Managing Pediatric Asthma Through School-Based Telehealth

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Scope of Pediatric Asthma
School-based Telehealth
Asthma Management Through School-Based Telehealth
Scope of the Problem

Asthma in the United States

- Leading chronic disease in U.S. children
  - Cases tripled from 1980-2010
  - Prevalence increased 28% from 2001-2011
- No. 1 reason children miss school days
  - 10.5 million days of school
- One of the most expensive chronic diseases
  - $56 billion dollars annually

Image credit: CDC
Scope of the Problem

Asthma in South Carolina\(^2\)

- Prevalence rate is highest among those under 18 years of age
- Most common chronic disease in children
- Leading cause of disability among children
- Leading cause of hospitalization and ED visits in children under 18 years of age

Photo credit: Amanda Mills/CDC
Asthma in South Carolina

Source: Asthma in South Carolina, Bureau of Community Health and Chronic Disease Prevention, SC DHEC, November 2013
Why is Asthma so Poorly Controlled in Our State?

- Many families use ED as primary source of care
  - No regular follow up or overall asthma management plan
  - No ongoing education

- Barriers to Accessing Care
  - Limited understanding about asthma and its treatment
  - Limited availability of health care providers
  - Scheduling difficulties
  - Transportation
  - Financial
    - Loss of wages for parents missing work
    - Risk of losing a job
School-Based Telehealth is the solution!

But, is it as effective as care provided in person?

- Telemedicine is as effective as in-person visits for patients with asthma\(^3\)
- Children receiving telehealth visits with an asthma care specialist increased their asthma symptom free days by 83% (\(p<.05\)), and mean asthma symptom scores reduced 44% (\(p<.001\))\(^4\)
What is School-Based Telehealth?

- High quality healthcare for children in the school setting using telehealth technologies
  - Secure, HIPAA Compliant Video conferencing
  - Digital stethoscopes otoscopes and exam cameras are used
What is School-Based Telehealth?

- A **telemedicine cart** is placed in the school nurse’s office.
- Schools are furnished with basic clinic supplies including albuterol and oral prednisolone.
- A thorough exam is able to be done with the assistance of the **school nurse** or **telepresenter**.
- Children are treated as they would be in a regular clinic setting.
How Does It Work?
Scope of Care

- Over 85% of visits can be completed by telemedicine alone
- Common childhood illnesses

Sick visits for most low acuity conditions

- Intervention early in the school year
- Respiratory therapy/asthma educator
- Asthma education programs for nurses and patients

Chronic disease management with a special focus on Asthma

- Identifying a medical home
- Registering for medicaid
- Close follow up
  - Medication monitoring
  - Frequent follow up visits as needed

Specialty Care

- Pediatric specialists
- Children with special healthcare needs
- Mental health

Care Coordination & Case Management
What’s Our Action Plan? Managing Asthma Via School-Based Telehealth

**Identify**
- Parent
- School nurse
- Local provider

**Evaluate and Treat**
- Early in school year
- Acute flares

**Prevent**
- School forms
- Action plans
- Rx

**Educate**
- Patient
- Family
- School
Identifying Patients

- **School Nurse**
  - School medical forms
  - Students requesting rescue inhaler frequently
  - Acute illness

- **School Staff**
  - Principals
  - Teachers

- **Parents**

- **Local Providers**
  - Refer patients for follow up/co-management
  - ER follow up visits
Evaluating and Treating

- Intervention early in the school year
  - Prescriptions for home and school
  - School forms
  - Controller medications
- Treating acute exacerbations
  - In the same way as in person
- Encouraging regular follow up
  - Local provider
  - School-based telehealth
Prevention

- **Medications**
  - Controller medications
  - Labeling inhalers
  - Partnering with school nurse to give medication at school

- **Forms**
  - Asthma action plans
  - School medication administration forms

- **Flu Shots**
Education

- **Patient and Family**
  - NP, Telepresenter, School Nurse
  - Respiratory Therapist
  - Asthma Camp

- **School**
  - Recognition of symptoms
  - Proper Management
  - School-wide triggers
    - Bus Idling
    - Cleaning solutions
  - Availability of tSBH program in the school
Improved Health = Cost Savings!

- High risk asthmatics account for a disproportionate amount of asthma healthcare costs
- Controller-to-total asthma medication ratios above 0.5 is associated with better patient outcomes and reduced emergency hospital utilization\(^5\)
- Estimated cost savings per child in the population we serve $1000
References


2. Asthma in South Carolina, Bureau of Community Health and Chronic Disease Prevention, SC DHEC, November 2013

