Vision: To be the Healthiest State in the Nation

Guidelines for the Care and Delegation of Care for Students with Asthma in Florida Schools 2013

Mission:
To protect, promote, & improve the health of all people in Florida through integrated state, county, & community efforts.

Florida HEALTH

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Table of Contents

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Section I: Introduction to Guidelines for the Care and Delegation of Care for Students with Asthma in Florida Schools

Purpose and Background

The purpose of this document is to provide guidelines for school nurses and other assistive personnel working for county health departments and local school districts to provide a safe learning environment for students with asthma. These guidelines establish a set of evidence-based practices that have worked in school settings and serve as a resource for developing local plans. Asthma can be life threatening. These guidelines are for use in conjunction with emergency management policies, including 911 systems.

This document is designed to provide basic information about asthma, describe the medical and legal requirements for meeting the needs of students in school, and provide guidelines for safe delegation to unlicensed assistive personnel (UAP). These guidelines will also assist the registered professional school nurse (hereinafter referred to a school nurse) in developing the plan of care in cooperation with the healthcare provider, parent/guardian, student, and designated school staff. Advance planning and preparation are required to identify and train individuals in the schools to provide the health care services these children may need while in school, participating in school-sponsored activities, or in transit to or from school or school-sponsored activities.

These guidelines represent the outcome of many workgroup meetings, review of literature, and collection of documents from local school districts; county health departments; the Environmental Protection Agency; the Centers for Disease Control and Prevention (CDC); the National Heart, Lung, and Blood Institute (NHLBI); the Environmental Council of States; and the Association of State and Territorial Health Officers. They do not represent the specific opinion of any individual or institution. The guidelines are not intended to replace clinical judgment or individualized consultation with medical providers. These guidelines are designed to identify management practices for students with asthma.

Position statements and other publications developed by the National Association of School Nurses (NASN), the American School Health Association, the American Public Health Association's Public Health Nursing Section, the National Association of State School Nurse Consultants, the American Nurses Association (ANA), and others, when specific to aspects of school nursing practice, may be regarded as guidelines.

The Florida School Health Services Act (1973), section (s.) 381.0056, Florida Statutes (F.S.) authorizes the Florida Department of Health, in cooperation with the Florida Department of Education, to supervise the administration of the school health services program in Florida. Health services are made available to students and provided by a school healthcare team led by a school nurse. The school nurse is responsible for the development of the student's individualized healthcare plan (IHP); (see Appendix A: Glossary, for definitions of school nurse and IHP as used in this document). Although the School Health Services Act addresses the need to plan for, and respond to, any healthcare problem that needs management in the school setting, these guidelines were developed specifically to address the management of students with asthma.

The National Institutes of Health (NIH), Expert Panel Report 3 (EPR-3) *Guidelines for the Diagnosis and Management of Asthma*, published by the NHLBI National Asthma Education and Prevention Program (NAEPP, 2007), have organized recommendations for asthma care around four components that are considered essential to effective asthma management:

- Measures of assessment and monitoring that are obtained by objective tests, physical examination, student health history and parent report in order to assess the characteristics and severity of asthma and to monitor if asthma control is achieved and maintained
- Asthma education for a partnership approach
- Control of environmental factors and underlying health conditions that affect asthma
- Medication therapy

Results from the National Surveillance of Asthma (Moorman, Akinbami, Bailey, et al, 2012) indicate that 9.5 percent of children ages 0–17 have asthma. The School Health Services Summary provides the number of asthma cases reported at the state and county level as well as average registered school nurse-to-student ratios. Although the need for school health services is increasing, the supply of school nurses remains static or in some cases is decreasing. Therefore, to meet the health care needs of students with asthma, UAP must be involved (see Appendix A: Glossary). It is imperative that these UAP have both general and child-specific training, in accordance with s. 1006.062, F.S. (Administration of medication and provision of medical services by district school board personnel).

Classification of Asthma

Asthma is a leading chronic illness among children and youth in Florida and the United States. According to the CDC (2010), asthma is the third-ranking cause of hospitalization among children under age 15. On average, in a classroom of 30 children, about three are likely to have asthma.

Asthma is defined as a chronic inflammatory disorder of the airways (NAEPP, 2007). Asthma attacks, also referred to as episodes, can be caused by exposure to allergens (e.g., pets, mold, seasonal pollens), irritants (e.g., smoke and industrial pollutants), or respiratory viruses, including the “common cold” viruses (NAEPP, 2007).

Classifying of Asthma Severity and Initiating Therapy (Table 1)

Based on the components of Impairment and Risk, the four classifications of asthma severity are specified for three age groups: 0–4, 5–11, and youths > 12 years of age and adults (NHLBI, 2012).

- Intermittent
- Mild Persistent
- Moderate Persistent
- Severe Persistent

Notes

- The stepwise approach is meant to assist, not replace, the clinical decision making required to meet individual patient needs.
- Level of severity is determined by both impairment and risk. Assess impairment domain by patient's/caregiver's recall of previous 2–4 weeks. Symptom assessment for longer periods should reflect a global assessment such as inquiring whether the patient's asthma is better or worse since the last visit. Assign severity to the most severe category in which any feature occurs.

INITIAL VISIT: CLASSIFYING ASTHMA SEVERITY AND INITIATING THERAPY

(in patients who are not currently taking long-term control medications)

Level of severity (Columns 2–5) is determined by events listed in Column 1 for both impairment (frequency and intensity of symptoms and functional limitations) and risk (of exacerbations). Assess impairment by patient's or caregiver's recall of events during the previous 2–4 weeks; assess risk over the last year. Recommendations for initiating therapy based on level of severity are presented in the last row.

Components of Severity		Intermittent			Persistent								
					Mild			Moderate			Severe		
		Ages 0–4 years	Ages 5–11 years	Ages ≥12 years	Ages 0–4 years	Ages 5–11 years	Ages ≥12 years	Ages 0–4 years	Ages 5–11 years	Ages ≥12 years	Ages 0–4 years	Ages 5–11 years	Ages ≥12 years
Impairment	Symptoms	≤2 days/week			>2 days/week but not daily			Daily			Throughout the day		
	Nighttime awakenings	0	≤2x/month		1–2x/month	3–4x/month		3–4x/month	>1x/week but not nightly		>1x/week	Often 7x/week	
	SABA* use for symptom control (not to prevent EIB*)	≤2 days/week			>2 days/week but not daily	>2 days/week but not daily and not more than once on any day		Daily			Several times per day		
	Interference with normal activity	None			Minor limitation			Some limitation			Extremely limited		
	Lung function												
	➔ FEV_1* (% predicted)	Not applicable	Normal FEV_1 between exacerbations >80%	Normal FEV_1 between exacerbations >80%	Not applicable	>80%	>80%	Not applicable	60–80%	60–80%	Not applicable	<60%	<60%
	➔ FEV_1/FVC*		>85%	Normal†		>80%	Normal†		75–80%	Reduced 5%†		<75%	Reduced >5%†
Risk	Asthma exacerbations requiring oral systemic corticosteroids‡	0–1/year			≥2 exacerb. in 6 months, or wheezing ≥4x per year lasting >1 day AND risk factors for persistent asthma	≥2/year		*Generally, more frequent and intense events indicate greater severity.*					
		*Consider severity and interval since last asthma exacerbation. Frequency and severity may fluctuate over time for patients in any severity category. Relative annual risk of exacerbations may be related to FEV_1.**											
Recommended Step for Initiating Therapy *(See "Stepwise Approach for Managing Asthma Long Term," page 7)* *The stepwise approach is meant to help, not replace, the clinical decisionmaking needed to meet individual patient needs.*		Step 1			Step 2			Step 3	Step 3 medium-dose ICS* option	Step 3	Step 3	Step 3 medium-dose ICS* option or Step 4	Step 4 or 5
								Consider short course of oral systemic corticosteroids.					
		In 2–6 weeks, depending on severity, assess level of asthma control achieved and adjust therapy as needed. For children 0–4 years old, if no clear benefit is observed in 4–6 weeks, consider adjusting therapy or alternate diagnoses.											

* **Abbreviations:** EIB, exercise-induced bronchospam; FEV_1, forced expiratory volume in 1 second; FVC, forced vital capacity; ICS, inhaled corticosteroid; SABA, short-acting $beta_2$-agonist.

† Normal FEV_1/FVC by age: 8–19 years, 85%; 20–39 years, 80%; 40–59 years, 75%; 60–80 years, 70%.

‡ Data are insufficient to link frequencies of exacerbations with different levels of asthma severity. Generally, more frequent and intense exacerbations (e.g., requiring urgent care, hospital or intensive care admission, and/or oral corticosteroids) indicate greater underlying disease severity. For treatment purposes, patients with ≥2 exacerbations may be considered to have persistent asthma, even in the absence of impairment levels consistent with persistent asthma.

Assessing Asthma Control and Adjusting Therapy (Table 2)

Asthma control focuses on two domains:

1. Reducing impairment—the frequency and intensity of symptoms currently or recently experienced; and
2. Reducing risk—the likelihood of future asthma episodes, progressive decline in lung function (or, for children, reduced lung growth), or medication side effects. Achieving and maintaining asthma control requires appropriate medication, addressing environmental factors that worsen symptoms, and ongoing monitoring to assess control and to adjust therapy accordingly (NHLBI , 2012).

FOLLOW-UP VISITS: ASSESSING ASTHMA CONTROL AND ADJUSTING THERAPY

Level of control (Columns 2–4) is based on the most severe component of impairment (symptoms and functional limitations) or risk (exacerbations). Assess impairment by patient's or caregiver's recall of events listed in Column 1 during the previous 2–4 weeks and by spirometry and/or peak flow measures. Symptom assessment for longer periods should reflect a global assessment, such as inquiring whether the patient's asthma is better or worse since the last visit. Assess risk by recall of exacerbations during the previous year and since the last visit. Recommendations for adjusting therapy based on level of control are presented in the last row.

Components of Control		Well Controlled			Not Well Controlled			Very Poorly Controlled		
		Ages 0–4 years	Ages 5–11 years	Ages ≥12 years	Ages 0–4 years	Ages 5–11 years	Ages ≥12 years	Ages 0–4 years	Ages 5–11 years	Ages ≥12 years
Impairment	Symptoms	≤2 days/week	≤2 days/week but not more than once on each day	≤2 days/week	>2 days/week	>2 days/week or multiple times on ≤2 days/week	>2 days/week	Throughout the day		
	Nighttime awakenings	≤1x/month		≤2x/month	>1x/month	≥2x/month	1–3x/week	>1x/week	≥2x/week	≥4x/week
	Interference with normal activity	None			Some limitation			Extremely limited		
	SABA* use for symptom control (not to prevent EIB*)	≤2 days/week			>2 days/week			Several times per day		
	Lung function ➡ FEV_1* (% *predicted*) or peak flow (% *personal best*) ➡ FEV_1/FVC*	Not applicable	>80% >80%	>80% Not applicable	Not applicable	60–80% 75–80%	60–80% Not applicable	Not applicable	<60% <75%	<60% Not applicable
	Validated questionnaires† ➡ ATAQ* ➡ ACQ* ➡ ACT*	Not applicable	Not applicable	0 ≤0.75‡ ≥20	Not applicable	Not applicable	1–2 ≥1.5 16–19	Not applicable	Not applicable	3–4 Not applicable ≤15
Risk	Asthma exacerbations requiring oral systemic corticosteroids§	0–1/year			2–3/year	≥2/year		>3/year	≥2/year	
		Consider severity and interval since last asthma exacerbation.								
	Reduction in lung growth/Progressive loss of lung function	Not applicable	Evaluation requires long-term follow-up care.		Not applicable	Evaluation requires long-term follow-up care.		Not applicable	Evaluation requires long-term follow-up care.	
	Treatment-related adverse effects	*Medication side effects can vary in intensity from none to very troublesome and worrisome. The level of intensity does not correlate to specific levels of control but should be considered in the overall assessment of risk.*								
Recommended Action for Treatment *(See "Stepwise Approach for Managing Asthma Long Term," page 7)* *The stepwise approach is meant to help, not replace, the clinical decisionmaking needed to meet individual patient needs.*		*Maintain current step.* *Regular follow-up every 1–6 months.* *Consider step down if well controlled for at least 3 months.*			Step up 1 step	Step up at least 1 step	Step up 1 step	*Consider short course of oral systemic corticosteroids.* *Step up 1–2 steps.* *Reevaluate in 2 weeks to achieve control.*		
					Reevaluate in 2–6 weeks to achieve control. *For children 0–4 years, if no clear benefit observed in 4–6 weeks, consider adjusting therapy or alternative diagnoses.*					
					Before step up in treatment: *Review adherence to medication, inhaler technique, and environmental control. If alternative treatment was used, discontinue and use preferred treatment for that step. For side effects, consider alternative treatment options.*					

* **Abbreviations:** ACQ, Asthma Control Questionnaire©; ACT, Asthma Control Test™; ATAQ, Asthma Therapy Assessment Questionnaire©; EIB, exercise-induced bronchospasm; FVC, forced vital capacity; FEV_1, forced expiratory volume in 1 second; SABA, short-acting $beta_2$-agonist.

† Minimal important difference: 1.0 for the ATAQ; 0.5 for the ACQ; not determined for the ACT.

‡ ACQ values of 0.76–1.4 are indeterminate regarding well-controlled asthma.

§ Data are insufficient to link frequencies of exacerbations with different levels of asthma control. Generally, more frequent and intense exacerbations (e.g., requiring urgent care, hospital or intensive care admission, and/or oral corticosteroids) indicate poorer asthma control.

Stepwise Approach for Managing Asthma Long Term (Table 3)

The stepwise approach for managing asthma long term has six steps. Noteworthy is that inhaled corticosteroids (ICS) are now considered the preferred long-term control therapy for all age groups with persistent asthma and development of a written action plan in partnership with the student, family and healthcare provider to choose treatment that achieves the health and learning outcomes that are important to the student/family (NHLBI, 2012).

STEPWISE APPROACH FOR MANAGING ASTHMA LONG TERM

The stepwise approach tailors the selection of medication to the level of asthma severity (see page 5) or asthma control (see page 6). The stepwise approach is meant to help, not replace, the clinical decisionmaking needed to meet individual patient needs.

ASSESS CONTROL:

STEP UP IF NEEDED (first, check medication adherence, inhaler technique, environmental control, and comorbidities)

STEP DOWN IF POSSIBLE (and asthma is well controlled for at least 3 months)

At each step: Patient education, environmental control, and management of comorbidities

0–4 years of age

	Intermittent Asthma	Persistent Asthma: Daily Medication Consult with asthma specialist if step 3 care or higher is required. Consider consultation at step 2.				
	STEP 1	STEP 2	STEP 3	STEP 4	STEP 5	STEP 6
Preferred Treatment†	SABA* as needed	low-dose ICS*	medium-dose ICS*	medium-dose ICS* + either LABA* or montelukast	high-dose ICS* + either LABA* or montelukast	high-dose ICS* + either LABA* or montelukast + oral corticosteroids
Alternative Treatment†,‡		cromolyn or montelukast				
If clear benefit is not observed in 4–6 weeks, and medication technique and adherence are satisfactory, consider adjusting therapy or alternate diagnoses.						
Quick-Relief Medication	▪ SABA* as needed for symptoms; intensity of treatment depends on severity of symptoms. ▪ With viral respiratory symptoms: SABA every 4–6 hours up to 24 hours (longer with physician consult). Consider short course of oral systemic corticosteroids if asthma exacerbation is severe or patient has history of severe exacerbations. ▪ Caution: Frequent use of SABA may indicate the need to step up treatment.					

5–11 years of age

	Intermittent Asthma	Persistent Asthma: Daily Medication Consult with asthma specialist if step 4 care or higher is required. Consider consultation at step 3.				
	STEP 1	STEP 2	STEP 3	STEP 4	STEP 5	STEP 6
Preferred Treatment†	SABA* as needed	low-dose ICS*	low-dose ICS* + either LABA,* LTRA,* or theophylline(b) **OR** medium-dose ICS	medium-dose ICS* + LABA*	high-dose ICS* + LABA*	high-dose ICS* + LABA* + oral corticosteroids
Alternative Treatment†,‡		cromolyn, LTRA,* or theophylline§		medium-dose ICS* + either LTRA* or theophylline§	high-dose ICS* + either LTRA* or theophylline§	high-dose ICS* + either LTRA* or theophylline§ + oral corticosteroids
		Consider subcutaneous allergen immunotherapy for patients who have persistent, allergic asthma.**				
Quick-Relief Medication	▪ SABA* as needed for symptoms. The intensity of treatment depends on severity of symptoms: up to 3 treatments every 20 minutes as needed. Short course of oral systemic corticosteroids may be needed. ▪ Caution: Increasing use of SABA or use >2 days/week for symptom relief (not to prevent EIB*) generally indicates inadequate control and the need to step up treatment.					

