ASTHMA MANAGEMENT IN SCHOOL: MAXIMIZE SCHOOL NURSE AS CARE COORDINATOR

Christy Haas-Howard, MPH, RN, NCSN, AE-C
Asthma Nurse Specialist
Colorado Department of Education
Reflection
School Nurse

Bandaids
School Nurse

Physical Assessments
School Nurse

Tube Feedings
School Nurse

Respiratory Care
Every Student Succeeds Act

- States 25% of children have chronic health issues
- Recognizes the intersection between health and education
- Refers to “Chronic disease management led by school nurses”

Definition of School Nursing

School nursing, a specialized practice of public health nursing, protects and promotes student health, facilitates normal development, and advances academic success. School nurses, grounded in ethical and evidence-based practice, are the leaders that bridge health care and education, provide care coordination, advocate for quality student-centered care, and collaborate to design systems that allow individuals and communities to develop their full potentials.

National Association of School Nurses, 2016
Bridge Health Care and Education

School + Health = Successful Students!
Providing Care Coordination: Coming Together to Address the Problem

Child with uncontrolled asthma

School Nurse
Family/Caregiver
Healthcare Provider

School Funding/Staffing
Public Policy

Collaborate to Design Systems

– School-based asthma management programs to support student success
  – Colorado Step Up Asthma Program
  – Building Bridges for Asthma Care Program
  – Healthy Learner Asthma Program
2 absences per month = likely to fall behind in school

2 absences per month
× 9 Months of school

Likely to fail a grade

2 absences per month = less likely to graduate

AbsencesAddUp.org
Five Health-Related Reasons for School Absence - Healthy Schools Campaign

https://healthyschoolscampaign.org/policy/education/five-health-related-causes-of-chronic-absenteeism/
Five School-Based Solutions for School Absence
School Access Disparities Related to Asthma

- **36,000 children** and adolescents miss school **each day** because of asthma
- Asthma is a leading cause of school absenteeism from chronic illness with the highest proportions in low income students
- Children with asthma missed **3 times** more school days and had a **2.7-fold increased risk** having a **learning disability** compared with well children

“Chronic absenteeism can lead to **poor educational and life outcomes for children**, and it can also be an indicator of underlying **social**, **health**, or **economic challenges** facing children, youth, and their families and communities.”
Asthma Straw Challenge
Asthma Statistics

- Number of children who currently have asthma: 6.3 million*
- Percent of children who currently have asthma: 8.6%*
- Approximately 69,000 students with asthma in Colorado**

*Summary Health Statistics: National Health Interview Survey, 2014

**Extracted from Colorado Department of Education data
In School and Ready to Learn
History of School Based Asthma Programs in Colorado
Asthma counselors (patient navigators) working with school nurses and students/families with asthma

Now in 4 school districts, reaching 32 school communities
In the U.S., 36,000 kids miss school due to asthma each day (1)

3x more than kids without asthma (1)

Screen and enroll high-risk children

Monitor their asthma control

School nurses

Teach them how to use quick relief inhalers

Connect with parents and doctors to manage treatment

Create asthma checklists and action plans

36% of schools in the U.S. have a full-time nurse (1)

19% of them receive asthma training (1)

464 children with asthma enrolled in Denver and Hartford (2)

Absences down nearly among kids enrolled 12% (3)

Absences up nearly among kids not enrolled 9% (3)

Building Bridges is a program that opens lines of communication between students with asthma, families, school staff and healthcare providers.

*School nurses in the program are trained for asthma management.

REFERENCES:
1. Cinvesti L, Gleason M, Szefler S J. Establishing school-centered asthma programs. Clinical Reviews in Allergy and Immunology, Dec 2014.
2. GSK Data on File
Building Bridges Video
Healthy Learner Asthma Program

Figure 1. The Healthy Learner Model for Student Chronic Condition Management. Copyright 2006 Special School District # 1, Minneapolis Public Schools Health Related Services (Used with permission).
Asthma Program Tools - Professional development and forms

- Applying Best Practice Asthma Care in Schools: A standardized statewide approach
- Asthma intake form
- CSACP
- Inhaler technique checklist
- IT Workshop for School Nurses
- Resource Nurse Specialist support through regularly scheduled phone conferences
Does your child have asthma?

☐ No — STOP HERE

☐ Yes — Please complete this form

If you have any questions, please contact your child’s school nurse.

