# Asthma 411: A Collaborative Asthma Initiative to Improve Community Health

## Introduction/Background/History:
Please include any relevant information that may be helpful for others to understand this initiative.

Asthma earns the unfortunate title of the most common chronic childhood illness and remains the most prevalent cause of childhood disability. Of Tarrant County, Texas children ages 0-14 years, approximately 75,500 have asthma. By age nine fully 25% of the County's children have been diagnosed with asthma, with a disproportionate number of cases occurring among the county's African American children. A number of provider knowledge and performance gaps, in addition to gaps in knowledge and performance by parents/caregivers, prevent optimal management and lead to increased school absences, lost school revenue and increased healthcare expenditures.

## Initiative Goal:
Please describe the overall goal of this initiative, including the patient population or disease area that this initiative will address.

This initiative will build upon a proven intervention working with the Fort Worth (Texas) Independent School District to narrow the gaps, resulting in fewer asthma related school absences, fewer asthma-related 911 calls from schools and related ED visits, fewer asthma symptom-related school clinic visits and asthma-related hospital readmissions. Educating school-based and community providers, as well as patients and parents/caregivers, will improve competence, performance, and patient and community health. The result of this pilot will be a self-sustaining program that can be rolled out district-wide and replicated in other communities.

## Target Learners:
Please describe the intended participants of this educational initiative, as well as the estimated number of learners.

This initiative targets school-based healthcare providers, community-based primary care clinicians, as well as students, parents/caregivers and teachers. It is estimated that more than 2000 will be directly impacted by this initiative, including more than 1100 clinicians and 900 patients/caregivers.

## Collaborators:
Please include a brief description of the role of each collaborator in the initiative.

The University of North Texas Health Science Center (UNTHSC) is the lead organization for this initiative. It will coordinate with Fort Worth Independent School District and the County Hospital System to facilitate in-school outreach and meeting locations.

## Educational Design:
Please describe how this initiative will be designed, as well as the approximate time span of this initiative.

Asthma management at home and in school is essential to a child's well-being and success in school. The UNTHSC will work with the school based clinics, schools they directly serve and surrounding community health providers to improve asthma identification and management. We will utilize a modified version of the Asthma 411 model, a school based asthma management system delivered by school nurses in collaboration with consulting physicians available to the school district. Asthma 411 is recognized by the CDC as an evidence-based program that supports the Strategies for “Addressing Asthma Within a Coordinated School Health Program.”

Three units of the UNTHSC will collaborate to conduct Asthma 411 over 18 months.

The School of Public Health will coordinate with the school district to:

- Establish with the school district a mechanism to identify and track asthma related morbidity in school.

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• Health services visits, symptomology, actions taken, absences.

• Implement the in school asthma management program that includes:
  o Mechanism for implementing standing orders to treat respiratory distress, and a focus on obtaining primary care provider/medical home prepared asthma action plans
  o Identification, tracking and symptomology assessment of students with asthma
  o Mechanisms for recording and transfer of evaluation information which includes student demographics, health services usage, absences and academic achievement.

• Work with each school and relevant healthcare facilities to develop mechanisms to follow up on outcomes related to ED visits and hospitalizations whether from school or home.

• Prove a tested asthma awareness curriculum to the elementary school that builds health literacy about asthma with students regardless of presence of asthma diagnosis.

The Office of Professional and Continuing Education will

• Plan, implement and assess educational interventions to narrow the identified gaps for school and community-based providers
• Provide education and training of appropriate school nurses and staff
• Develop or assemble asthma education material in English and Spanish for patients and caregivers
• Provide oversight to the initiative and communicate with the supporter

The Department of Allergy and Immunology will provide the consulting physician, PA and/or NP.

Specific interventions are:

<table>
<thead>
<tr>
<th>Name</th>
<th>Anticipated Participation</th>
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<tbody>
<tr>
<td>School clinic/school nurse education program</td>
<td>140</td>
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<tr>
<td>Two online health professional educational modules</td>
<td>200 locally, 800 nationwide</td>
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<tr>
<td>8 community roundtable meetings</td>
<td>160</td>
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<tr>
<td>Patient education/Caregiver education videos</td>
<td>160 locally, 350 nationally</td>
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<tr>
<td>Educational consulting with healthcare providers within the two focus schools</td>
<td>5</td>
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<tr>
<td>Integrated asthma awareness curriculum for elementary schools</td>
<td>608</td>
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<td></td>
<td><strong>2063</strong></td>
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</table>

Publication Strategy: Please describe how educational outcomes results from this initiative will be disseminated.

The UNTHSC and its partners embrace the “Open Access Principle” described by John Willinsky, PhD that states “a commitment to scholarly work carries with it a responsibility to circulate that work as widely as possible.”

To facilitate change and encourage other CME providers to impact performance related to asthma in their local regions, the UNTHSC will make all materials – needs assessment, presentations, handouts, cases and outcomes measures – electronically available free of charge from its website to any CME provider in the country. This distribution of material is intended to empower CME providers to address asthma in their communities more easily, reducing the development cost and time required for such an endeavor.