≥12 years of age

	Intermittent Asthma	Persistent Asthma: Daily Medication Consult with asthma specialist if step 4 care or higher is required. Consider consultation at step 3.				
	STEP 1	STEP 2	STEP 3	STEP 4	STEP 5	STEP 6
Preferred Treatment†	SABA* as needed	low-dose ICS*	low-dose ICS* + LABA* **OR** medium-dose ICS*	medium-dose ICS* + LABA*	high-dose ICS* + LABA* **AND** consider omalizumab for patients who have allergies††	high-dose ICS* + LABA* + oral corticosteroid§§ **AND** consider omalizumab for patients who have allergies††
Alternative Treatment†,‡		cromolyn, LTRA,* or theophylline§	low-dose ICS* + either LTRA,* theophylline,§ or zileuton‡‡	medium-dose ICS* + either LTRA,* theophylline,§ or zileuton‡‡		
		Consider subcutaneous allergen immunotherapy for patients who have persistent, allergic asthma.**				
Quick-Relief Medication	▪ SABA* as needed for symptoms. The intensity of treatment depends on severity of symptoms: up to 3 treatments every 20 minutes as needed. Short course of oral systemic corticosteroids may be needed. ▪ Caution: Use of SABA >2 days/week for symptom relief (not to prevent EIB*) generally indicates inadequate control and the need to step up treatment.					

* **Abbreviations:** EIB, exercise-induced bronchospasm; ICS, inhaled corticosteroid; LABA, inhaled long-acting beta$_2$-agonist; LTRA, leukotriene receptor antagonist; SABA, inhaled short-acting beta$_2$-agonist.
† Treatment options are listed in alphabetical order, if more than one.
‡ If alternative treatment is used and response is inadequate, discontinue and use preferred treatment before stepping up.
§ Theophylline is a less desirable alternative because of the need to monitor serum concentration levels.
** Based on evidence for dust mites, animal dander, and pollen; evidence is weak or lacking for molds and cockroaches. Evidence is strongest for immunotherapy with single allergens. The role of allergy in asthma is greater in children than in adults.
†† Clinicians who administer immunotherapy or omalizumab should be prepared to treat anaphylaxis that may occur.
‡‡ Zileuton is less desirable because of limited studies as adjunctive therapy and the need to monitor liver function.
§§ Before oral corticosteroids are introduced, a trial of high-dose ICS + LABA + either LTRA, theophylline, or zileuton, may be considered, although this approach has not been studied in clinical trials.

Section II: Major Factors in Maintaining Health

Maintaining health for the student with asthma requires a balance of a variety of factors. Some of these include exercise and sports, prompt management of asthma symptoms, and maintenance of an allergen-free environment. All of these factors should be considered in preparing the student's IHP and in planning for the least restrictive environment.

Exercise and Sports

The EPR-3 recommends that physical activity at play or in organized sports is an essential part of a child's life and full participation in physical activities should be encouraged. Many children who have asthma experience coughing, wheezing, or excessive fatigue when they exercise. Treatment immediately before vigorous activity or exercise usually prevents exercise-induced bronchospasm (EIB). EIB is a bronchospastic event that is caused by a loss of heat, water or both from the lung during exercise because of hyperventilating of air that is cooler and dryer than that of the respiratory tree. If symptoms occur during usual play activities, a step up in long-term therapy is warranted. Poor endurance or EIB can be an indication of poorly controlled persistent asthma. Appropriate use of long-term control medication can reduce EIB. See EPR-3, Section 4 (NAEPP, 2007) for EIB management strategies.

Participation in physical activity and school sports helps all students, including students with asthma, to feel healthier. It improves self-esteem and fosters a sense of empowerment. The benefits of physical activity include cardiovascular fitness, long-term weight control, and social interaction. In addition, physical activity can help reduce susceptibility to asthma exacerbations. In general, there are no activities that students with asthma should avoid. Physical activity guidelines include the following:

- Avoid dehydration.
- Keep bronchodilator (inhaler) available.
- Use a beta$_2$ agonist (inhaled bronchodilator) before vigorous exercise if exercise is a trigger for the student.
- Warm up before intensive activities.
- If student develops cough, wheezing or shortness of breath, provide medication as ordered and monitor breathing. If breathing does not improve, see the student's IHP for continued emergency follow up directions.
- Wear an asthma identification tag or jewelry.

The school nurse should list any specific exercise or physical activity requirements or restrictions in the student's IHP, as indicated in the medical plan of care. EIB can limit and disrupt otherwise normal lives if not treated and should be anticipated in all students with asthma. EIB usually occurs either during or minutes after vigorous activity, reaches its peak 5–10 minutes after stopping the activity and resolves in another 20–30 minutes (NHLBI, 2007). Teachers and coaches should be notified that a student has EIB, that the student should be able to participate in activities, and that the student may need inhaled medication before physical activity.

Nutrition and Meal Planning

Food allergy is the only circumstance under which meal planning becomes an important component in the treatment of asthma. If the parent or physician reports a specific food allergy, the school nurse should list any specific restriction in the student's IHP. Steps should be taken to avoid exposure to that food. The meal plan should reflect consideration of the developmental needs of the student, as well as food preferences, cultural influences, and family eating patterns.

School Environment: Creating an Asthma-Friendly Environment

Exposure of students with asthma to allergens to which they are sensitive has been shown to increase asthma symptoms and precipitate asthma exacerbations. Substances in the environment can act as triggers for a student's asthma. Common environmental triggers may include the following:

- Tobacco smoke
- Dust mites
- Pet dander
- Aerosol sprays (cologne, room deodorizers)
- Tree pollens
- Grass
- Hot or cold air
- Cockroaches
- Mold

Reductions in exposures to allergens and irritants are recommended in environments where the child spends extended periods of time, such as home, daycare, and school. It is important that school staff be aware of these substances and work to minimize them in the school. Actions that can reduce indoor allergens include the following:

- Improve housekeeping with better dust removal by using vacuum cleaners with high-efficiency particulate air (HEPA) filters, wet-wiping and vacuuming surfaces and furniture, and cleaning carpets more often (consider replacing carpet with tile or linoleum where possible).
- Institute good humidity and moisture control measures by routinely inspecting for and repairing moisture problems, and maintaining relative humidity within the recommended levels to avoid mold.
- Institute preventive maintenance procedures for the building by routinely inspecting, cleaning, and repairing each air handler.
- Institute integrated pest management policies in every school to control cockroaches and rodents.
- Ensure that unnecessary odors, allergens, irritants, or pollutants are not added to the school air by avoiding air fresheners, ozone generators, furred or feathered animals, indoor plants in classrooms, and outdoor plants known to be allergens.
- Eliminate all smoke exposure.

- Use hypoallergenic air filters for mold and pollen control.
- Minimize the use of portables for classrooms.

Medications

Quick-Relief Medications. Judicious use of quick-relief medications and inhaled bronchodilators is an important component in asthma management. The healthcare provider will prescribe a medication and the means of administration specific to the needs of the student. The healthcare provider will also indicate the frequency with which that medication may be given and whether the student has the skills to self-administer. Albuterol via metered dose inhalers (MDI) is as useful as nebulizer therapy if it is given through a valved holding chamber and in adequate amounts. If initial therapy with two puffs is not effective in relieving the episode, additional puffs can be given as directed in the student's IHP. Devices available to deliver inhaled medication include MDI, breath-actuated MDI, dry powder inhalers (DPI), and nebulizers. Inhaled medications are preferred because high concentrations of low doses of drug are delivered directly to airways providing potent therapy with few side effects (see Appendix D).

The school nurse should list the type of medication and means of administration, as well as emergency management, in the student's IHP. Section 1002.20 (3)(h), F.S. (K–12 student and parent rights), provides the authority for students with asthma to carry a MDI in the school setting if parents provide written permission and a physician's order.

Oral Asthma Medications. In some cases, the healthcare provider will prescribe an oral form of bronchodilator. The school nurse should list the type of medication and means of administration in the student's IHP.

Long-Term Control Medications for Asthma. Students with persistent asthma require a long-term control medication to prevent daily asthma symptoms and to enable them to pursue normal activities. These medications are to be administered once to twice daily and are generally given at home. On occasion, the school may be asked to administer these medications. Control medications may be in pill, MDI, or DPI form (see Appendix C).

Section III: Legal Aspects to Consider

The Nurse Practice Act (2010), Chapter 464, F.S., regulates the practice of nurses in Florida. In s. 464.003(20), F.S., the "practice of professional nursing" is defined as:

> [T]he performance of those acts requiring substantial specialized knowledge, judgment, and nursing skill based upon applied principles of psychological, biological, physical, and social sciences which shall include, but not be limited to:
>
> a. The observation, assessment, nursing diagnosis, planning, intervention, and evaluation of care health teaching and counseling of the ill, injured, or infirm and the promotion of wellness, maintenance of health, and prevention of illness of others.
> b. The administration of medications and treatments as prescribed or authorized by a duly licensed practitioner authorized by the laws of this state to prescribe such medications and treatments.
> c. The supervision and teaching of other personnel in the theory and performance of any of the acts described in this subsection.

Further clarification of the nurse's role in delegation and supervision is provided in Rule Chapter 64B9-14.001, Florida Administrative Code (F.A.C.) Delegation to Unlicensed Assitive Personnel. These rules provide definitions for delegation, specify key factors to consider for delegation of tasks or activities, and stipulate delegation of tasks that are prohibited.

Section 1006.062, F.S., is the Florida law governing the administration of medication and provision of medical services in the school setting. In addition, s. 1002.20(3)(h), F.S., provides the authority for students with asthma to carry a metered dose inhaler on their person if parents provide written permission and physician approval.

Federal laws may apply to children with asthma and may be obtained at the following Internet sites:

- Americans with Disabilities Act (ADA) Amendments Act of 2008
- Section 504 of the Rehabilitation Act of 1973
- Individuals with Disabilities Education Act (IDEA) 2004
- Individual Healthcare Plans and Section 504 White Paper (2012)

The school district determines whether the student with asthma is covered by Section 504, the Americans with Disabilities Act (ADA), or Individuals with Disabilities Education Act (IDEA). When evaluating a student with an IHP to determine whether the student is disabled under Section 504, the Section 504 team must determine whether the student would be substantially limited by his or her impairment without the provision of services listed in the student's IHP or any other mitigating measure used by the student.

The extent of the school district's obligation to make reasonable modifications or to provide educational accommodations requires a case-by-case analysis. If the district determines that the student is eligible under IDEA, the district documents the related aids and services in the student's individual educational plan (IEP). The IHP developed by the school nurse should be referenced in the 504 or IEP in order to document the healthcare services the student will receive while at school, participating in school-sponsored activities, or in transit to or from school or school-sponsored activities.

Section IV: Criteria for Delegation

The safety of the student is the primary consideration in the delivery of all health-related services provided in the school. Refer to the Technical Assistance Guidelines: *Role of the Professional School Nurse in the Delegation of Care in Florida Schools* at http://www.doh.state.fl.us/Family/School/attachments/Documents/TAG_SchoolHealth02.pdf. The school nurse is responsible for training and monitoring the UAP designated to perform these services in accordance with s.1006.062, F.S.

Unsafe Delegation

In keeping with the Nurse Practice Act (Chapter 464, F.S.), the delegation rule (64B9-14 F.A.C.), and position statements from the National Association of School Nurses (NASN), delegating asthma-related tasks to UAP in the following situations would be considered unsafe and should not be done:

- When students are newly diagnosed with moderate to severe asthma and the IHP has not been written or approved.
- When the student is medically fragile with health complications or multiple health problems that require nursing assessment.
- When the student has a history of non-compliance with treatment plans or with following local guidelines and safety precautions.
- When the student has been authorized to function independently by the healthcare provider but cannot consistently demonstrate competence in asthma-related tasks in the school setting. These students must be referred back to the healthcare provider for further evaluation and training before delegating their care to an UAP.
- When the UAP has not been trained or the UAP has not demonstrated competence in the assigned activity/task.

Safe Delegation

The school nurse should use professional judgment and consider the following criteria to determine safe and appropriate delegation of healthcare services for the student who needs assistance with some or all of the asthma-related services:

- The registered professional school nurse is responsible and accountable for creating the IHP, for managing its activities, and for its outcomes, even when implementation of the plan requires delegation to unlicensed assistive personnel (NASN, 2012a).
- The IHP is developed collaboratively with information from the family, the student, the student's healthcare providers, and school staff, as appropriate (ANA & NASN, 2011). The IHP includes medical orders implemented at school. Evaluation identifies progress toward achieving student outcomes. The IHP is reviewed at least annually, updated as needed, and revised as significant changes occur in the student's health status or medical treatment (NASN, 2013).

- The school nurse has received an action asthma plan with specific written orders related to frequency of administration of bronchodilators and any emergency orders. Those orders may be in the form of a prescription label.
- The school nurse has arranged to be available for supervision, monitoring, and consultation in an emergency.

- The school nurse will do the following:
    - Request that the parents/guardian notify the school and/or school nurse promptly when there are changes in the student's medical condition or plan of care and provide a revised medical authorization sheet from the healthcare provider
    - Request that the parents/guardian encourage their child to comply with local guidelines and safety precautions
    - Request that the parents/guardian make a diligent effort to be available by phone to the school nurse in case of an emergency and to notify the school of any change of phone numbers and/or treatment orders

- The parents/guardian have done the following:
    - Provided the school and/or school nurse with the necessary equipment and supplies to administer asthma medication
    - Provided the school and/or school nurse with the required asthma history information, authorization forms, and asthma action plan including emergency information specific to the needs of the student
    - Participated in one annual student healthcare planning and evaluation meeting with the school health team

- The delegated UAP:
    - Has obtained Level I Asthma Awareness Education, Level II Student-Specific Asthma Education, and Level III Student Specific Asthma Education for Direct Care Providers with ongoing monitoring and supervision by the school nurse (see Section VIII: Recommendations for Staff Education)
    - Has demonstrated competence in recognizing the signs and symptoms of an asthma episode and in responding with the student-specific interventions, including, if necessary, the administration of inhaled or oral bronchodilators
    - Has demonstrated competence in determining the efficacy of bronchodilators in relieving respiratory distress
    - Has a history of only providing services that are within the range of knowledge, skills, and abilities for the position
    - Is certified in cardiopulmonary resuscitation (CPR) and first aid (strongly recommended)

- Verification that the student has completed the initial asthma education series provided by the healthcare provider (strongly recommended).
- For students who perform asthma-related tasks independently, the school nurse should consider the following when delegating to an UAP:

    - Documentation from the healthcare provider indicating the student's level of independent functioning
    - Nursing documentation that the student has demonstrated competence in determining the need for assistance and in the use of medication administration devices according to locally designed skills checklists
    - Nursing documentation in the IHP for bronchodilator usage and
    - Assurance that the student will follow the local policies and safety procedures

- The school nurse should also encourage parents of students using devices for administering asthma medication to assure that their child is competent in the use of these devices.

Finding a Solution and Providing Safe Care

- Collaborate with the school principal for designated school staff to be trained as alternate UAP to provide student health services as required.
- Explore any other locally designed solution that protects the health and safety of the student and promotes the student's ability to fully participate in all school-sponsored activities.

Section V: Healthcare Planning and Implementation Meeting

The school nurse is responsible for developing, managing, delegating, implementing, and evaluating the IHP and Emergency Action Plan (EAP) for a student with chronic or newly diagnosed asthma. “Students whose healthcare needs affect or have the potential to affect safe and optimal school attendance and academic performance require the professional school nurse to write an IHP, in collaboration with the student, family, educators, and healthcare providers” (NASN, 2013). When possible, it is best to conduct a planning and implementation meeting before the student starts school. The four major purposes of the planning and implementation meeting are to:

1. Collaborate with appropriate participants to obtain a thorough health history, identify the student needs, discuss confidentiality issues, and discuss the components of the IHP/EAP. The school nurse should refer to medical orders/Asthma Action Plan (AAP).
2. Provide consultation to key school staff regarding any health-related accommodations required by Section 504 or IDEA legislation, if the student is eligible.
3. Plan for and provide training, direction, and supervision for both licensed and unlicensed personnel to meet the individualized healthcare needs of the student.
4. Review the AAP and/or other documentation from the healthcare provider, parent/student input, and school nurse assessment to evaluate and determine student level of self-care required for daily functioning or safety. Obtain parent/guardian authorization to provide required health services.

The meeting participants should include school staff with a role in the student’s asthma care, such as:

- Parents/Guardian and Student
- School nurse
- Current teacher(s)
- Past year teacher(s)
- Food service manager
- School social worker or counselor
- Individuals expected to respond to a school health emergency
- Licensed Practical Nurse (LPN) and designated UAP
- Children’s Medical Services (CMS) nurse and/or other representative of the student’s healthcare team
- School Bus Driver*
- Bus Attendants*

*Since these meetings usually take place before or after school, bus drivers and bus attendants can be informed separately in a confidential manner when they are not with students.

