address co-management and care coordination strategies



18-MONTH PROGRAM IMPACT



Of the sites who completed the reassessment stage to-date (n=14 sites), reassessment results demonstrate large incremental gains towards achieving optimal processes and workflows. These data strongly suggest that the participating sites have taken significant steps towards improved care and care coordination of patients with severe asthma. The largest gains were reported with improving the specialty referral loop ($\bar{x}$=33.60), assessing SABA use ($\bar{x}$=29.00) and confirming asthma diagnoses ($\bar{x}$=28.14).



*Extrapolated Value

These data indicate that the teams who participated in the digital QI appreciate the signs of severe asthma, and which patients require referral to a specialist. Over 1,200 more adult patients and 1,300 more pediatric patients are expected to be referred to a specialist each month as a result of this activity.

Assessing asthma control
"We use the Asthma Control Test (ACT) for assessing asthma control, now available in paper or electronic form. Paper forms are now in all patient rooms. While we haven't integrated the form into the EMR, we scan the paper forms for record keeping."

Correct inhaler technique/adherence
"We trained our MD team, head nurse, and some APRNs to check and correct inhaler techniques and adherence, this improved workflows across our four hospitals and four private clinics. We're hiring an extra provider dedicated to each clinic to train in inhaler techniques and patient education."

Co-management with a specialist
"Without access to outpatient specialists, we've been informally consulting inpatient pulmonologists. Meanwhile, we're training our MDs with specialists' guidelines and clinic practices."

- *University of Miami Department of Family Medicine and Community Health*
- *Reassessment Results*

CONCLUSION

After 18 months, 260 primary care, emergency medicine, pulmonary, and multi-specialty sites comprised of 1,858 healthcare providers completed the baseline assessment. Baseline levels across eight process-based quality measures ranged from 26 to 44 average points on a 100-point scale. 99 sites developed action plans, and 14 sites completed the reassessment. Amongst these 14 sites, aggregated improvement across domains increased from a mean score of 33.51 to 56.63. All sites reported broad improvement, but full optimization defined by EMR integration remained a barrier within timeframes allotted.

QI provides proven frameworks for improving patient outcomes and healthcare delivery, yet the barriers to implementation are sizeable and most often limited in practice to well-resourced academic medical centers. For this reason, open-source digital QI frameworks are a sustainable and replicable approach to efficiently and effectively improve processes and structures. Data collected and analyzed, coupled with participation trends, show the strengths of this design in achieving success and illustrate how a scalable digital QI construct can facilitate participation in QI to broaden the reach and render more meaningful and sustainable results.

ACKNOWLEDGEMENTS

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