Date form completed: ___________________________ Student ID: ___________________________

Student Name: ___________________________ Birth date: ___________________________

Parent/Guardian Name & Phone #: ___________________________

Name of person completing form and relationship (i.e. mom, dad, grandma):

Health care provider for asthma (name & phone #):

1. In the past 12 months, how many times has your child visited the ER/urgent care or had an urgent doctor’s office visit for asthma?
   - 0 times
   - 1 time
   - 2 times
   - 3 times
   - 4 times
   - 5 or more times

2. In the past 12 months, how many times has your child been hospitalized overnight for asthma?
   - 0 times
   - 1 time
   - 2 times
   - 3 times
   - 4 times
   - 5 or more times

3. In the past 12 months, how many times has your child used oral steroids (prednisone, Depo) to treat an asthma attack?
   - 0 times
   - 1 time
   - 2 times
   - 3 times
   - 4 times
   - 5 or more times

4. How many days of school did your child miss this past school year because of asthma?
   - 0 days
   - 1-2 days
   - 3-5 days
   - 6-10 days
   - 11-15 days
   - 16 or more days

5. In the past 4 weeks, how often has your child used a rescue or reliever medication (a spray, inhaler, or breathing machine) to relieve coughing, trouble breathing, or wheezing?
   - Never
   - 1-2 days/week
   - 3 or more days/week but not every day
   - Every day

6. In the past 4 weeks, how often has your child had coughing, trouble breathing, or wheezing every day or during the night?
   - Never
   - 1-2 times/week
   - 3 or more times/week but not every day
   - Every day

7. In the past 4 weeks, how often has your child awakened at night because of coughing, trouble breathing, or wheezing?
   - Never
   - 1-2 times/month
   - 3 or more times/month or 2 or more times/week
   - Every night

8. In the past 4 weeks, how often has your child’s asthma bothered or interrupted him/her during normal activities (playing, running around, and sports)?
   - Never
   - Rarely
   - Sometimes
   - Often
   - All of the time

9. What triggers your child’s asthma? (Check all that apply)
   - □ Illness (colds)
   - □ Smoke
   - □ Allergies: □ Cat □ Dog □ Dust □ Mold □ Pollen
   - □ Emotions (crying, laughing, stress)
   - □ Exercise/physical activity
   - □ Food
   - □ Weather changes
   - □ Strong odors/mists
   - □ Other:

10. Please write the names or colors of medicines (inhalers/puffers, pills, liquids, nebulizers) your child takes for asthma and allergies (the once every day and as needed) and give the nurse a copy of your written asthma treatment plan.

   List names or colors of medicines used for asthma

11. How well does your child take asthma medicines? (Only one answer)
   - Takes medicine by self
   - Needs help taking medicine
   - Not using medicine now

Parent Signature _____________________________________________ Date _______________

School Nurse Reviewed _____________________________________________ Date _______________

Statewide Form – Colorado Department of Education
COLOrado school Asthma Care Plan

PARENT/GUARDIAN complete and sign the top portion of form.

Student Name: [Redacted]
Birth date: [Redacted]
Parent/Guardian: [Redacted]
Cell Phone: [Redacted]
Other Contact: [Redacted]
Grade: [Redacted]
Teacher: [Redacted]

If there is a quick relief inhaler at school and the student is experiencing asthma symptoms:

- Call parent/guardians to pick up student and/or bring inhaler/medications to school.
- Inform them that if they can’t get to school, 911 may be called.

I give permission for school personnel to share this information, follow this plan, administer medication, and care for my child and, if necessary, contact my physician. I assume full responsibility for providing the school with prescribed medication and delivery/monitoring devices. I approve this Asthma Care Plan for my child.

Health Care Provider to complete all items, sign and date completed form.

Green Zone: Student participation in activity and need for pre-treatment. No current symptoms.

- For treatment of severe activity: Not Required
- Pre-treatment for strenuous activity: Pre-treatment: (Check One) [Redacted] Other: __________ [Redacted] 10-15 minutes before activity.
- Repeat at 4 hours if needed for additional or ongoing physical activity.
- If student is currently experiencing symptoms, follow yellow zone.

Yellow Zone: Sick—Uncontrolled Asthma

If you see this:
[Items listed in the form]

Do this:
[Items listed in the form]

Red Zone: Emergency Situation—Severe Asthma Symptoms

If you see this:
[Items listed in the form]

Do this immediately:
[Items listed in the form]
### Inhaler Technique Assessment Tool

**Name:**

**Inhaler device (Check one):** MDI alone (a 5-yr old)  MDI plus spacer  MDI plus spacer with mask

**Instructions:** Give one point for each step performed correctly (1 = Yes, correct technique). Provide a reason for why a step was not done correctly for steps with a score of 0. For boxes with a score of 0, provide more teaching or coaching in these areas until a total score of 5 is obtained. Record the number of attempts until a satisfactory technique is obtained in the column “Coaching.”