The agenda topics should include the following:

- The length of time the student has been diagnosed and treated for asthma
- Student's current health status and how asthma is managed in the home
- The current medical management plan/AAP for assessment of respiratory status and medication administration
- Any special requirements or restrictions relating to nutrition or exercise
- The student's level of knowledge and skills related to the management of asthma
- Student-specific signs and symptoms of an asthma episode
- A plan for responding to an emergency related to asthma
- Accessibility of the plan for the student's care in the event of a disaster
- Expectations of the parents/guardian regarding the provision of health services to be provided by the school-based staff
- Expectations of the school staff regarding what equipment and health services must be provided by the parents/guardian
- A discussion involving all relevant factors in the selection of school staff willing and able to take on the responsibility of safely providing the health- and asthma-related services
- How and when the school nurse will train the designated UAP and other members of the school-based staff
- Student's status under IDEA or Section 504, including:
    - How the required accommodations will be provided within the student's usual school setting with as little disruption to the student's routine, and the routine at the school, as possible
        - Common accommodations might include the following:
            - Facilitating the student's participation in school-sponsored activities, including sports and field trips
            - Providing opportunities to make up missed classroom assignments due to asthma-related care or illness
            - Providing assistance with responding to respiratory distress whenever and wherever it is necessary to meet the medical plan of care

Section VI: Components of the Individualized Healthcare Plan (IHP)

The school nurse will obtain a history for the IHP and EAP based on the information received during the planning and implementation meeting. The EAP should be a component of the IHP. An AAP may be the preferred EAP, if available. The plan of care should comply with local policies and procedures and be formatted according to local standards. The school nurse should develop an EAP for use by UAP who are delegated to care for students with asthma. The IHP should contain all standard components of an IHP according to the *Scope and Standards of Practice* (ANA & NASN, 2011; & NASN, 2013). It is strongly recommended that IHPs for the student with asthma include the following components:

1. **Assessment and Diagnosis:**
   - Student-specific demographic information, including parents/guardian and health care provider contacts
   - A current photo of the student, if available
   - Authorization to carry and self-administer an asthma inhaler in accordance with s. 1002.20(3)(h), F.S., and local policies/procedures
   - Assessment data, including student's health status, risks, concerns, and strengths
   - List of any known allergies, including food or insect allergies, environmental allergens, and any previous episodes of anaphylaxis
   - Date of last visit to healthcare provider regarding asthma and asthma classification assigned to the student
   - Date of last emergency room (ER) visit or hospitalization for asthma
   - Assessment of the student's developmental level and compliance/adherence history
   - Identification of nursing diagnosis based on nursing assessment data

2. **Identify Expected Outcomes and Goals that are:**
   Consistent with the individual student's ability, skill, maturity, and development as outlined in the asthma medical plan of care and/or AAP

3. **Intervention/Implementation:**
   - Specific nursing interventions, actions, and activities related to monitoring respiratory status, administering medication, identifying an asthma emergency, and providing appropriate treatment
   - Student-specific signs and symptoms of respiratory distress and implementing the student's EAP
   - The anticipated level of independent functioning, as identified by the student's healthcare provider
   - Specific information regarding all medications as ordered by the healthcare provider, including doses and routes of administration
   - Specific information regarding the student's physical activities, including the prevention of EIB

4. **Planning (Delegation/Training)**
    - Specific information identifying personnel authorized and trained to be responsible to assist the student with asthma care during the school day
    - Information on any special accommodations that must be made during participation in school-sponsored activities, and in transit to or from school or school-sponsored activities

5. **Evaluation**
    - Measurement of effectiveness of plan in meeting outcomes
    - Adjustments/revisions to the IHP are made on an as needed basis

Section VII: Roles and Responsibilities

The well-being of a student with asthma involves a collaborative relationship among the healthcare provider, the school, and the home. The student's family and the healthcare team are responsible for the medical management and should contribute information to the IHP. The school should be responsible for assuring that persons are specifically trained to implement the plan of care. These services should be provided in the least restrictive environment (LRE), while preserving the safety of the student.

The school district, school administrators, and school nurse should be familiar with the school issues and responsibilities associated with students with asthma and assure consistent care through districtwide policies. Several national health and educational organizations have jointly issued guidance regarding students with chronic diseases. A copy of this guidance is provided in Appendix H.

School Principal

The principal should set the example for the rest of the school-based staff to create a safe environment for the student with asthma. The principal or the administrative designee should participate in Level I: Asthma Awareness Education. In some cases the principal or the administrative designee may choose to complete Level II: Student-Specific Asthma Education and Level III: Student-Specific Asthma Education for Direct Care Providers to be available to function in an emergency when the designated and trained UAP is unavailable (see Section VIII: Recommendations for Staff Education).

The principal should:

- Provide leadership for all school-based personnel to ensure that all health policies related to asthma management at school are current and implemented.
- At a minimum, participate in Level I: Asthma Awareness Education and require all school-based personnel to participate in this in-service education.
- Designate staff to participate in level II and III asthma-related training.
- Consider completing Level II and III asthma-related training to provide care for students when other trained staff is unavailable.
- Be aware of the federal and state laws governing the educational requirements for students with asthma:
    - Americans with Disabilities Act Amendments Act of 2008
    - Section 504 of the Rehabilitation Act of 1973
    - Individuals with Disabilities Education Act 2004
    - Individual Healthcare Plans and Section 504 White Paper (2012)

- Work with school nurses, other medical professionals, and parents/guardian to ensure that medication administration is safe, reliable, and effective and, to the extent possible, allows the student to self-administer medication according to Florida law.

- Collaborate with the school nurse to:
    - Select and designate UAPs to provide the student-specific services required for each student.
    - Maintain student's medical management plan/AAP. Educate appropriate staff members, including teachers, about each student's individual medical management plan/AAP.
    - Prepare an alternate plan for emergencies in case designated UAP is not available.

- Require that each designated UAP complete the necessary general and student-specific training and meet the locally designed competency requirements.
- Facilitate problem solving and negotiations among members of the school team and the student's family.
- Provide physical resources on campus to execute safely all accommodations and activities noted in the IHP and to maintain an allergen-free environment.
- Respect the student's confidentiality and right to privacy.

Registered Professional School Nurse

The school nurse functions under the scope of practice defined by Florida's Nurse Practice Act. The school nurse may be the only full-time or part-time licensed healthcare professional in the school setting. When assigned to multiple schools, the nurse should recognize the needs of students with asthma as a high priority whenever part or all of their care is delegated to an UAP. To ensure effective and safe management the school nurse should follow the Technical Assistance Guidelines on the *Role of the Professional School Nurse in the Delegation of Care in Florida Schools* (2010) to carefully plan for the health management of students with asthma with the following activities.

Assessment and Diagnosis:

- Identify students with asthma by reviewing medical records and emergency information, including questions related to asthma in the health history.
- Perform a nursing assessment on the student based on a home or school-health room visit to obtain health information (see Appendix E: Asthma Action Plan Nurse Assessment Tool).
- Assess asthma symptoms and/or use of student's metered dose inhaler (MDI) as ordered.
- Discuss situations of suspected undiagnosed or poorly controlled asthma with the student, parents/guardian and suggest referral to their healthcare provider for a proper diagnosis or a treatment update.

Expected Outcomes and Goals:

- Obtain and maintain a current knowledge base and update skills and abilities related to the medical management of asthma in the school-age population. This includes knowledge relating to the current standard of care prevalent in the community and EPR-3 Guidelines (NAEPP, 2007)

- Arrange for safe administration of medication in accordance with district policy and s. 1006.062, F.S.
- Establish an asthma resource file of pamphlets, brochures, and other publications for use by school personnel
- Provide asthma education for students with asthma to help them improve their self-management skills
- Serve as the student's advocate
- Respect the student's confidentiality and right to privacy
- Establish and maintain a working relationship with the student's parents/guardian and healthcare provider and act as a liaison between the students' authorized healthcare provider and the school
- Participate in IEP or Section 504 meetings to provide relevant health information
- Establish a process for on-going and emergency communication with the:
    - **Parents/guardian (this should include a parental notification procedure to address repair or replacement of equipment and replenishing supplies and medications)**
    - Authorized healthcare provider
    - Designated UAP
    - School staff who come into direct contact with the student

Planning (Delegation/Training):

- Organize and facilitate meetings with the student's parents/guardian and other key school staff to discuss planning and implementation of the student's IHP.
- Maintain a medical management plan/AAP for students with asthma. Include information on administering medications, monitoring asthma symptoms, reducing triggers, and responding to an asthma episode.
- Develop an IHP in cooperation with the student, the parents/guardian, the healthcare provider, and other school-based staff.
- Provide for easy access to short-acting $beta_2$-agonist (SABA) for emergency care.
- Collaborate with the principal to select and delegate the most appropriate UAP for each student with asthma.
- Train and supervise the UAP designated to perform procedures for the student with asthma.
- It is recommended that two or more back-up persons be trained in each school to ensure adequate coverage in an emergency.
- Maintain appropriate documentation of the UAP training.
- Monitor the care provided and documentation of services provided by the UAP.
- Act as a resource to the principal and other school-based personnel, providing or arranging for in-service education appropriate to their level of involvement with the student with asthma.
- Educate all staff members about asthma and its potential impact on a student's health, safety, and school performance. Within confidentiality guidelines, talk to school staff about students with asthma and their unique needs (see Section VIII: Recommendations for Staff Education).
- Provide or arrange for child-specific training of all school-based personnel who will have direct contact with the student on how to respond in an emergency.

- Support self-administration of medication when appropriate.

Evaluation

- Regularly review and update the IHP whenever there is a change in medical management/AAP or the student's response to care.
- If necessary, encourage the parents/guardian and healthcare provider to re-evaluate the student's competency level to enhance the student's independence further, or if necessary, require closer supervision until the student's knowledge and skills improve.

Unlicensed Assistive Personnel (UAP)

UAP may be designated to provide the services for the student with asthma. It may be necessary for the school nurse to train additional non-medical school staff specifically to assist students with asthma. UAP may be required to administer medication to multiple students at the same time that students with asthma also require monitoring, medication administration, or services outside the health room. Unlicensed assistive personnel should participate in Level I: Asthma Awareness Education. UAP delegated to provide direct care for students with asthma will also need Level II: Student-Specific Asthma Education and Level III: Student-Specific Asthma Education for Direct Care Providers (see Section IV: Criteria for Safe Delegation).

Teachers, Coaches, and Other School Staff

Teachers and coaches should provide a supportive learning environment and treat the student with asthma the same as any other student, while also meeting the required accommodations. Not all teachers or coaches in a school will have direct contact with the student who has asthma. If no direct contact is anticipated, the teacher, coach, or other school staff will just need to attend the Level I: Asthma Awareness Education. Teachers, coaches, and other school staff who will have direct contact with the student should:

- Be aware of which students have asthma and cooperate with the accommodations listed in the IHP, Section 504 Plan, or IEP
- Attend the Level II: Student-Specific Asthma Education and be able to recognize the signs and symptoms associated with an asthma episode
- Be aware of any student-specific emergency actions that might be necessary
- Provide the student with an opportunity to rest and use a bronchodilator when symptomatic in accordance with the student's IHP
- Ensure bronchodilator is used as directed and the recommended period of time elapses before engaging in physical activity, as indicated in the student's IHP
- Understand that accommodations may be necessary even during standardized testing periods
- Communicate with the student's parents/guardian and with the school nurse when planning a field trip or classroom activities

- Leave a clear message for any substitute regarding the special needs of the student
- Respect the student's right to confidentiality and privacy

With the parents/guardian and the student's permission, the teacher or the school nurse may educate the class about the special needs of an individual who has asthma and use this as an opportunity to educate students regarding allergen avoidance, irritants, nutrition, exercise, health, control measures and medication.

School Counselor, Social Worker, and Psychologist

The school counselors, social workers, and/or psychologists may not always have direct contact with the student, they should be aware of students in their schools with asthma and the potential impact of asthma and its treatment on the student's behavior and performance. School personnel should attend at a minimum, the Level I: Asthma Awareness Education, and be prepared to work with the school nurse to assure that the necessary accommodations are made to comply with state and federal laws. The school counselor, social worker, or school psychologist may be involved with the development of a 504 Plan or an IEP. The school counselor, social worker, or school psychologist may be called upon to assist the student with any expressed concerns regarding asthma and to identify and respond to ineffective coping mechanisms demonstrated by the student or the family. The school counselor, social worker, or school psychologist should be familiar with community resources and services available to assist the student and family.

Food and Nutrition Staff

The food service staff should work with a dietitian to develop a plan so that the student with food allergies is not served any food containing an allergen. Food service staff members should attend Levels I and II asthma in-service education to facilitate their understanding of the overall health and safety of students with asthma.

School Bus Drivers

Bus drivers will have contact with the student on field trips and at the beginning and end of the school day. The bus drivers should:

- Be aware of which students have asthma and be able to identify signs and symptoms of an asthma episode.
- Be aware of the emergency response appropriate to each student according to his/her IHP, which may allow the student to carry an inhaled bronchodilator.
- Be aware of the students' IHPs and whether they're IHPs require seating near the front of the bus to allow for closer observation.
- Communicate to the school nurse any concerns regarding the student's actions or behaviors regarding asthma management.
- Provide a secure place for transport of medication and/or equipment, if local policy allows.

- All bus drivers should participate in Level I: Asthma Awareness Education. If students who have asthma are assigned to ride their buses, bus drivers should participate in the Level II: Student-Specific Asthma Education.
- Respect the student's right to confidentiality and privacy.

Parents/Guardian

For students to receive services in the safest possible manner while in school, parents/guardian should:

- Inform the school as soon as possible when a student is newly diagnosed as having asthma or when a previously diagnosed student enrolls in a new school so that planning and training of personnel can be arranged quickly. Ideally, parents should work with the school staff **prior** to their child's admittance to ease the student's transition into the school environment.
- Provide the school with accurate and current emergency contact information;
- Provide the school with the healthcare provider's written medical orders related to the student's asthma management (this could be in the form of a prescription and/or a medical management plan/AAP).
- Participate in a care planning conference as soon as possible after diagnosis and at the start of each school year or when any change in the status of the student's diagnosis or medical management occurs.
- Provide the school nurse with any new written medical orders when there are changes in the medical management/AAP that must be implemented in school.
- Inform the school nurse if the student's asthma severity or management changes.
- Provide and transport to the school all medications, equipment, and supplies associated with the medical management of the student's asthma.
- Assume responsibility for the maintenance of all medical equipment.
- Sign appropriate written permission for authorization of treatment and sharing of necessary health-related information.
- Work with healthcare providers, their staff, and the student to promote self-care in asthma management.

Student With Asthma

To remain active and healthy, the student with asthma should learn to identify early warning signs of an asthma episode. School health policy and staff will promote and support the student toward self-care and independence in following the medical management plan/AAP designed by their healthcare provider. However, the student must also assume some of the responsibility. The following responsible actions are recommended:

- Cooperate with school personnel in implementing the IHP.
- Wear a medical identification tag or jewelry while in school if provided by parents/guardian.

- Seek adult help immediately when symptoms of an asthma episode occur and are not relieved by the use the prescribed bronchodilator.
- Follow an allergy reduction/avoidance diet according to the medical plan of care/AAP.
- Complete the initial and ongoing asthma education provided by the primary healthcare provider or the school community.
- Seek authorization from the primary healthcare provider, parent, and school nurse to function independently.
- Demonstrate competence in the use of asthma monitoring and medication administration devices (see Appendix E).
- Agree to follow the school policies and safety procedures.
- Advocate for his or her needs.

Healthcare Provider

The healthcare provider manages the medical care of the student with asthma. The healthcare provider should provide treatment information and guidance to the school nurse to use in developing the IHP. The healthcare provider should be aware of the medical needs of the student and take into consideration the resources available in the school. To ensure student health, the student's healthcare provider should:

- Provide the school nurse with the required asthma history information, signed authorization forms, and emergency information specific to the needs of the student.
- Provide specific written orders in a medical management plan/AAP, which should include steps to ensure prompt access to medications, instructions for handling asthma episodes, recommendations for long-term control medications, prevention of EIB if appropriate, and identification of those factors that make the student's asthma worse to help the student avoid exposure.
- Be available for consultation regarding student-specific questions.
- Educate the student and the parents/guardian for a partnership in asthma care (NAEPP, 2007).
- Determine the level of self-care allowed based on the student's knowledge, developmental level, and abilities.

Section VIII: Recommendations for Staff Education

Asthma Basics for Schools at http://www.nhlbi.nih.gov/health/prof/lung/asthma/basics_schools/ (NHLBI, 2008) provides presentation materials to address asthma among students with faculty and staff.

Level I: Asthma Awareness Education

This is a brief asthma in-service education program for all school-based staff. The training should include the following:

- An overview of issues related to asthma management in the school setting
- An overview of the usual medical plan of care for students with asthma
- Signs and symptoms of an asthma episode
- Common emergency actions that may be necessary
- Information regarding the local policies and standards adapted by their school district/county health department
- Information found in the IHP and the AAP

Level II: Student-Specific Asthma Education

This training is designed for all school-based staff with direct contact with a student who needs asthma care or supervision during the school day. Training should include the material from the "Level I: Asthma Awareness Education," plus:

- Student-specific information that might be found in the IHP and the AAP
- Student-specific emergency actions that may be necessary
- Knowledge related to allergies and exercise that may affect the student in the classroom or other activities
- Federal and state guidelines and the accommodations that may be required by law
- Emotional and behavioral issues
- Knowledge about PFM, oral, and inhaled medication administration, including record keeping and monitoring logs and
- Roles and responsibilities of the student, the parents, and the school-based staff

Level III: Student-Specific Asthma Education for Direct Care Providers

This level of training is essential for all UAP assigned to students requiring asthma monitoring and/or medication administration. This training must include all the information from Levels I and II along with student-specific training of skills needed to monitor and/or assist with procedures. Competence-based monitoring and supervision of all skills by the school nurse must be an ongoing process (see Appendix E). The skills may include, but not be limited to, the administration of inhaled medication by MDI, DPI, nebulizers and/or chambers, and the use of peak flow meter (PFM).

