



Healthy Practices. Healthy People. Healthy Places.

## Quality Improvement In Practice

# Improving Asthma Outcomes in America

## Reducing the Negative Impact of Asthma in Knox County Schools

### Asthma's Impact on Schools

Asthma is a chronic disease affecting many students and families across the United States. Students and teachers with asthma are at increased risk for absenteeism, which negatively impacts their ability to learn or their ability to provide consistent, high-quality instruction time. With funding from AstraZeneca, the Public Health Foundation (PHF) selected Knoxville, Tennessee as the site of the quality improvement (QI) demonstration project for several reasons, including that the Asthma and Allergy Foundation of America ranks Knoxville as the second most challenging city in America for people with asthma to live. In the Knox County High School, about 13% of the students have been told they have asthma compared to the national average of 10.8% (Centers for Disease Control and Prevention, 2009). In Knoxville, asthma management is a challenge due to inconsistent policies and a lack of adequate information for teachers, staff, and parents.

**The Knox County Health Department (KCHD) and Knox County Schools (KCS) collaborated to identify short-term targeted asthma improvement outcomes.**

### Applying Quality Improvement Tools

The Knox County Health Department (KCHD) and the Knox County Schools (KCS) participated in a rapid Plan-Do-Check-Act (PDCA) cycle with the goal of reducing the negative impact of asthma on KCS.



#### PDCA Cycle

This cycle allows organizations to **PLAN** what they want to accomplish, **DO** what they plan, **CHECK** the results, and **ACT** on the results. This is a simple and powerful way to complete the QI process and analyze the effectiveness of improvement plans.

With assistance from PHF's QI Experts, the KCHD and KCS team applied QI tools and methods such as brainstorming and flow-charting to identify barriers to asthma management and to learn about components that impact asthma student identification.

**The QI tools and methods helped the team determine that the areas in which they had the **greatest opportunity for change and influence** was on asthma education, policies and forms.**

Project funding provided by AstraZeneca.

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## Outputs

After surveying teachers, school nurses, parents, and KCS Healthy School Team Leaders, the team developed new educational resources, policies, and forms based on the American Lung Association's Asthma 1-2-3 curriculum:

- ♦ Asthma toolkit for nurses
- ♦ Parent fact-sheets about the school asthma curriculum
- ♦ Teacher Reference Card modeled after an emergency response card
- ♦ Teacher online learning module
- ♦ Teacher training module meeting professional development credits requirements
- ♦ Initiative brand: *It takes a village to care for a child with Asthma*



In school year 2011-12, KCS is pilot testing the new educational resources in at least one elementary, middle, and high school and will evaluate their effectiveness.

## Action Steps

- ♦ Integrate the brand into community initiatives
- ♦ Hold annual training on the asthma toolkit for teachers, nurses, and support staff
- ♦ Survey nurses, teachers, and parents on satisfaction with the changes
- ♦ Begin a dialogue and build partnerships with local asthma stakeholders:
  - ♦ Tennessee State Asthma Coalition
  - ♦ State of Tennessee Asthma Task Force
  - ♦ University of Tennessee Knoxville College of Nursing
  - ♦ East Tennessee Children's Hospital



## Lessons Learned

The team approach used to address asthma in the school system highlighted the broader lesson of collaboration. By tackling the problem together, each partner shared their unique insights, knowledge, and background to make conversations deeper and richer. These organizations learned from each other and are considering future partnership to create more new and promising practices.

PHF worked with four teams in the Knoxville, Tennessee area to achieve improvements in the management and control of asthma through use of QI tools and methods in process improvement. The full report and related resources are available on the PHF website at [www.phf.org/asthma](http://www.phf.org/asthma).

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