#### Sequence of Critical Steps & Criteria

<table>
<thead>
<tr>
<th>Step</th>
<th>Scoring Criteria</th>
<th>Coaching</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1) Removes Cap</strong></td>
<td>Score 1 if:</td>
<td></td>
</tr>
<tr>
<td>✔ MDI: Removes cap from mouthpiece.</td>
<td>Score 0 if:</td>
<td></td>
</tr>
<tr>
<td>✔ MDI plus spacer (with or without mask): Removes cap(s) AND correctly inserts MDI into spacer.</td>
<td>Score 0 if:</td>
<td></td>
</tr>
<tr>
<td>✔ Checks counter (if applicable)</td>
<td>Score 0 if:</td>
<td></td>
</tr>
<tr>
<td><strong>2) Correctly primes device</strong></td>
<td>Score 0 if:</td>
<td></td>
</tr>
<tr>
<td>✔ Shakes the MDI inhaler AND inhaler is upright.</td>
<td>Score 0 if:</td>
<td></td>
</tr>
<tr>
<td><strong>3) Exhales</strong></td>
<td>Score 0 if:</td>
<td></td>
</tr>
<tr>
<td>✔ Exhales completely or breathes out to the end of a normal breath before putting device in mouth.</td>
<td>Score 0 if:</td>
<td></td>
</tr>
<tr>
<td>✔ MDI plus spacer with mask: Steps above plus ensure good fit of mask (nose and mouth should be covered).</td>
<td>Score 0 if:</td>
<td></td>
</tr>
<tr>
<td><strong>4) Inhalates appropriately for device</strong></td>
<td>Score 0 if:</td>
<td></td>
</tr>
<tr>
<td>✔ MDI: Positioned in mouth or 2-3 finger breaths away from mouth. At the same time starts to breathe in slowly to full inspiration, depresses the inhaler to release 1 puff of medication.</td>
<td>Score 0 if:</td>
<td></td>
</tr>
<tr>
<td>✔ MDI plus spacer: Places mouthpiece of spacer into the mouth, with lips closed tightly around it to get a good seal, presses the inhaler once. Breathe in slowly through the mouthpiece (3L/min or 3.5 secs).</td>
<td>Score 0 if:</td>
<td></td>
</tr>
<tr>
<td>✔ MDI plus spacer with mask: Once mask has good seal over nose and mouth, press inhaler once with slow tidal breathing (breathing in and out) for 3-5 breaths.</td>
<td>Score 0 if:</td>
<td></td>
</tr>
<tr>
<td><strong>5) Holds breath</strong></td>
<td>Score 0 if:</td>
<td></td>
</tr>
<tr>
<td>✔ Holds breath to count of 10.</td>
<td>Score 0 if:</td>
<td></td>
</tr>
<tr>
<td>✔ Lips kept closed while holding breath.</td>
<td>Score 0 if:</td>
<td></td>
</tr>
<tr>
<td>✔ 15-30 seconds before repeating process.</td>
<td>Score 0 if:</td>
<td></td>
</tr>
</tbody>
</table>

**Provider:**

**Date:**

**TOTAL SCORE:**
Evaluation Outcomes

– Pre/post assessment (knowledge, skills, and confidence) by nurse
– Pre/post inhaler technique by nurse
– Evaluation
Health and Educational Outcomes

- Increase in student’s asthma knowledge
- Measureable skill development of inhaler technique
- Fewer at risk factors
- Controlled asthma
- Presence of Colorado School Asthma Care Plan
- Decreased absenteeism due to asthma
COLLABORATION:
Two or more people working together towards shared goals

△ Relationship building
△ Mutual respect
△ Listening
△ Investment of time and resources
△ Trust
△ Feeling of accomplishment
△ Actual progress
△ Fun
School Nursing and Health

Mission: Supporting and Promoting the connection between health and academic achievement.

Welcome to the CDE School Nursing and Health Services web pages. The following resources are available to support your practice and give you assistance in obtaining additional resources.

Professional Development
- What's New!
- Training Opportunities
- E-Learning
- Meetings

School Health Office Management
- Organization of Services
- School Health Manual
- Fact Facts
- Students in Need
- Related Services & Department

Professional School Nursing
- School Nursing Practice
- School Nurse Licensure
- Mentor Program
- CASN/NASN

Resources
- Community
- State and National

School Health Services
- Immunizations
- Infectious Diseases
- Screenings
- Early Childhood
- Emergency Care/Disaster Planning
- Student Safety

Legal Issues
- Child Abuse & Neglect
- Delegation
- Documentation & Confidentiality
- Rules & Regulations

Nursing Procedures
- Board of Nursing Laws, Rules and Policies
- Guidelines:
  - Baclofen
  - Venlafaxine
  - Dexamethasone
  - Intranasal Midazolam
  - Baccal Midazolam

School Nurse Training Tools
- Chronic Health Conditions
- Medication Administration
- Unlicensed Assistive Personnel
- Health & Wellness
- Training Resources

Health Conditions
- Health Care Plans
- Allergy/Asthma
- Diabetes
- Epilepsy/Seizures
- TBI/Concussion
- Mental Health

Special Education
- Special Education/504
- Medicaid School Health Program
- Special Procedure

Contact Us
- Colorado Department of Education
- Regional Nurses

http://www.cde.state.co.us/healthandwellness/snh_home
School-Based Asthma Management Program - SAMPRO™

https://www.aaaai.org/conditions-and-treatments/school-tools/SAMPRO
Acknowledgements

Dr. Stanley Szefler, Children’s Hospital Colorado
Melanie Gleason, Children’s Hospital Colorado
Lisa Cicutto, National Jewish Health
Kathy Patrick, Colorado Department of Education
Donna Shocks, Denver Public Schools
Lynn Jenkins-Nygren, Colorado Department of Education
Susan Labonde, Colorado Department of Education
Regional Nurse Specialist Team, Colorado Department of Education
Colorado Step Up Asthma Program Team, Children’s Hospital Colorado
Building Bridges for Asthma Care Team, Multiple institutions