Section IX: Disaster Preparedness

Each school district and county health department should have disaster plans in place to address the broad scope of potential disasters that might impact a school and the students, staff, and visitors. School administrators or their designees should review those plans to ensure that the unique requirements of students with asthma are covered by those plans. If a school nurse is not available during a disaster, the UAP who has been trained to follow the students' IHP should administer care.

The type of disaster may also affect students with asthma. Disasters that result in high dust particulates, smoke or fumes will adversely affect these students. Every effort should be made to remove the students with asthma safely, and/or make sure that an emergency plan is in place for communication measures for 72 hours as telephones, cell phones, and computers may not operate in an emergency.

In the event of sheltering or evacuation, advanced planning is of particular importance to facilitate access to medications, especially for those students classified with moderate to severe and/or poorly controlled asthma (e.g., those taking oral systemic corticosteroids). School nurses should also participate in disaster preparedness education and training in schools to assist staff in understanding the special aspects of preparation necessary to protect the health of students with asthma as outlined in the position statement, *Emergency Preparedness: The Role of the School Nurse* (2011b).

Appendices

Appendix A

Glossary

Glossary

Accommodations: Adjustments or modifications made by teachers and other school staff members to enable students with disabilities to have access to education.

Allergens: Substances triggering an allergic reaction that may cause asthma attacks.

Allergic asthma: A type of asthma in which an allergic trigger can lead to asthma attacks and symptoms. This type of asthma is confirmed by a skin or blood test.

Asthmatic episode: A reaction in the lungs in response to an asthma trigger in which the linings of the airways swell and produce more mucus, and the muscles lining the airways tighten making it more difficult to breathe.

Asthma Medical Management/Action Plan: Plan of medical care written by the physician in cooperation with the parent. A copy of the plan is provided to the school nurse by the parents/physician and placed in the school health record. This plan is used in the development of the student Individualized Healthcare Plan (IHP).

Asthma trigger: Substances or situations that cause an asthma episode or worsening of day-to-day asthma symptoms.

Broken speech: Inability to speak a word or short sentence without taking one or more breaths between the words.

Bronchodilator: A quick-relief medication used to relieve asthma symptoms.

Chamber: See Spacer.

Compressor: A machine used to push air through a nebulizer breaking the medicine into tiny drops of mist that blow from the nebulizer to administer asthma medicine.

Delegation: The transference to a competent individual the authority to perform a selected task or activity in a selected situation by a nurse qualified by licensure and experience to perform the task or activity (Chapter 64B9-14, F.A.C.).

Emergency Action Plan (EAP): An EAP is a child-specific action plan to facilitate quick and appropriate responses for an individual emergency in the school setting. The EAP is also known as the Emergency Care Plan (ECP) and may be a component of the Individualized Healthcare Plan (IHP) that is developed consistent with sections 1002.20(3)(h) and 1006.062(4), F.S. The EAP shall specify when the emergency number (911) will be called and describe a plan of action when the student is unable to self-administer medication or self-manage treatment as prescribed.

Emergency room (ER): Could also be called Emergency Department or Urgent Care facilities.

Exercise induced bronchospasm (EIB): Exercise-induced bronchospasm generally begins during exercise and reaches its peak in 5 to 10 minutes. Symptoms often spontaneously resolve in another 20 to 30 minutes after stopping. For most, exercise-induced bronchospasm should not limit participation or success in vigorous activities.

Immunoglobulin E (IgE): A naturally occurring substance in the body that, in some people, can cause a series of chemical reactions that may lead to asthma attacks and symptoms.

Inflammation: Swelling inside the airways in response to exposure to an asthma trigger.

Dry powder inhaler (DPI): A device for delivering asthma medication in which the medication is delivered in a powder form.

Exceptional student education (ESE): Specially designed instruction and related services that are provided to meet the unique needs of students who meet exceptional student education eligibility criteria. Related services include school health services and school nurse services, social work services in schools, and parent counseling and training (34 Code of Federal Regulations [CFR] § 300.34).

Individual educational plan (IEP): The IEP is an IDEA term for ESE. It means a written document for each student with a disability that is developed, reviewed, and revised in accordance with state and federal guidelines governing the education of exceptional education students.

Individualized Healthcare Plan (IHP or IHCP): The IHP is developed from the Asthma Medical Management/Action Plan by a registered nurse in collaboration with the family, student, student's health care providers, and school personnel for the management of asthma while in school, participating in school-sponsored activities, and in transit to or from school or school-sponsored activities. The IHP is child-specific and includes a written format for nursing assessment (health status, risks, concerns, and strengths), nursing diagnoses, interventions, delegation, training, expected outcomes, and goals to meet the health care needs of a student with asthma. Sometimes referred to as an IHCP or a nursing care plan.

Integrated pest management (IPM): The coordinated use of pest and environmental information with available pest control methods to prevent unacceptable levels of pest damage by the most economical means, and with the least possible hazard to people, property, and the environment.

Healthcare provider: A licensed health care professional in Florida responsible for the medical management of the student with asthma.

Least restrictive environment (LRE): To the maximum extent appropriate, children with disabilities are educated with children who are nondisabled.

Local education agency (LEA): The local county school district.

Long-term control medications or preventers: Medications that are taken on a daily basis to achieve and maintain control of persistent asthma.

Metered-dose inhaler (MDI): A device for delivering asthma medication in which the medication is delivered as a pre-measured aerosol.

NAEPP: National Asthma Education and Prevention Program (See asthma materials for schools at http://www.nhlbi.nih.gov/health/prof/lung/index.htm#asthma).

NASN: National Association of School Nurses (See Position Papers and Reports at http://www.nasn.org/Default.aspx?tabid=61).

Nebulizer: A compressor driven device used to deliver asthma medicine as a mist (aerosol) that can be breathed directly into the lungs where it is needed. These devices will come with a mouthpiece for inhaling the medicine, but a mask can be supplied for small children.

Nursing Care Plan: See Individualized Healthcare Plan (IHP).

Peak flow meter (PFM): A small, portable, hand-held device that measures airflow out of the lungs. The peak flow reading may decrease before symptoms of asthma begin.

Persistent asthma, (moderate to severe): Includes one or more of the following: daily need for a rescue inhaler, two or more asthma attacks a week, waking up one or more nights a week with asthma symptoms, and/or a below-normal peak flow meter reading (less than 80 percent).

Quick relief medication: Medication used to treat asthma episodes and exacerbations (attacks).

Related services: Related services may include school health services and school nurse services, social work services in schools, and parent counseling and training (Rule 6A-6.03411, F.A.C.).

School Nurse: A professional nurse, registered and licensed to practice in Florida, who is employed by the county health department, local school district, or contracted by the county health department or local school district from a community-based agency. The school nurse may be assigned to one or more schools. This nurse provides leadership and services consistent with the Nurse Practice Act (Chapter 464, F.S.) and the School Health Services Program (s. 381.0056, F.S.).

Section 504 (§ 504): Section 504 is a federal law designed to protect the rights of students with disabilities in programs and activities that receive federal financial assistance from the U.S. Department of Education. The Section 504 Plan consists of accommodations that are designed to meet the student's individual needs (See 504 FAQ at http://www2.ed.gov/about/offices/list/ocr/504faq.html).

Student Asthma Action Plan: The Expert Panel (NAEPP, 2007) recommends that health care providers either encourage parents to take a copy of the written asthma action plan to the school or obtain parental permission and send a copy to the school nurse or designee.

Spacer: A device used to improve delivery of aerosol medications from a metered dose inhaler. This device acts to slow the force of the medication so there is less deposited in the mouth and throat. Spacers with a valve also make the use of a metered dose inhaler easier for young students who have difficulty coordinating the steps of pressing down on the inhaler with the intake of breath. This is also referred to as a *chamber* (see Appendix D).

Supervision: The provision of guidance by a qualified nurse and periodic monitoring inspection by the nurse for the accomplishment of a nursing task or activity provided by unlicensed assistive personnel. The nurse must be qualified and legally entitled to perform such task or activity.

> **Direct supervision** means the supervisor is on the premises but not necessarily immediately, physically present where the tasks and activities are being performed.
>
> **Indirect supervision** means the supervisor is not on the premises, but is accessible by two-way communication, is able to respond to an inquiry when made, and is readily available for consultation (Chapter 64B9-14, F.A.C.).

Unlicensed assistive personnel (UAP): Chapter 64B9-14.001, F.A.C., defines "unlicensed assistive personnel" (UAP) as persons who do not hold licensure from the Florida Department of Health but who have been assigned to function in an assistive role under the supervision of a registered nurse. UAPs are trained and delegated (required under s. 1006.062, F.S.) to perform health-related services for students while they are in school. The UAP may be any school employee, including, but not limited to, teacher, secretary, bus driver, bus attendant, or aide, who meets the above listed requirements and has willingly agreed to provide the delegated services within all locally established policies and guidelines. UAPs may also be referred to as non-medical assistive personnel as listed in s. 1006.062, F.S.

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Appendix B

Protocols

1. School Asthma Management Protocol[3]
2. Childhood Asthma Control Test.[4]
3. Management of Asthma Exacerbations: School Treatment[5]

[3] Developed by the Pediatric Pulmonary Center at the University of Florida (2013e). Reprinted by permission of University of Florida, Pediatric Pulmonary Center.
[4] Source:GlaxoSmithKline, Copyright 2002, by QualityMetric Incorporated.
[5] Source: National Heart, Lung, and Blood Institute; National Institutes of Health; U.S. Department of Health and Human Services.

School Asthma Management Protocol

1. **Collect baseline information for identified students with asthma:**

   - Complete Student Asthma Action Plan and Authorization for Medication
   - Determine student's ability to self-administer quick-relief medication

2. **Alert teacher(s) to information pertinent to classroom:**

   - Triggers
   - Severity of asthma
   - Availability of bronchodilator
   - Other pertinent information gathered from student/parent

3. **Alert physical education teacher if child is reported to have exercise-induced asthma so child is encouraged to use inhaler prior to physical education class and to warm up before exertion**

   - Physical education teacher should be aware that child should stop and rest if symptoms occur with activity
   - Inhaler may be used a second time if respiratory difficulty occurs during activity
   - If inhaler is not effective in relieving shortness of breath, the child should be sent to the health room for management

4. **When student presents to health room in respiratory distress:**

   - Assess difficulty breathing (the extent of this assessment will depend upon the level of training of the school health personnel)

     - Auscultate chest for:
       - Wheeze: expiratory/inspiratory
       - Air movement
       - Cough
     - Ability to talk (broken speech)
     - Evidence of shortness of breath
     - Respiratory rate
     - Retractions
     - Posture changes
     - Exercise tolerance
     - Color of skin
     - Find out whether student has already taken a dose of bronchodilator
       - When?
       - Did it help?

   - Administer bronchodilator, such as albuterol (Proventil and Ventolin), Xopenex, or Atrovent
   - Discuss potential triggers of this asthma episode
   - Wait 10 minutes and reassess difficulty breathing:

- If breathing is normal with no symptoms of shortness of breath (SOB), wheezing, and/or coughing, send the student back to class with instructions to return to the health room if symptoms come back.
- If breathing is still restricted, call parents.
- If child returns to health room with breathing difficulty in less than four hours, reassess and call parents unless condition is as described below indicating need to call 911. In either case, stay with the child, and if condition worsens, repeat bronchodilator and call 911 if you have not already done so.

- Nursing Guidelines: – Call 911 if:

  - Decreased air movement on auscultation after medication
  - Nasal flaring
  - Shallow rapid respirations, unable to talk
  - Tightening of neck and chest muscles with each inhalation
  - Absence of wheezing with severe retractions and prolonged expirations
  - Retractions
  - Unable to talk due to SOB
  - Blue or gray color to lips or nail beds
  - Mental changes such as decreased alertness, disorientation

- Guidelines for unlicensed assistive personnel: – Call 911 if:

  - Talking in broken sentences due to SOB
  - Not mentally alert as evidenced by difficulty concentrating or appearing confused
  - Using neck, rib, or stomach muscles to breathe
  - Pale or blue in color around lips or fingernails
  - Having obvious difficulty breathing

Remember: when airways get very tight, wheezing often goes away because the child cannot breathe with enough force to cause a wheeze.

Childhood Asthma Control Test for children 4 to 11 years old. Know the score.

This test will provide a score that may help your doctor determine if your child's asthma treatment plan is working or if it might be time for a change.

How to take the Childhood Asthma Control Test

Step 1 Let your child respond to **the first four questions (1 to 4).** If your child needs help reading or understanding the question, you may help, but let your child select the response. Complete the remaining **three questions (5 to 7)** on your own and without letting your child's response influence your answers. There are no right or wrong answers.

Step 2 Write the number of each answer in the score box provided.

Step 3 Add up each score box for the total.

Step 4 Take the test to the doctor to talk about your child's total score.

19 or less If your child's score is 19 or less, it may be a sign that your child's asthma is not controlled as well as it could be. No matter what the score, bring this test to your doctor to talk about your child's results.

Have your child complete these questions.

SCORE

1. How is your asthma today?

0	1	2	3
Very bad	Bad	Good	Very good

2. How much of a problem is your asthma when you run, exercise or play sports?

0	1	2	3
It's a big problem, I can't do what I want to do.	It's a problem and I don't like it.	It's a little problem but it's okay.	It's not a problem.

3. Do you cough because of your asthma?

0	1	2	3
Yes, all of the time.	Yes, most of the time.	Yes, some of the time.	No, none of the time.

4. Do you wake up during the night because of your asthma?

0	1	2	3
Yes, all of the time.	Yes, most of the time.	Yes, some of the time.	No, none of the time.

Please complete the following questions on your own.

5. During the last 4 weeks, on average, how many days per month did your child have any daytime asthma symptoms?

5	4	3	2	1	0
Not at all	1-3 days/mo	4-10 days/mo	11-18 days/mo	19-24 days/mo	Everyday

6. During the last 4 weeks, on average, how many days per month did your child wheeze during the day because of asthma?

5	4	3	2	1	0
Not at all	1-3 days/mo	4-10 days/mo	11-18 days/mo	19-24 days/mo	Everyday

7. During the last 4 weeks, on average, how many days per month did your child wake up during the night because of asthma?

5	4	3	2	1	0
Not at all	1-3 days/mo	4-10 days/mo	11-18 days/mo	19-24 days/mo	Everyday

TOTAL

Please turn this page over to see what your child's total score means.

Asthma Control Test™ for teens 12 years and older. Know the score.

If your teen is 12 years or older have him take the test now and discuss the results with your doctor

Step 1 Write the number of each answer in the score box provided.

Step 2 Add up each score box for the total.

Step 3 Take the test to the doctor to talk about your child's total score.

1. In the past **4 weeks**, how much of the time did your **asthma** keep you from getting as much done at work, school or at home?

All of the time	1	Most of the time	2	Some of the time	3	A little of the time	4	None of the time	5

2. During the past **4 weeks**, how often have you had shortness of breath?

More than once a day	1	Once a day	2	3 to 6 times a week	3	Once or twice a week	4	Not at all	5

3. During the past **4 weeks**, how often did your **asthma** symptoms (wheezing, coughing, shortness of breath, chest tightness, or pain) wake you up at night or earlier than usual in the morning?

4 or more nights a week	1	2 or 3 nights a week	2	Once a week	3	Once or twice	4	Not at all	5

4. During the past **4 weeks**, how often have you used your rescue inhaler or nebulizer medication (such as albuterol)?

3 or more times per day	1	1 or 2 times per day	2	2 or 3 times per week	3	Once a week or less	4	Not at all	5

5. How would you rate your **asthma** control during the past **4 weeks**?

Not controlled at all	1	Poorly controlled	2	Somewhat controlled	3	Well controlled	4	Completely controlled	5

Total

AMERICAN LUNG ASSOCIATION®

The American Lung Association supports the Asthma Control Test and wants everyone 12 years of age and older with asthma to take it.

What does it mean if my child scores 19 or less?

- If your child's score is 19 or less, it may be a sign that your child's asthma is not under control.
- Make an appointment to discuss your child's asthma score with their doctor. Ask if you should change your child's asthma treatment plan.
- Ask your child's doctor about daily long-term medications that can help control airway inflammation and constriction, the two main causes of asthma symptoms. Many children may need to treat both of these on a daily basis for the best asthma control.

Steps to Follow for an Asthma Episode in the School Setting When a Nurse is Not Available

Be prepared. Know which students have asthma and where their medicine is kept.

Be alert for students who may have asthma symptoms. Symptoms can become progressively worse and lead to severe, even life-threatening asthma attacks. Treating symptoms promptly can prevent this and allow the student to resume school activities.