The UNTHSC will also disseminate the findings to professional organizations, including submitting abstracts for posters/presentations to professional meetings such as:

### Educational/Quality/Professional Practice Gaps

<table>
<thead>
<tr>
<th>Educational/Quality/Professional Practice Gaps</th>
<th>Strategies Used to Identify Gaps (eg, peer-reviewed published data, national consensus sources for clinical performance/quality measures, chart audit/EHR data, medical claims data, etc)</th>
<th>Learning Objectives</th>
<th>ABMS MOC Process (Part I-IV) and/or Core Competencies Addressed (eg, IOM, ACGME, ABMS)</th>
<th>Educational Outcomes/Measures (Please include Moore Level(^1) when appropriate)</th>
<th>Strategies Used to Measure Outcomes (eg, direct and objective performance assessments, chart audits, medical claims data, EHR data, disease screening audits, patient surveys, etc)</th>
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<tbody>
<tr>
<td><strong>Asthma can be misdiagnosed as reactive airway disease or bronchitis</strong></td>
<td>peer-reviewed published data</td>
<td>• Improve school health clinic and community-based provider diagnosis, management and monitoring of asthma in pediatric patients</td>
<td>Medical knowledge, Patient Care and Procedural Skills</td>
<td>Improvements in diagnostic accuracy</td>
<td>Case data will be collected during the educational interventions. Instrument Utilization Data collected from school health clinic reporting. Improved diagnosis means asthma can be managed more effectively and earlier. The case presentations will be used to prime providers that they may have been misdiagnosing asthma in some cases. Using a screening tool in students with conditions known to be asthma differentials in</td>
</tr>
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Strong correlations exist in children who have asthma and
- Are obese
- Have hayfever/allergies
- Use the ER more than 3 times/year
- Have had a tonsillectomy
- Are African American or Hispanic

<table>
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<tr>
<th>Strong correlations exist in children who have asthma and</th>
<th>peer-reviewed published data</th>
<th>Improves school health clinic and community-based provider diagnosis, management and monitoring of asthma in pediatric patients</th>
<th>Medical knowledge Patient Care and Procedural Skills Interpersonal Skills and Communication</th>
<th>Increase in knowledge over baseline of the regional risk factors listed</th>
<th>Case data will be collected during the educational interventions. Instrument Utilization Data collected from school health clinic reporting. Increasing what a provider knows about risk factors will improve the way it is diagnosed and managed. Using a screening tool in students with known risk factors suggests the knowledge has been translated into action</th>
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<tbody>
<tr>
<td>Many clinicians don’t use written asthma care plans</td>
<td>peer-reviewed published data</td>
<td>Improve school health clinic and community-based provider diagnosis, management and monitoring of asthma in pediatric patients</td>
<td>Medical knowledge Patient Care and Procedural Skills Interpersonal Skills and Communication Systems-based Practice</td>
<td>20% increase in healthcare provider-prepared asthma action plans for individual students submitted to school</td>
<td>Asthma plan data for students will be collected from school health clinic reporting. Increases in students with asthma who have asthma plans on file suggest improved clinician performance and improved patient health.</td>
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| Patient use of controller medication is less effective over time, but can be improved with improved provider communication | peer-reviewed published data National Asthma Education and Prevention Program | • Improve school health clinic and community-based provider diagnosis, management and monitoring of asthma in pediatric patients  
• Increase the number of healthcare provider-prepared asthma action plans for individual students | Medical knowledge Patient Care and Procedural Skills Interpersonal Skills and Communication Systems-based Practice | 20% increase in school clinic providers demonstrating/receiving demonstration of inhaler use in one year.  
Measure: % of students with asthma who receive a demonstration and demonstrate proper inhaler use during school year | Levels 4 and 5 | Demonstration rates for students will be collected from school health clinic reporting. Increases in students with asthma who have documented demonstration provided/received on file suggest improved clinician performance and improved patient health. |
|---|---|---|---|---|---|---|
| Providers could improve therapy optimization and routine follow-up | peer-reviewed published data National Asthma Education and Prevention Program | • Improve school health clinic and community-based provider diagnosis, management and monitoring of asthma in pediatric patients  
• Increase the number of healthcare provider-prepared asthma action plans for individual students  
• Increase provider competence related to local risk factors and asthma correlates | Medical knowledge Patient Care and Procedural Skills Interpersonal Skills and Communication Systems-based Practice | Improvements in asthma therapy optimization  
Improvements in follow-up  
Measures:  
At least one review each year of current asthma medications, phenotypes, and symptom patterns for each child with known diagnosed asthma  
Scheduled follow-up visits for the school year for students with known diagnosed asthma who receive primary care at the school health clinic  
Levels 4 and 5 | Case data will be collected during the educational interventions. Intent to improve will be collected from each provider at educational activities. The above suggest improved competence and performance. Therapy reviews and follow-ups scheduled will be collected from school clinic reporting. Both suggest improved patient health and improved provider performance. |

Asthma management is not optimal, leading to adverse health outcomes. Peer-reviewed published data (asthma burden in Tarrant County, Texas) • Improve health outcomes for patients with asthma

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<tr>
<th>Patient Care and Procedural Skills</th>
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<tr>
<td>School clinic visits due to asthma symptoms (Goal = 25% reduction)</td>
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<td>School absences due to asthma (Goal = 10% reduction)</td>
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<tr>
<td>Lost school revenue due to asthma-related absences (Goal = 10% reduction)</td>
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<tr>
<td>Asthma-related 911 calls from school (Goal = 20% reduction)</td>
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<tr>
<td>Asthma-related hospital readmissions for students with asthma (Goal = 5% reduction)</td>
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Level 6

School clinic records
School records
Emergency Medical System provider records/data
Admissions data from Dallas Fort Worth Hospital Council

Please contact the educational provider for additional information regarding the initiative.