Common symptoms of an asthma episode include one or more of these things: Coughing, wheezing (which can sound like noisy breathing or whistling in the chest), difficulty or discomfort when breathing, tightness in the chest (a sensation of heavy weight on the chest or chest pain), shortness of breath, and breathing hard and/or fast.

If a student has asthma symptoms or complaints and needs your assistance,* take these steps.

- **Quickly evaluate** the situation. **Call 911** if the student is **struggling to breathe, talk, stay awake, has blue lips, or asks for an ambulance.**
- **NEVER LEAVE A STUDENT ALONE.** Have an adult accompany the student to the health room or send for help from a school nurse or designee. **Do not wait.**
- **Stop the student's activity.** If the episode began after exposure to an allergen or irritant,** remove the student from the allergen or irritant, if possible. Help the student be calm and in a comfortable position.
- **Help the student locate and take his/her prescribed quick-relief inhaler medicine.**
- **Contact the parent/guardian.**
- **Repeat quick-relief inhaler medicine in 20 minutes** if student is still having trouble breathing.

Call 911 if any of the following occur:

- If the student is **struggling to breathe, talk, stay awake, has blue lips, or asks for an ambulance.**
- If the **student doesn't improve** after two administrations of quick-relief medicine, and nurse/designee or parent/guardian is not available.
- If no quick-relief medicine is available, **the student's symptoms have not improved** spontaneously, and nurse/designee or parent/guardian is not available.
- If you are unsure what to do.

Remember:

* Many students who carry their own medicine may be able to self-manage asthma episodes. They should follow the school protocol. Provide support as needed.

** Common asthma allergens and irritants include tobacco smoke, pollens, furry animals, cockroach droppings, dust mites, chalk dust, or strong odors (for example, from cleaning products, paints, or perfume).

Appendix C

Asthma Medications[6]

1. Long-Term Control
2. Quick-Relief

Note: Medications for asthma are categorized into two general classes: long-term controller medications used to achieve and maintain control of persistent asthma and quick-relief medications used to treat acute symptoms and exacerbations.

[6] Written by Ashley Lockwood, PharmD Candidate and Leslie Hendeles, PharmD, Professor at the University of Florida (2013). Reprinted by permission of University of Florida, Ashley Lockwood, PharmD Candidate and Leslie Hendeles, PharmD, Professor.

Long-Term Control Medications

Long-term control medications are used on a daily basis to prevent symptoms. They are typically referred to as Preventers (controllers) and are used even when the child is symptom-free. They are usually given one to two times a day at home.

Inhaled Corticosteroids

How do they work?

Inhaled corticosteroids prevent asthma symptoms by decreasing inflammation in the lungs (swelling and redness).

Are there any side effects?

These medications can cause a dose-dependent slowing of growth (on average 0.5" total). They rarely cause thrush, which is an overgrowth of fungus in the mouth. They can increase the risk of dental caries. This can be prevented by rinsing the mouth and spitting the water out after each use.

What are important things to know about this medication?

These medications are used to maintain control and prevent asthma attacks. They should be taken everyday exactly as the doctor ordered whether student thinks he/she needs them or not. They SHOULD NOT be used to treat students when they are having an asthma attack. In that instance, a quick-relief medicine is needed.

Generic name	Brand name	Dosage Form /Dose*	Directions	Onset
Beclomethasone dipropionate	Qvar	40mcg/puff	2 actuations twice a day	3 days
		80 mcg/puff	2 actuations twice a day	
Budesonide	Pulmicort Flexhaler	DPI: 180 mcg/puff 90 mcg/puff	1-2 actuations twice a day	3 days
	Pulmicort (Nebulizer)	Neb: 0.25 mg/vial 0.5 mg/vial 1 mg/vial	1 vial 1-2 times nebulized a day	
Mometasone	Asmanex Twisthaler	110 mcg/puff 220 mcg/puff	1 actuation in the PM or 2 actuations in the AM	1 - 2 weeks
Fluticasone propionate	Flovent	MDI: 44mcg/puff 110mcg/puff 220mcg/puff	2 puffs twice a day	1 - 4 days
		DPI: 50mcg/puff 100mcg/puff 250mcg/puff	1 puff twice a day	
Fluticasone/ Salmeterol	Advair	DPI: 100mcg/50mcg 250mcg/50mcg 500mcg/50mcg	1 actuation twice a day	1 – 4 days
		MDI: 45-21mcg/puff 115-21mcg/puff 230-21mcg/puff	2 puffs twice a day	
Budesonide/ Formoterol	Symbicort	MDI: 80-4.5mcg/puff 160-4.5mcg/puff	2 puffs twice a day	1-4 days
Mometasone/ Formoterol	Dulera	MDI: 100-5mcg/puff 200-5mcg/puff	2 puffs twice a day	1-4 days

Leukotriene Modifiers

How do they work?

Leukotriene modifiers block chemicals in the body that make airways smaller (constrict)

Are there any side effects?

Rarely headache

What are important things to know about this medication?

These medications are used only to maintain control and to prevent exacerbations from occurring. They SHOULD NOT be used to treat students when they are having an asthma attack. In that instance, a quick-acting medicine is needed.

Generic name	Brand name	Dosage Form	Dose	Side effects
Montelukast	Singulair (insurance will cover generic)	Granules: 4mg Chewable tablet: 4, 5mg Tablet: 10mg 2-5 yrs old = 4 mg 6-14 yrs old = 5 mg >14 yrs old = 10 mg	1 tablet at bedtime	Rare

Immunoglobulin E blocker (IgE blocker)

How do they work?

Xolair acts early in the allergic-inflammatory process in people with allergic asthma by helping to block IgE from causing the reactions that can lead to asthma attacks and symptoms.

Are there any side effects?

Possible side effects are local pain, redness at injection site, and rarely anaphylaxis.

What are important things to know about these medications?

Used for children age 12 or older with documented allergies, elevated IgE, and whose asthma cannot be controlled with other long-term medications.
Not effective against acute bronchospasm and does not, therefore, replace the need for inhaled bronchodilators.

Generic name	Brand name	Dosage Form	Dose
Omalizumab	Xolair	Injection at physician's office	1-2 times per month based on weight and IgE level

Quick-Relief Asthma Medications

Quick-relief asthma medications work quickly to relieve symptoms when students with asthma are coughing, wheezing, have chest tightness, or are short-of-breath. These medications should only be taken when the student is experiencing symptoms.

Anticholinergics (not first-line but sometimes prescribed)

How do they work?

Anticholinergics work by helping to keep airways open (bronchodilator).

Are there any side effects?

Dry mouth is a side effect of anticholinergics.

What are important things to know about these medications?

They work slowly to relieve symptoms.
Anticholinergics should always be taken using a spacer or placing mouthpiece directly in the mouth. They can cause blurring of vision if accidentally sprayed into the eyes.

Generic name	Brand name	Dosage Form/Dose	Directions	Onset
Ipratropium Bromide	Atrovent HFA	MDI: 17mcg/puff	2 puffs every 6 hours as needed	30 minutes
		Nebulizer: 0.20 mg/mL (0.02% unit dose)	1 vial every 6-8 hours	
Combination Product				
Ipratropium Bromide/ Albuterol	Combivent (Respimat)	MDI: 103-18mcg/puff	4-8 puffs every 20 minutes as needed, up to 3 hours	Rapid
	DuoNeb	Nebulizer: 3mg-0.5mg/vial	One-half vial every 20 minutes for 3 doses, then as needed	

Oral Corticosteroids

How do they work?

Oral corticosteroids decrease asthma symptoms that are unresponsive to bronchodilators thus decreasing inflammation and increase response to inhaled beta $_2$ agonist.

Are there any side effects?

Side effects include increased appetite, weight gain, acne, psychiatric reactions, dizziness, and difficulty sleeping.
May cause growth suppression and other adverse effects if taken daily for more than two (2) weeks.

What are important things to know about these medications?

These medications are used when asthma is not responding completely to the inhaled beta$_2$-agonist.

Generic name	Brand name	Dosage Form /Dose	Directions	Onset
Dexamethasone	Decadron	Crushed tablet : 0.75 mg	0.6 mg/kg on 2 consecutive days	1-2 hours
Methylprednisolone	Medrol	Tablet: 2, 4, 6, 8, 16, 32 mg	1-2mg/kg/day Divided BID	1-2 hours
Prednisolone sodium phosphate	Orapred (ODT)	Tablet: 20 mg Oral Disintegrating Tablet: 10, 15, 30 mg	1-2mg/kg/day Divided BID	4 hrs
	Generic	Solution: 15 mg/ 5 ml		
Prednisone	Generic only	Tablet: 1, 2.5, 5, 10, 20, mg	1.1.1.1. 1-2mg/kg/day Divided BID	4 hrs

Short-acting, inhaled Beta$_2$-agonists

How do they work?

Beta$_2$-agonists work by helping to open airways quickly and keep them open.

Are there any side effects?

Side effects are fast heartbeat, nervousness, headache, muscle tremors (jitters).

What are important things to know about this medication?

They should be used in addition to a long-term control medicine (usually taken at home) for children with persistent asthma.
These medications can be used before exercise to prevent symptoms if the student always has symptoms during exercise.
Proper technique is critical.
During an emergency, use of a spacer is recommended for MDI.
For severe attacks, physicians may suggest using two to four times the usual dose.

Generic name	Brand name	Dosage Form/Dose	Directions	Onset
Albuterol	Proventil – HFA	Nebulizer 2.5 mg/ 3 mL 0.083% (unit dose)	1 vial every 4-6 hours as needed	Rapid
	Ventolin – HFA Proair – HFA	MDI: 90 mcg/puff	2-4 puffs q 4-6 hours as needed 2 puffs, 15 minutes before exercise	
Levalbuterol	Xopenex	Nebulizer: 0.31 mg/vial 0.63 mg/vial 1.25 mg/vial	1 vial every 1-4 hours as needed	Rapid
	Xopenex HFA	HFA: 45 mcg/puff	2-4 puffs q 4-6 hours as needed	
Pirbuterol	Maxair Autohaler	MDI: 200 mcg/puff	2-4 puffs q 4-6 hours as needed	Rapid

Appendix D

Medication Administration[7]

1. How to use a Chamber with a Mask for Metered Dose Inhalers
2. Compressors and Nebulizers
3. Metered Dose Inhalers
4. How to use an Aero Chamber with a mouth piece for Metered-Dose Inhalers

[7] Developed by the Pediatric Pulmonary Center at the University of Florida (2013). Reprinted with permission.

How to Use a Chamber with Mask

for Metered Dose Inhalers

The AeroChamber Plus Flow-Vu® with Comfort Seal Mask is an anti-static holding device that is used to give medication from a metered dose inhaler (MDI) to young children who cannot coordinate their breathing well enough to use an MDI alone.

How to use a chamber with mask:

1. Shake the MDI.
2. Attach the MDI to the chamber (see picture).
3. Place the mask firmly over the child's mouth and nose.
4. Press down on the MDI canister to put one puff of the medication into the chamber.
5. Hold the mask in place until the child has taken six breaths. The flow indicator should flip open six times.
6. Repeat steps 1-5 until the prescribed number of puffs have been given. Never give more than one puff at a time.

If your child struggles when using the device, try to keep the mask in place. Most children will get used to it. Your child will get some medication into his lungs even if he cries. If the indicator flips open, the drug has been inhaled. You may also try giving the medication while your child is sleeping.

Please call us if you have any questions about how to use your chamber.

University of Florida
Pediatric Pulmonary Division
352-273-8380 M-F 8am-5pm
352-265-0111 after hours

How to take care of the chamber:

Wash the chamber weekly with warm soapy water. Rinse and let it air dry. Clean the mask with rubbing alcohol. Replace the chamber once a year (or sooner if damaged).

Note: only the AeroChamber® brand is covered by Florida Medicaid. Do not allow the pharmacy to substitute the optichamber brand. It delivers less drug to the lungs.

Compressors and Nebulizers [8]

Compressors are the machines used to push air through the nebulizer to break the medicine into tiny drops of mist that blow from the nebulizer. They pull in air from the room through a filter that must be either cleaned or replaced regularly. Parents should provide a copy of the manufacturer's instructions and review them with the school nurse.

Nebulizers are devices used to deliver medicine as a mist (aerosol) that can be breathed directly into the lungs where it is needed. These medicines include bronchodilators such as Albuterol or inhaled steroids. These devices will come with a mouthpiece for inhaling the medicine, but a mask can be supplied for small children. A mask is much more effective than just blowing the medicine in the child's face. There are two basic types of nebulizers:

Disposable: These nebulizers are meant to be thrown away after 30 uses. There are many brands of disposable nebulizers.

Reusable: These nebulizers are meant to be used for six months of daily use and 12 months of less regular use before being replaced. Reusable brands of nebulizers would include the ParlLC Plus®, Pari Star®, or the Invacare®.

Steps for using a nebulizer

1. Twist the top off the medicine cup, add medicine, and replace the top.
2. Attach one end of the tubing to the nebulizer cup and the other end to the compressor.
3. Hold nebulizer upright and place the mouthpiece in the mouth or mask over the mouth and nose.
4. Turn on the compressor power switch.
5. The student should breathe normally through the mouth.
6. Every minute or so, take a deep, slow breath to bring medicine farther into the lungs.
7. When the nebulizer begins to "sputter," tap the sides of the medicine cup to bring unused medicine back to the bottom.
8. When the mist stops, the treatment is complete.
9. Remove the tubing from the nebulizer but do not wash. Condensation may be dried with air from the compressor after the medicine cup is removed
10. Take apart the nebulizer remove the cap, the mouthpiece, or mask, and the piece that is inside the cup.
11. Rinse each part with warm water and set on a towel to dry. DO NOT STORE UNTIL DRY.
12. Used equipment should be disinfected* on the day it is used. Remove, rinse, set out on a towel to dry, and cover with a second dry towel while it air dries. DO NOT WASH TUBING.

* Disinfection options

a. Soak in a solution of one part household bleach and 50 parts water for three minutes
b. Soak in 70 percent isopropyl alcohol for five minutes
c. Soak in 3 percent hydrogen peroxide for 30 minutes

[8]Developed by the Pediatric Pulmonary Center at the University of Florida (2013)

Metered Dose Inhalers

A metered dose inhaler (MDI) is a device that delivers a mist of medicine that can be breathed directly into the lungs. Medicines given this way work faster and with fewer side effects.

How an MDI works

The medicine is held under pressure in a canister that fits inside a plastic device. When you press the canister down in its plastic case, the medicine puffs out in a measured dose. The MDI has to be triggered at the exact moment that you start to breathe in through your mouth. It comes out fast. If the timing isn't just right, the medicine doesn't make it into the lungs.

Medicines that come in MDIs:

Bronchodilators (like albuterol): These are reliever medicines that are used only to relieve symptoms of asthma like cough, wheeze or difficulty breathing. They should not be used unless there are symptoms of asthma present.

Inhaled steroids (like Flovent®, Qvar®, Symbicort ® or Advair®): These are prevention medicines that are used to prevent asthma episodes by decreasing the inflammation and swelling in the airways. They should be taken every day as directed by a doctor.

Before you use an inhaler:

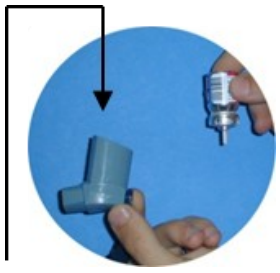
"Prime" your inhaler by squirting 4 puffs into the air before inhaling if it is a new inhaler, or it has been two weeks or more since last use,

*The HFA in the inhaler causes the opening to clog.

How to use an MDI

1. Remove the cap from the inhaler.
2. Shake the inhaler.
3. Breathe out as much air as you can.
4. Put the mouthpiece of the inhaler into your mouth (keep your tongue under the inhaler) and close your lips tight.
5. Trigger the inhaler at the very beginning of a long, slow, deep breath. The inhaler triggers when you press the canister down into the plastic holder.
6. Hold your breath for 10 seconds or to the count of 10.
7. If you are using a bronchodilator, wait 1-2 minutes between puffs.
8. Repeat until you have taken the prescribed number of puffs.

Clean the plastic holder once a week by removing the canister from the holder and running warm water through it for 30 seconds. Twist the canister back into place after the holder has air dried.



Please call us if you have any questions about how to use your inhaler.

University of Florida
Pediatric Pulmonary Division
352-273-8380 M-F 8am-5pm
352-265-0111 after hours

How to Use an AeroChamber with Mouthpiece

The AeroChamber Plus Flow-Vu® is an anti-static holding device that is used to give medication from a metered dose inhaler (MDI) to children who cannot coordinate their breathing well enough to use an MDI alone.

How to use an AeroChamber®:

1. Shake the MDI.
2. Attach the MDI to the chamber (see picture).
3. Place the mouthpiece in the child's mouth.
4. Have the child take a long, slow breath in. Hold for a count of 10.
5. Repeat steps 1-5 until the prescribed number of puffs have been given. Never give more than one puff at a time.

If needed, hold the child's nose to be sure she is breathing through her mouth. Watch the flow indicator flap to see that the drug is breathed in.

How to take care of the chamber:

Wash the chamber weekly with warm soapy water. Rinse and let it air dry. Replace the chamber once a year (or if damaged).

Equivalent anti-static chambers:

Vortex®

Aerochamber Z-stat

Please call us if you have any questions about how to use your chamber.

University of Florida
Pediatric Pulmonary Division
352-273-8380 M-F 8am-5pm
352-265-0111 after hours

Appendix E

Checklists and Forms

1. Sample Asthma Action Plans
   - Asthma Health Care Action Plan and Authorization for Medication
   - American Lung Association Asthma Action Plan (English)[9]
   - American Lung Association Asthma Action Plan (Spanish)
   - California Asthma Action Plan (English)[10]
   - California Asthma Action Plan (Spanish)
   - Maryland Asthma Action Plan
   - National Heart, Lung, and Blood Institute (NHLBI) Asthma Action Plan[11]
   - Virginia Asthma Action Plan
   - Sample Asthma Health Care Plan
2. Asthma Action Plan Nurse Assessment Tool[11]
3. Asthma Delegation Check List
4. Skills Checklist for Delegation to UAP

[9] American Lung Association Action Plan (English/Spanish), (Rev_July 2008). Reprint permission requested.
[10] California Asthma Action Plan (English/Spanish). Reprinted with permission.
[11] Source: National Heart, Lung, and Blood Institute; National Institutes of Health; U.S. Department of Health and Human Services.

ASTHMA HEALTH CARE ACTION PLAN & AUTHORIZATION FOR MEDICATION

TO BE COMPLETED BY PARENT: **SCHOOL DIVISION NAME:** _____

Child's Name _____ Date of Birth _____ School _____ Grade _____

Parent/Caregiver _____ Phone (H) _____ Phone (W) _____ Phone (Cell) _____

Address _____ City _____ Zip _____

Emergency Contact _____ Relationship _____ Phone _____

Name of Provider (Physician/Nurse Practitioner/Physician's Assistant) _____ Office Phone (___) _____
Office Fax (___) _____

What triggers your child's asthma attack? (Check all that apply)

☐ Illness ☐ Cigarette or other smoke Food_____
☐ Emotions ☐ Exercise/physical activity Allergies: ☐ Cat ☐ Dog ☐ Dust ☐ Mold ☐ Pollen
☐ Weather changes ☐ Chemical odors Other: _____

Describe the symptoms your child experiences before or during an asthma episode: (Check all that apply)

☐ Cough ☐ Tightness in chest ☐ Rubbing chin/neck
☐ Shortness of breath ☐ Breathing hard/fast ☐ Feeling tired/weak
☐ Wheezing ☐ Runny nose ☐ Other _____

TO BE COMPLETED BY HEALTH CARE PROVIDER:
The child's asthma is: ☐**Intermittent** ☐**Mild Persistent** ☐**Moderate Persistent** ☐**Severe Persistent** ☐ **Exercise-induced**

SYMPTOMS &/OR	**Peak Flow Monitoring**	**Treatment**		
WELL • Usual medications control asthma • No cough or wheeze • Able to sleep through the night • No rescue meds needed • No activity restrictions (PE & recess are okay)	**GREEN ZONE** **Personal Best =** _____ _____ to _____	**Medication**	**How Much**	**When**
		Relievers/Rescue		
		☐Albuterol (with spacer) or nebulizer	☐2 puffs 1 min. apart (or 1 nebulizer treatment) every 4-6 hrs. as needed	☐ **2 puffs or 1 nebulizer treatment 5-15 min. before physical activity**
		☐ **Other**		
		Controllers		
		☐ Inhaled Corticosteroid		
		☐ Advair		
		☐ Symbicort		
		☐ Other _____		
		Leukotriene Modifier: ☐ Singulair		
		☐Other _____		
		Other _____		
SICK • Needs reliever medications more often • Increased asthma symptoms (shortness of breath, cough, chest pain • Wakes at night due to asthma • Unable to do usual activities	**YELLOW ZONE** _____ to _____	1. ☐ Continue daily controller medications 2. ☐ Give albuterol 2-6 puffs (1 min between puffs) with spacer or 1 nebulizer treatment, wait 20 min 3. ☐ If no improvement, repeat 2-6 puffs or 1 nebulizer treatment, wait 20 mins. Call Parent and/or Provider. **<u>If no improvement , CALL 911</u>** **If child returns to Green Zone:** ☐ Continue to give albuterol 2 puffs every 4 hours for 1 to 2 more days ☐ No physical activity ☐ Physical activity as tolerated i.e. PE & recess at school		
EMERGENCY • Reliever medications do not help • Very short of breath • Constant cough	**RED ZONE** <_____	☐ **Give albuterol 2-6 puffs (with spacer) or 1 nebulizer treatment NOW! May repeat once after 20 min.** **<u>If there is no improvement, call parent and/or 911.</u>** **<u>Call 911 immediately if:</u>** • Child is struggling to breathe and there is no improvement in 20 minutes after taking albuterol • Child has trouble talking or walking • Child has lips or fingernails that are gray or blue • Child's chest or neck is pulling in with breathing		

PATIENT/STUDENT INSTRUCTIONS:

☐ Student has been instructed in the proper use of all his/her asthma medications, and in my opinion, the student <u>can carry and use his/her inhaler at school</u>
☐ Student is to notify his/her designated school health officials after using inhaler per school protocol
☐ Student needs supervision or assistance to use his/her inhaler ☐ Student should **<u>NOT</u>** carry his/her inhaler while at school

_____ _____ _____ ☐ **Valid for current school year**
HEALTH CARE PROVIDER SIGNATURE **PLEASE PRINT PROVIDER'S NAME** **DATE**

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

_____ _____ _____
PARENT SIGNATURE **DATE** **EMAIL**

CINCH
Virginia Asthma Coalition

Cc: principal ____ office staff ____ librarian ____cafeteria mgr. ____ bus driver/transportation ____ Coach/PE ____ teachers ___

revision: May, 2010

Asthma Action Plan

AMERICAN LUNG ASSOCIATION®

General Information:

■ Name _____

■ Emergency contact _____ Phone numbers _____

■ Physician/healthcare provider _____ Phone numbers _____

■ Physician signature _____ Date _____

Severity Classification

❍ Intermittent ❍ Moderate Persistent
❍ Mild Persistent ❍ Severe Persistent

❍ Colds ❍ Smoke ❍ Weather
❍ Exercise ❍ Dust ❍ Air Pollution
❍ Animals ❍ Food
❍ Other _____

1. Premedication (how much and when) _____
_____
2. Exercise modifications _____
_____

Green Zone: Doing Well

Peak Flow Meter Personal Best =

Symptoms

- ■ Breathing is good
- ■ No cough or wheeze
- ■ Can work and play
- ■ Sleeps well at night

Peak Flow Meter

More than 80% of personal best or _____

Control Medications:

Medicine	How Much to Take	When to Take It

Yellow Zone: Getting Worse

Contact physician if using quick relief more than 2 times per week.

Symptoms

- ■ Some problems breathing
- ■ Cough, wheeze, or chest tight
- ■ Problems working or playing
- ■ Wake at night

Peak Flow Meter

Between 50% and 80% of personal best or
_____ to _____

Continue control medicines and add:

Medicine	How Much to Take	When to Take It

IF your symptoms (and peak flow, if used) return to Green Zone after one hour of the quick-relief treatment, THEN

- ❍ Take quick-relief medication every 4 hours for 1 to 2 days.
- ❍ Change your long-term control medicine by _____
- ❍ Contact your physician for follow-up care.

IF your symptoms (and peak flow, if used) DO NOT return to Green Zone after one hour of the quick-relief treatment, THEN

- ❍ Take quick-relief treatment again.
- ❍ Change your long-term control medicine by _____
- ❍ Call your physician/Healthcare provider within ____ hour(s) of modifying your medication routine.

Red Zone: Medical Alert

Ambulance/Emergency Phone Number:

Symptoms

- ■ Lots of problems breathing
- ■ Cannot work or play
- ■ Getting worse instead of better
- ■ Medicine is not helping

Peak Flow Meter

Less than 50% of personal best or
_____ to _____

Continue control medicines and add:

Medicine	How Much to Take	When to Take It

Go to the hospital or call for an ambulance if:

- ❍ Still in the red zone after 15 minutes.
- ❍ You have not been able to reach your physician/healthcare provider for help.
- ❍ _____

Call an ambulance immediately if the following danger signs are present:

- ❍ Trouble walking/talking due to shortness of breath.
- ❍ Lips or fingernails are blue.

Rev_July_2008

Plan de acción contra el asma

AMERICAN LUNG ASSOCIATION®

Información general:

■ Nombre _____

■ Contacto en caso de emergencia _____ Números telefónicos _____

■ Médico/Proveedor de atención médica _____ Números telefónicos _____

■ Firma del médico _____ Fecha _____

❍ Intermitente ❍ Leve persistente ❍ Moderada persistente ❍ Severa persistente	❍ Resfríos ❍ Fumar ❍ Clima ❍ Ejercicio ❍ Polvo ❍ Contaminación ❍ Animales ❍ Alimentos ❍ Otros _____	1. Previa al medicamento (cuánta y cuándo)_____ _____ 2. Modificaciones en la actividad física _____ _____

Zona verde: se encuentra bien

Síntomas

- ■ Respira bien
- ■ No tiene tos ni respiración ruidosa
- ■ Puede trabajar y jugar
- ■ Duerme toda la noche

Medidor de flujo máximo

Más del 80% del récord o _____

Récord obtenido en el medidor de flujo máximo:

Medicamentos de control

Medicamento	Cantidad que debe tomar	Horarios en que debe tomarlo

Zona amarilla: está empeorando

Síntomas

- ■ Algunas dificultades para respirar
- ■ Tos, respiración ruidosa u opresión en el pecho
- ■ Problemas para trabajar o jugar
- ■ Se despierta por las noches

Medidor de flujo máximo

Entre el 50% y el 80% del récord, o entre _____ y _____

Comuníquese con el médico si utiliza el medicamento más de 2 veces por semana.

Continúe con los medicamentos de control y agregue:

Medicamento	Cantidad que debe tomar	Horarios en que debe tomarlo

SI los síntomas (y el flujo máximo, si se mide) regresan a la zona verde después de una hora del tratamiento de alivio rápido:

- ❍ Tome el medicamento de alivio rápido cada 4 horas durante 1 ó 2 días
- ❍ Cambie sus medicamentos de control a largo plazo por _____
- ❍ Comuníquese con su médico para obtener atención de seguimiento

SI los síntomas (y el flujo máximo, si se mide) NO regresan a la zona verde luego de 1 hora del tratamiento de alivio rápido:

- ❍ Tome nuevamente el medicamento de alivio rápido
- ❍ Cambie los medicamentos de control a largo plazo por _____
- ❍ Llame a su médico/Proveedor de atención médica dentro de las ____ horas de haber modificado su rutina de medicamentos

Zona roja: alerta médica

Síntomas

- ■ Muchas dificultades para respirar
- ■ No puede trabajar o jugar
- ■ Se empeora en lugar de mejorar
- ■ El medicamento no ayuda

Medidor de flujo máximo

Menos del 50% del récord, o entre _____ y _____

Número telefónico de emergencias/ la ambulancia:

Continúe con los medicamentos de control y agregue:

Medicamento	Cantidad que debe tomar	Horarios en que debe tomarlo

Diríjase al hospital o llame a una ambulancia si:

- ❍ continúa en la zona roja luego de 15 minutos
- ❍ no pudo comunicarse con su médico/proveedor de atención médica para solicitar ayuda
- ❍ _____

Llame a una ambulancia inmediatamente si se presentan las siguientes señales de peligro:

- ❍ Tiene problemas para caminar/hablar debido a la falta de aire
- ❍ Los labios o las uñas se tornan de color azul

Patient Name: _____
Date of Birth: _____
Parent Name: _____
Cell Phone: _____
Home Phone: _____
School Name: _____

My Asthma Action Plan

Use traffic light colors to help control asthma.

Asthma Severity Classification* ☐ **Intermittent**: Symptoms ≤ 2/days/wk; ≤ 2 nights/mo ☐ **Mild Persistent:** Symptoms > 2 days/wk; 3-4 nights/mo ☐ **Moderate Persistent:** Symptoms daily; ≥ 5 nights/mo ☐ **Severe Persistent:** Symptoms continual; frequent nights

* These are *partial* criteria for Severity Classification. See national guidelines (EPR-3) for *complete* criteria: www.nhlbi.nih.gov/guidelines/asthma

I Feel Good

- Breathing is good, **and**
- No cough, tight chest, or wheeze, **and**
- Can work or play as normal

Peak Flow number is:
_____ to _____
80% 100%


Every-Day Medicines for Prevention and Long-Term Control at home

Medicine	How Much	When

At 15 to 20 minutes *before* sports or hard play take:
_____ sprays **albuterol**, using spacer

I Don't Feel Good



• Cough, **or** • Congested/ Tight Chest, **or** • Trouble breathing, **or** wheezing

or… Peak Flow number is:
_____ to _____
50% 79%

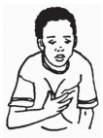
Continue the Green Zone Every-Day Medicine, and
Start Quick-Relief Medicine (albuterol) at home or school to stop your asthma from getting worse.

1. Start **albuterol** (inhaler with spacer, or by machine) now: 1 spray; then wait 1 minute and repeat.
2. If not improved in 30 minutes, repeat ____ sprays **albuterol**.
3. If improved, then _____ sprays every ____ hours, as needed until _____.

If not improved after taking ____ sprays of **albuterol** ____times, or if still in Yellow Zone after _____ days, then start _____ **and phone Your Doctor:** _____

RED = URGENT-EMERGENCY!

I Feel Awful



- Medicine is not helping, **or**
- Working hard to breathe, **or**
- Uncontrolled cough, **or**
- Severe chest tightness/congestion, **or**
- Trouble talking or walking (**Emergency 911**), **or**
- Blue lips/nails or drowsy (**Emergency 911**)

or… Peak Flow number is:
____ and ____
0% 49%

Take Quick-Relief Medicine and get help from a doctor, NOW!

1. Take **albuterol** right away: _____ sprays or by machine **and**
2. Start **corticosteroid:** _____ mg. **and**
3. Repeat albuterol_____ sprays or by nebulizer, if necessary, **AND**

Go To Emergency Room / Call 911 NOW. Do Not Wait!

If you go to the Emergency Room, make an appointment with your doctor the next day.

Authorization and Disclaimer from Parent/Guardian: I request that the school assist my child with the above asthma medications and the Asthma Action Plan in accordance with state laws and regulations. Yes ☐ No ☐
My child may carry and self-administer asthma medications and I agree to release the school district and school personnel from all claims of liability if my child suffers any adverse reactions from self-administration of asthma medications. Yes ☐ No ☐
Print Parent/Guardian Name:_____ Signature:_____ Date: _____
Health Care Provider: My signature provides authorization for the above written orders. I understand that all procedures will be implemented in accordance with state laws and regulations. Student may carry and self-administer asthma medications: Yes☐ No☐
(This authorization is for a maximum of one year from signature date.)
Print Provider Name/Credentials: _____ Signature:_____ Date:_____
Provider Phone #: _____ Provider Address: _____

Nombre del paciente: _____
Fecha de nacimiento: _____
Nombre del padre: _____
Teléfono celular: _____
Teléfono del hogar: _____
Nombre de la escuela: _____

Mi plan de acción contra el asma

Utilice los colores del semáforo para ayudar a controlar el asma.

Asthma Severity Classification* ☐ **Intermittent**: Symptoms ≤ 2/days/wk; ≤ 2 nights/mo ☐ **Mild Persistent:** Symptoms > 2 days/wk; 3-4 nights/mo ☐ **Moderate Persistent:** Symptoms daily; ≥ 5 nights/mo ☐ **Severe Persistent:** Symptoms continual; frequent nights

* These are *partial* criteria for Severity Classification. See national guidelines (EPR-3) for *complete* criteria: www.nhlbi.nih.gov/guidelines/asthma

VERDE = ¡ADELANTE!

Me siento bien

- Respiro bien, **y**
- No tengo tos, opresión en el pecho ni silbido, **y**
- Puedo trabajar o jugar con normalidad, **y**

El índice del flujo máximo es:
entre _____ y _____
80% 100%

Medicamentos diarios para la prevención y el control a largo plazo en el hogar

Medicamento	Cantidad	Frecuencia

A los 15 ó 20 minutos *antes* de practicar un deporte o juego intenso, adminístrese:

_____ inhalaciones de **albuterol**, con el espaciador

AMARILLO = ACTÚE

No me siento bien

- Tos, **o**
- Congestionado **u** opresión en el pecho, **o**
- Dificultad para respirar **o** silbidos

o… el índice del flujo máximo es entre
_____ y _____
50% 79%

Continúe tomando el medicamento diario de la zona verde y **Comience con el medicamento de alivio rápido (albuterol)** en el hogar o en la escuela para evitar que su asma empeore.

1. Comience a tomar **albuterol** (inhalador con espaciador o con una máquina) ahora: 1 inhalación; espere 1 minuto y repita.
2. Si no mejora en 30 minutos, repita ___ inhalaciones de albuterol.
3. Si mejora, administre __inhalaciones cada __ horas, según lo necesite, hasta_____.

Si no mejora después de ____ inhalaciones de albuterol ___ veces, o si continúa en la zona amarilla después de ___ días, entonces comience _____**y llame a su médico:** _____

ROJO = ¡URGENTE! ¡EMERGENCIA!

Me siento muy mal

- El medicamento no está ayudando, **o**
- Tengo dificultad para respirar, **o**
- Tos incontrolable, **o**
- Congestión/opresión grave en el pecho, **o**
- Dificultad para hablar o caminar (**Emergencia 911**), **o**
- Labios/uñas azules o somnolencia (**Emergencia 911**)

o… el índice del flujo máximo es:
entre _____ y _____
0% 49%

Tome un medicamento de alivio rápido y busque ayuda con un médico, ¡AHORA!

1. Tome **albuterol** de inmediato: ____ inhalaciones o con una máquina **y**
2. Comience a tomar un **corticosteroide:** _____ mg **y**
3. Repita ___ inhalaciones de albuterol o con un nebulizador, si fuera necesario, **Y**

Vaya A La Sala De Emergencia / Llame al 911 Ahora. ¡No espere!

Si va a la sala de emergencia, pida una cita con su médico para el día siguiente.

Autorización y exención de responsabilidad del padre/tutor: Solicito que la escuela ayude a mi hijo/a con los medicamentos contra el asma indicados arriba y el plan de acción contra el asma de acuerdo con las leyes y la reglamentación estatal. Sí ☐ No ☐

Mi hijo/a puede llevar y administrarse medicamentos contra el asma y yo acepto eximir de toda responsabilidad al distrito escolar y al personal de la escuela si mi hijo/a llegara a sufrir alguna reacción adversa por administrarse los medicamentos contra el asma. Sí ☐ No ☐

Nombre del padre/tutor: _____ Firma: _____Fecha: _____

Proveedor de atención médica: Mi firma concede autorización para las órdenes escritas antes mencionadas. Entiendo que todos los procedimientos se implementarán de acuerdo con las leyes y la reglamentación estatal. El alumno puede llevar y administrarse medicamentos contra el asma: Sí ☐ No ☐
(Esta autorización estará vigente durante un año como máximo desde la fecha de la firma).

Nombre del proveedor/credenciales: _____ Firma: _____ Fecha: _____

Teléfono del proveedor: _____ Dirección del proveedor: _____

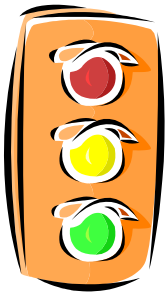
MARYLAND DEPARTMENT OF HEALTH AND MENTAL HYGIENE

American Academy of Pediatrics
DEDICATED TO THE HEALTH OF ALL CHILDREN™
Maryland Chapter

ASTHMA ACTION PLAN

Check Asthma Severity: ☐Mild Intermittent ☐Mild Persistent ☐Moderate Persistent ☐Severe Persistent

Patient's Name	DOB	Effective Date ___/___/___ to ___/___/___
Doctor's Name	Parent/ Guardian's Name	
Doctor's Office Phone Number	Parent/ Guardian's Phone Number	
Emergency Contact after Parent	Contact Phone	



Personal Best Peak Flow: _____

Personal Peak Flow Ranges

RED means Danger Zone! Get help from a doctor. -- _____

YELLOW means Caution Zone! Add prescribed yellow medicine. -- _____

GREEN means Go Zone! Use preventive medicine. -- _____

GO (Green) → Use these medications every day.

You have *all* of these:
- Breathing is good.
- No cough or wheeze.
- Sleep through the night.
- Can work and play.

And/ or personal peak flow above 80 % _____

Medicine/ Dosage	How much to take	When to take it
Comments		

For exercise, take:

CAUTION (Yellow) → Continue with green zone medicine and ADD:

You have *any* of these:
- First sign of a cold.
- Exposure to a known trigger.
- Cough.
- Mild wheeze.
- Tight chest.
- Cough at night.

And/ or personal peak flow from 80% _____ To 50% _____

Medicine/ Dosage	How much to take	When to take it
Comments		

If Quick Reliever/ Yellow Zone medicines are used more than 2 to 3 times per week, CALL your Doctor.

DANGER (Red) → Take these medicines and call your doctor.

Your asthma is getting worse fast:
- Medicine is not helping within 15-20 minutes.
- Breathing is hard and fast.
- Nose opens wide.
- Ribs show.
- Lips are blue.
- Fingernails are blue.
- Trouble walking or talking.

And/ or personal peak flow below 50% _____

Medicine/ Dosage	How much to take	When to take it
Comments		

GET HELP FROM A DOCTOR NOW!

If you cannot contact your doctor, go directly to the emergency room. DO NOT WAIT.

Trigger List:
- ❑ Chalk dust
- ❑ Cigarette smoke
- ❑ Colds/Flu
- ❑ Dust or dust mites
- ❑ Stuffed animals
- ❑ Carpet
- ❑ Exercise
- ❑ Mold
- ❑ Ozone alert days
- ❑ Pests
- ❑ Pets
- ❑ Plants, flowers, cut grass, pollen
- ❑ Strong odors, perfume, cleaning products
- ❑ Sudden temperature change
- ❑ Wood smoke
- ❑ Foods: _____ _____
- ❑ Other: _____

Adapted from: NYC DOHMH and Pediatric/ Adult Asthma Coalition of New Jersey.

www.fha.state.md.us/mch www.MarylandAsthmaControl.org www.mdaap.org

White Copy- Patient **Pink Copy- School** **Yellow Copy- Doctor**

DHMH Form Number: 4643

For additional forms, please call: 410-799-1940

Asthma Action Plan

For: _____ Doctor: _____ Date: _____

Doctor's Phone Number _____ Hospital/Emergency Department Phone Number _____

GREEN ZONE

Doing Well

- No cough, wheeze, chest tightness, or shortness of breath during the day or night
- Can do usual activities

And, if a peak flow meter is used,

Peak flow: more than _____
(80 percent or more of my best peak flow)

My best peak flow is: _____

Take these long-term control medicines each day (include an anti-inflammatory).

Medicine	How much to take	When to take it
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
Before exercise	❒ _____	❒ 2 or ❒ 4 puffs _____	5 minutes before exercise

YELLOW ZONE

Asthma Is Getting Worse

- Cough, wheeze, chest tightness, or shortness of breath, or
- Waking at night due to asthma, or
- Can do some, but not all, usual activities

-Or-

Peak flow: _____ to _____
(50 to 79 percent of my best peak flow)

First

Add: quick-relief medicine—and keep taking your GREEN ZONE medicine.

_____ ❒ 2 or ❒ 4 puffs, every 20 minutes for up to 1 hour
(short-acting $beta_2$-agonist) ❒ Nebulizer, once

Second

If your symptoms (and peak flow, if used) return to GREEN ZONE after 1 hour of above treatment:
❒ Continue monitoring to be sure you stay in the green zone.

-Or-

If your symptoms (and peak flow, if used) do not return to GREEN ZONE after 1 hour of above treatment:
❒ Take: _____ ❒ 2 or ❒ 4 puffs or ❒ Nebulizer
(short-acting $beta_2$-agonist)
❒ Add: _____ mg per day For _____(3–10) days
(oral steroid)
❒ Call the doctor ❒ before/ ❒ within _____ hours after taking the oral steroid.

RED ZONE

Medical Alert!

- Very short of breath, or
- Quick-relief medicines have not helped, or
- Cannot do usual activities, or
- Symptoms are same or get worse after 24 hours in Yellow Zone

-Or-

Peak flow: less than _____
(50 percent of my best peak flow)

Take this medicine:

❒ _____ ❒ 4 or ❒ 6 puffs or ❒ Nebulizer
(short-acting $beta_2$-agonist)

❒ _____ mg
(oral steroid)

Then call your doctor NOW. Go to the hospital or call an ambulance if:
- You are still in the red zone after 15 minutes AND
- You have not reached your doctor.

DANGER SIGNS

- **Trouble walking and talking due to shortness of breath**
- **Lips or fingernails are blue**

- **Take ❒ 4 or ❒ 6 puffs of your quick-relief medicine AND**
- **Go to the hospital or call for an ambulance _____ NOW!**
(phone)

See the reverse side for things you can do to avoid your asthma triggers.

How To Control Things That Make Your Asthma Worse

This guide suggests things you can do to avoid your asthma triggers. Put a check next to the triggers that you know make your asthma worse and ask your doctor to help you find out if you have other triggers as well. Then decide with your doctor what steps you will take.

Allergens

❒ Animal Dander

Some people are allergic to the flakes of skin or dried saliva from animals with fur or feathers.

The best thing to do:

- Keep furred or feathered pets out of your home.

If you can't keep the pet outdoors, then:

- Keep the pet out of your bedroom and other sleeping areas at all times, and keep the door closed.
- Remove carpets and furniture covered with cloth from your home. If that is not possible, keep the pet away from fabric-covered furniture and carpets.

❒ Dust Mites

Many people with asthma are allergic to dust mites. Dust mites are tiny bugs that are found in every home—in mattresses, pillows, carpets, upholstered furniture, bedcovers, clothes, stuffed toys, and fabric or other fabric-covered items.

Things that can help:

- Encase your mattress in a special dust-proof cover.
- Encase your pillow in a special dust-proof cover or wash the pillow each week in hot water. Water must be hotter than 130° F to kill the mites. Cold or warm water used with detergent and bleach can also be effective.
- Wash the sheets and blankets on your bed each week in hot water.
- Reduce indoor humidity to below 60 percent (ideally between 30—50 percent). Dehumidifiers or central air conditioners can do this.
- Try not to sleep or lie on cloth-covered cushions.
- Remove carpets from your bedroom and those laid on concrete, if you can.
- Keep stuffed toys out of the bed or wash the toys weekly in hot water or cooler water with detergent and bleach.

❒ Cockroaches

Many people with asthma are allergic to the dried droppings and remains of cockroaches.

The best thing to do:

- Keep food and garbage in closed containers. Never leave food out.
- Use poison baits, powders, gels, or paste (for example, boric acid). You can also use traps.
- If a spray is used to kill roaches, stay out of the room until the odor goes away.

❒ Indoor Mold

- Fix leaky faucets, pipes, or other sources of water that have mold around them.
- Clean moldy surfaces with a cleaner that has bleach in it.

❒ Pollen and Outdoor Mold

What to do during your allergy season (when pollen or mold spore counts are high):

- Try to keep your windows closed.
- Stay indoors with windows closed from late morning to afternoon, if you can. Pollen and some mold spore counts are highest at that time.
- Ask your doctor whether you need to take or increase anti-inflammatory medicine before your allergy season starts.

Irritants

❒ Tobacco Smoke

- If you smoke, ask your doctor for ways to help you quit. Ask family members to quit smoking, too.
- Do not allow smoking in your home or car.

❒ Smoke, Strong Odors, and Sprays

- If possible, do not use a wood-burning stove, kerosene heater, or fireplace.
- Try to stay away from strong odors and sprays, such as perfume, talcum powder, hair spray, and paints.

Other things that bring on asthma symptoms in some people include:

❒ Vacuum Cleaning

- Try to get someone else to vacuum for you once or twice a week, if you can. Stay out of rooms while they are being vacuumed and for a short while afterward.
- If you vacuum, use a dust mask (from a hardware store), a double-layered or microfilter vacuum cleaner bag, or a vacuum cleaner with a HEPA filter.

❒ Other Things That Can Make Asthma Worse

- Sulfites in foods and beverages: Do not drink beer or wine or eat dried fruit, processed potatoes, or shrimp if they cause asthma symptoms.
- Cold air: Cover your nose and mouth with a scarf on cold or windy days.
- Other medicines: Tell your doctor about all the medicines you take. Include cold medicines, aspirin, vitamins and other supplements, and nonselective beta-blockers (including those in eye drops).

U.S. Department of Health and Human Services
National Institutes of Health

National Heart Lung and Blood Institute

For More Information, go to: www.nhlbi.nih.gov

NIH Publication No. 07-5251
April 2007

Virginia Asthma Action Plan

School Division: _____

Name	**Date of Birth**		**Effective Dates** / / to / /
Health Care Provider	**Provider's Phone #**	**Fax #**	**Last flu shot** / / /
Parent/Guardian	**Parent/Guardian Phone**		**Parent/Guardian Email:**
Additional Emergency Contact	**Contact Phone**		**Contact Email**

Asthma Severity: ☐ **Intermittent** ***or*** **Persistent:** ☐ Mild ☐ Moderate ☐ Severe

Asthma Triggers (Things that make your asthma worse)

☐ Colds ☐ Smoke (tobacco, incense) ☐ Pollen ☐ Dust ☐ Animals:_____ ☐ Strong odors ☐ Mold/moisture ☐ Stress/Emotions

☐Exercise ☐ Acid reflux ☐ Pests (rodents, cockroaches) ☐ Season (circle): Fall, Winter, Spring, Summer ☐ Other:_____

Green Zone: Go! — Take these CONTROL (PREVENTION) Medicines EVERY Day

You have **ALL** of these:

- Breathing is easy
- No cough or wheeze
- Can work and play
- Can sleep all night

Peak flow: _____ to _____
(More than 80% of Personal Best)
Personal best peak flow:_____

Always rinse your mouth after using your inhaler and remember to use a spacer with your MDI.

☐ No control medicines required.

☐ Dulera _____ ☐ Symbicort _____ ☐ Advair _____ , _____ puff (s) _____ times a day
Combination medications: inhaled corticosteroid with long-acting β-agonist

☐ Alvesco _____☐ Asmanex _____ ☐ Azmacort _____ ☐ Flovent _____☐ Pulmicort ☐ QVAR _____
Inhaled Corticosteroid or Inhaled corticosteroid/long-acting β-agonist

_____ puff (s) MDI ___ times a day **Or** _____ nebulizer treatment (s) ___ times a day

☐ Singulair or _____, take _____ by mouth once daily at bedtime
Leukotriene antagonist

For asthma with exercise, ADD: ☐ Albuterol or _____, _____ puffs with spacer 15 minutes before exercise

Yellow Zone: Caution! — Continue CONTROL Medicines and ADD RESCUE Medicines

You have **ANY** of these:

- Cough or mild wheeze
- First sign of cold
- Tight chest
- Problems sleeping, working, or playing

Peak flow: _____ to _____
(60% - 80% of Personal Best)

☐ Albuterol or _____, _____ puffs with spacer every _____ hours as needed
Inhaled β-agonist

☐ Albuterol or _____, one nebulizer treatment (s) every _____ hours as needed
Inhaled β–agonist

Call your Healthcare Provider if you need rescue medicine for more than 24 hours or two times a week, or if your rescue medicine doesn't work.

Red Zone: DANGER! — Continue CONTROL & RESCUE Medicines and GET HELP!

You have **ANY** of these:

- Can't talk, eat, or walk well
- Medicine is not helping
- Breathing hard and fast
- Blue lips and fingernails
- Tired or lethargic
- Ribs show

Peak flow: < _____
(Less than 60% of Personal Best)

☐ Albuterol or _____, __ puffs with spacer **every 15 minutes**, for **THREE** treatments
Inhaled β-agonist

☐ Albuterol or _____, one nebulizer treatment **every 15 minutes**, for **THREE** treatments
Inhaled β-agonist

Call your doctor while administering the treatments.

IF YOU CANNOT CONTACT YOUR DOCTOR:
Call 911 or go directly to the Emergency Department NOW!

REQUIRED SIGNATURES:

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

PARENT/GUARDIAN _____ **Date** _____

SCHOOL NURSE/DESIGNEE _____ **Date** _____

OTHER _____ **Date** _____

CC: ☐ **Principal** ☐ **Cafeteria Mgr** ☐ **Bus Driver/Transportation**
☐ **Coach/PE** ☐ **Office Staff** ☐ **School Staff**

SCHOOL MEDICATION CONSENT & HEALTH CARE PROVIDER ORDER

CHECK ALL THAT APPLY:

____ **Student instructed in proper use of their asthma medications, and in my opinion, CAN CARRY AND SELF-ADMINISTER INHALER AT SCHOOL.**

____ **Student is to notify designated school health officials after using inhaler at school.**

____ **Student needs supervision or assistance to use inhaler.**

____ **Student should NOT carry inhaler while at school.**

MD/NP/PA SIGNATURE: _____ **DATE**_____

Virginia Asthma Action Plan approved by the Virginia Asthma Coalition (VAC) 4/12
Based on NAEPP Guidelines and modified with permission from the D.C. Asthma Action Plan via District of Columbia Department of Health, DC Control Asthma Now, and District of Columbia Asthma Partnership

_____County Schools
School Health Services

photo

In consideration of the diagnosis of **Asthma** for _____
The following **Individualized Health Care Plan** has been developed:

Nursing Assessment Data:

_____

_____

Nursing Diagnosis: Risk for impaired gas exchange related to airway inflammation, broncho-constriction, and excessive mucous production. Risk for non-compliance with treatment regimen associated with knowledge deficit about asthma.

_____

_____

Goals: Student will have needed asthma medication available and easily accessible, Student will participate fully in normal school activities including sports and exercise. Student will increase knowledge about asthma and self-management skills.

Nursing Interventions: Include parent or guardian and student in the development of the IHCP, provide initial and periodic assessment of student status, delegate to designated unlicensed assistive personnel, provide child specific training, ongoing supervision and evaluation, and maintain appropriate documentation of delegated staff, training, evaluation and child specific documentation, and monitor medication status. _____

Expected Outcomes: The student will increase knowledge about asthma and self care, student identifies adults at school who can assist with asthma, student will communicate with school personnel regarding asthma status, student will participate fully in school activities, student will demonstrate a good attendance pattern. _____

List delegated and trained personnel: _____

_____

SCHOOL'S RESPONSIBLITIES

1) Notify parent/guardian of any change in student's health status.
2) Follow Asthma Action Plan interventions as ordered.
3) Trained personnel must accompany student on field trips, or any other school-based activity off school grounds, and must bring medications and equipment as needed.
4) Copy of Action Plan must be included in substitute folder.
5) Maintain records to document medications or procedures administered at school and medical events occurring at school, e.g. asthmatic episodes.
6) Coordinate schedule of classroom, medications, and treatments to maximize participation in school activities.
7) If appropriate, and parent/guardian and student agree, inform classmates about the condition to generate acceptance and decrease anxiety.
8) Instruct appropriate personnel in signs/symptoms of asthma episode and advanced episode parent/guardian has identified, noting that either may include any of the symptoms listed.
9) Comments/special instructions: _____

_____

PARENT/GUARDIAN'S RESPONSIBILITIES

1) Return requested authorization form(s) to school personnel.
2) Keep school informed of current health status, including hospitalization, change in physician's orders, medications, etc.
3) Inform school of any changes in home, work, or emergency telephone numbers.
4) Provide and maintain equipment for treatments at school.
5) If student is to self carry inhaler, provide prescription labeled inhaler that must be kept in pocket or fanny pack while at school.

The goal is to establish and maintain a healthy school environment for your child. We cannot stress enough the importance of having current telephone numbers, including emergency numbers. If your child is in respiratory distress and shows no signs of improvement, 911 will be called.

NOTE: CARE PLAN MUST BE EVALUATED ANNUALLY OR AS CONDITION WARRANTS

I give permission for release of medical information contained in the care plan to be shared with school staff as needed, to maintain a healthy school environment for my child. I also give permission for the school nurse and Health Care Provider who is, _____ and whose phone number is, _____, to communicate to provide continuity of care and safety for my child.

National Asthma Education and Prevention Program
NAEPP School Asthma Education Subcommittee

Is the Asthma Action Plan Working?
A Tool for School Nurse Assessment

Assessment for: _____ **Completed by:** _____ **Date:** _____
(Student) **(Nurse or Parent)**

This tool assists the school nurse in assessing if students are achieving good control of their asthma. Its use is particularly indicated for students receiving intensive case management services at school.

With good asthma management, students should:

- Be free from asthma symptoms or have only minor symptoms:
  - no coughing or wheezing
  - no difficulty breathing or chest-tightness
  - no wakening at night due to asthma symptoms
- Be able to go to school every day, unhampered by asthma.
- Be able to participate fully in regular school and daycare activities, including play, sports, and exercise.
- Have no bothersome side effects from medications.
- Have no emergency room or hospital visits.
- Have no missed class time for asthma-related interventions or missed class time is minimized.

Signs that a student's asthma is not well controlled:

Indicate by checking the appropriate box whether any of the signs or symptoms listed below have been observed or reported by parents or children within the past 2-4 weeks (6 months for history). If any boxes are marked, this suggests difficulty with following the treatment plan or need for a change in treatment or intervention (e.g., different or additional medications, better identification or avoidance of triggers).

- ☐ Asthma symptoms more than two days a week or multiple times in one day that require quick-relief medicine (short-acting beta2-agonists, e.g., albuterol).
- ☐ Symptoms get worse even with quick-relief meds.
- ☐ Waking up at night because of coughing or wheezing.
- ☐ Frequent or irregular heartbeat, headache, upset stomach, irritability, feeling shaky or dizzy.
- ☐ Missing school or classroom time because of asthma symptoms.
- ☐ Having to stop and rest at PE, recess, or during activities at home because of symptoms.
- ☐ Exacerbations requiring oral systemic corticosteroids more than once a year.
- ☐ Symptoms require unscheduled visit to doctor, emergency room, or hospitalization.
- ☐ 911 call required.

If you checked any of the above, use the following questions to more specifically ascertain areas where intervention may be needed.

Probes	Responsible Person/Site	Yes	No	N/A
Medications				
• Are appropriate forms completed and on file for permitting medication administration at school?	**By school staff**	☐	☐	☐
	Self-carry	☐	☐	☐
• Has a daily long-term-control medication(s)* been prescribed?		☐	☐	☐
• Is long-term-control medication available to use as ordered?	**Home**	☐	☐	☐
	School	☐	☐	☐
• Is the student taking the long-term-control medication(s) as ordered?	**Home**	☐	☐	☐
	School	☐	☐	☐
• Has a quick-relief (short-acting B2-agonist) medication been prescribed?		☐	☐	☐
• Is quick-relief medication easily accessible?	**Home**	☐	☐	
	Personal inhaler(s) at school health office	☐	☐	
	Self-carry	☐	☐	
• Is the student using quick-relief medication(s) as ordered… ◦ Before exercise?	**Home**	☐	☐	☐
	School	☐	☐	☐
◦ Immediately when symptoms occur?	**Home**	☐	☐	☐
	School	☐	☐	☐

Probes (continued)	Responsible Person/Site	Yes	No	N/A
Medical Administration				
• Does the student use correct technique when taking medication?	Home	☐	☐	☐
	School	☐	☐	☐
• Does the person administering the medication use correct technique?	Home	☐	☐	☐
	School	☐	☐	☐
Monitoring				
• Can the student identify his/her early warning signs and symptoms that indicate the onset of an asthma episode and need for quick-relief medicine?		☐	☐	☐
• Can the student identify his/her asthma signs and symptoms that indicate the need for help or medical attention?		☐	☐	☐
• Can the student correctly use a peak flow meter or asthma diary for tracking symptoms?		☐	☐	☐
• Are the student's asthma signs and symptoms monitored using a Peak Flow, verbal report, or diary? ◦ Daily?	Home	☐	☐	☐
	School	☐	☐	☐
◦ For response to quick-relief medication?	Home	☐	☐	☐
	School	☐	☐	☐
◦ During physical activity?	Home	☐	☐	☐
	School	☐	☐	☐
Trigger Awareness				
• Have triggers been identified?		☐	☐	
• Can student name his/her triggers?		☐	☐	☐
• Can parents/caregivers list their child's asthma triggers?		☐	☐	
• Are teachers, including physical educators, aware of this student's asthma triggers?		☐	☐	
Trigger Avoidance				
• Are triggers removed or adequately managed?	Home	☐	☐	☐
	School	☐	☐	☐

School nurses provide appropriate asthma education and health behavior intervention to students, parents, and school personnel when signs and symptoms of uncontrolled asthma and other areas of concern are identified. If there is an indication for a change in asthma medications or treatment regimen, refer the student and family to their primary care provider or asthma care specialist or help families to find such services as soon as possible.

*Long-term-control medications (controllers) include inhaled corticosteroids (ICS), leukotriene receptor antagonists (LTRA), or combination medicine (long-acting B2-agonists and ICS), cromolyn, or theophylline.

Asthma Delegation Check List[12]

County: _____ School: _____ School Year:_____

Student Name: _____ Date of Birth:_____

If one or more items is checked as "no," it is recommended that more in-depth preparation is needed before delegation to Unlicensed Assistive Personnel (UAP) will be safe.

CRITERIA FOR DELEGATION		
School Registered Nurse		
Has developed an Individualized Healthcare Plan (IHP) approved by parent/guardian		
Has established communication links between the school nurse and parent/guardian, healthcare provider, and delegated UAP for supervision, monitoring, and consultation		
Unlicensed Assistive Personnel (UAP)		
Has completed all necessary training		
Has demonstrated skill competence		
Parent/Guardian		
Has signed the approved the IHP		
Has signed any required written authorizations		
Has provided all necessary equipment and supplies		
Has completed asthma history information forms		
Has provided all required emergency information		
Student		
Is medically stable		
If able, has completed initial asthma education		
If capable of performing tasks, has demonstrated skill competence		
Agrees to follow local policies and procedures		
Healthcare Provider		
Has provided required asthma history, information, and authorization forms		
Has signed a statement indicating students level of independent functioning		
Has been sent a copy of the IHP and services being provided by the designated UAP		
Has provided specific written orders related to inhaled or oral asthma medications		

Comments:

_____

_____

_____

_____

_____

[12]Adapted with permission from the Nursing Guidelines for the Delegation of Care for Students with Diabetes in Florida Schools 2013

Skills Checklist for Delegation to Unlicensed Assistive Personnel [13]

County: _____ School: _____ School Year: _____

Student Name: _____ Date of Birth: _____

Person trained: _____ Position: _____

Instructor should insert the date and their initials after each procedure they demonstrate and review.

Peak Flow Meter (PFM)	Class Date	Return Demo Date	Return Demo Date	Return Demo Date
States name and purpose of procedure				
Identifies Supplies: Peak flow (PF) meter PF chart				
Steps 1. Writes the child's personal best on their PF log sheet 2. Follows meter-specific procedure 3. Identifies good effort 4. Writes the result on the PF log with date and time 5. Identifies need for intervention 6. Notifies personnel as appropriate 7. Confirms appropriate action per IHP 8. Demonstrates appropriate cleaning of PFM				

Metered-Dose Inhaler (MDI)/Autohaler	Demo Date	Return Demo Date	Return Demo Date	Return Demo Date
States name and purpose of procedure				
Identifies Supplies: Metered-dose inhaler/autohaler				
Steps: 1. Follows procedure for use of MDI 2. Identifies and correct problems with technique 3. Assesses response to medication 4. Responds appropriately to poor response to medication 5. Demonstrates correct care of device				

[13]Adapted with permission from sample forms developed by The School Board of Sarasota County [Florida] and the Sarasota County Health Department (2001), the Illinois Department of Human Services (April 2002), and Vermont Department of Health (1998).

Dry Powder Inhaler (DPI)	Demo Date	Return Demo Date	Return Demo Date	Return Demo Date
States name and purpose of procedure				
Identifies Supplies: Dry Powder Inhaler				
Steps: 1. Follows procedure for use of DPI 2. Identifies and correct problems with technique 3. Assesses response to medication 4. Responds appropriately to poor response to medication 5. Demonstrates correct care of device				

Valved Chamber/Spacer	Demo Date	Return Demo Date	Return Demo Date	Return Demo Date
States name and purpose of procedure				
Identifies Supplies: Metered dose inhaler & chamber				
Steps: 1. Follows procedure for assembly and use of inhaler with spacer/chamber 2. Identifies and correct problems with technique 3. Assess response to medication 4. Responds appropriately to poor response to medication (if appropriate) 5. Demonstrates correct care of chamber and inhaler				

Compressor/Nebulizer	Demo Date	Return Demo Date	Return Demo Date	Return Demo Date
States name and purpose of procedure				
Identifies Supplies: Compressor Nebulizer cup and tubing Medication				
Steps: 1. Follows procedure for assembly of nebulizer and compressor 2. Follows procedure for administration of treatment 3. Assesses response to medication 4. Responds appropriately to poor response to medication (if appropriate) 5. Demonstrates correct care of nebulizer cup				

Epinephrine Auto-injector	Demo Date	Return Demo Date	Return Demo Date	Return Demo Date
States name and purpose of procedure				
Identifies Supplies: Medication Auto-injector or syringe				
Steps: 1. Identifies need for intervention 2. Notifies personnel as appropriate, including activation of emergency personnel (911) 3. Confirms appropriate action per IHP 4. Follows procedure for administration of medication 5. Assesses response to medication 6. Responds appropriately to poor response to medication (if appropriate) 7. Demonstrates correct care of medication and syringe/injector				

_____ _____

Instructing School Nurse's Name Signature/Initials Date

Appendix F

Asthma Organizations and Associations

Asthma Organizations and Associations

Allergy and Asthma Network. Mothers of Asthmatics, Incorporated
http://www.aanma.org

American Academy of Allergy, Asthma, and Immunology
http://www.aaaai.org

American Academy of Pediatrics
http://www.aap.org

American Association for Respiratory Care
http://www.aarc.org

American College of Allergy, Asthma and Immunology
http://ww.acaai.org

American Lung Association (ALA)
http://www.lungusa.org

American Lung Association of Florida (ALAF)
http://www.lungfla.org

Asthma and Allergy Foundation of America
http://www.aafa.org

Centers for Disease Control and Prevention
http://www.cdc.gov

The Environmental Protection Agency
http://www.epa.gov

National Association of School Nurses
http://www.nasn.org

National Association of School Nurses
http://www.nasn.org

National Asthma Education and Prevention Program, NHLBI Information Center
http://www.nhlbi.nih.gov

National Institute of Allergy and Infectious Diseases, Office of Communications and Public Liaison
http://www.niaid.nih.gov

National Jewish Medical and Research Center (Lung Line)
http://www.njc.org

Pediatric Pulmonary Centers
http://www.ppc.mchtraining.net

U.S. Department of Education Office for Civil Rights, Customer Service Team
http://www.ed.gov/about/offices/list/ocr

Appendix G

Florida School Health Survey:

Current Asthma Prevention and Control Practices (2010)

SURVEY RESULTS SUMMARY REPORT

Florida School Health Survey:

Current Asthma Prevention and Control Practices

Prepared by:

Brandi Knight, MPH, CHES
Florida Department of Health
Bureau of Environmental Public Health Medicine
Asthma Prevention and Control Program
September 2010

Table of Contents

Introduction

The underlying goal of the survey was to research current asthma management and control practices of school districts in the state of Florida. In addition, use survey results to make recommendations as to how current efforts could be enhanced in the future, using the capacity and resources available within the state program and statewide partnerships.

This summary focuses on results related to asthma management and control practices in school districts obtained through a survey which was sent out via email. The online survey was sent to School Health Coordinators from all sixty-seven counties in Florida. The purpose of this survey was to assist the Florida Asthma Prevention and Control Program (FLAPCP) staff and stakeholders in understanding the need and capacity for implementing evidence based interventions in school districts throughout Florida. Prior to intervention implementation, it was essential for the FLAPCP to assess current asthma control practices in school districts.

Survey Description

The online survey on current asthma management and control practices in schools was developed by the asthma program evaluator. After an internal review by both the Florida Asthma Prevention and Control Program and the Department of Health School Health Program and Department of Education, the online survey was disseminated to 67 school health coordinators using the online survey creation tool, www.surveymonkey.com on August 2, 2010. Coordinators were given a deadline of August 20, 2010 to complete the survey. At that time, forty-five counties had responded to questions on the survey. The FLAPCP attempted to secure additional responses by contacting unresponsive counties directly to further explain how survey information will be used programmatically. This attempt yielded an additional twelve responses before the end of the program fiscal year, a total of 57.

The survey (see Appendix I) contained an initial question on the respondent's knowledge of Expert Panel Report 3 (EPR3): Guidelines for the Diagnosis and Management of Asthma[1] and a number of more specific questions on asthma management procedures in the school district.

Survey Response Summary

The survey was emailed to all sixty-seven school health coordinators (Table 1). A total of 57 (85%) surveys were completed and analyzed. Respondents answered each survey question and also had the opportunity to write general comments regarding major asthma-related concerns in their school district. Majority of survey questions were

[1] The EPR 3 Guidelines on Asthma was developed by an expert panel commissioned by the National Asthma Education and Prevention Program (NAEPP) Coordinating Committee (CC), coordinated by the National Heart, Lung, and Blood Institute (NHLBI) of the National Institutes of Health. Using the 1997 EPR 2 guidelines and the 2004 update of EPR 2 as the framework, the expert panel organized the literature review and final guidelines report around four essential components of asthma care, namely: assessment and monitoring, patient education, control of factors contributing to asthma severity, and pharmacologic treatment. Subtopics were developed for each of these four broad categories.

multiple choice and allowed more than one response. Questions regarding asthma-related concerns in the school district required a more detailed response; therefore responders were able to write paragraphs explaining concerns and needs. The survey can be found on page 13.

County Representation

Table 1: Counties Represented by Completed Surveys	
• Alachua • Bay • Bradford • Broward • Calhoun • Charlotte • Citrus • Clay • Collier • Columbia • Dade • De Soto • Dixie • Escambia • Flagler • Franklin • Gadsden • Glades • Gulf • Hamilton • Hardee • Hendry • Hernando • Highlands • Hillsborough • Holmes • Indian River • Jackson • Lafayette	• Lake • Leon • Levy • Madison • Marion • Martin • Monroe • Nassau • Okaloosa • Okeechobee • Orange • Osceola • Palm Beach • Pasco • Pinellas • Polk • Putnam • Santa Rosa • Sarasota • St. Johns • Sarasota • SBBC • Seminole • St. Lucie • Sumter • Suwannee • Taylor • Volusia • Washington

Survey Results

Question #2: Are you familiar with the Expert Panel Report 3 (EPR3): Guidelines for the Diagnosis and Management of Asthma?

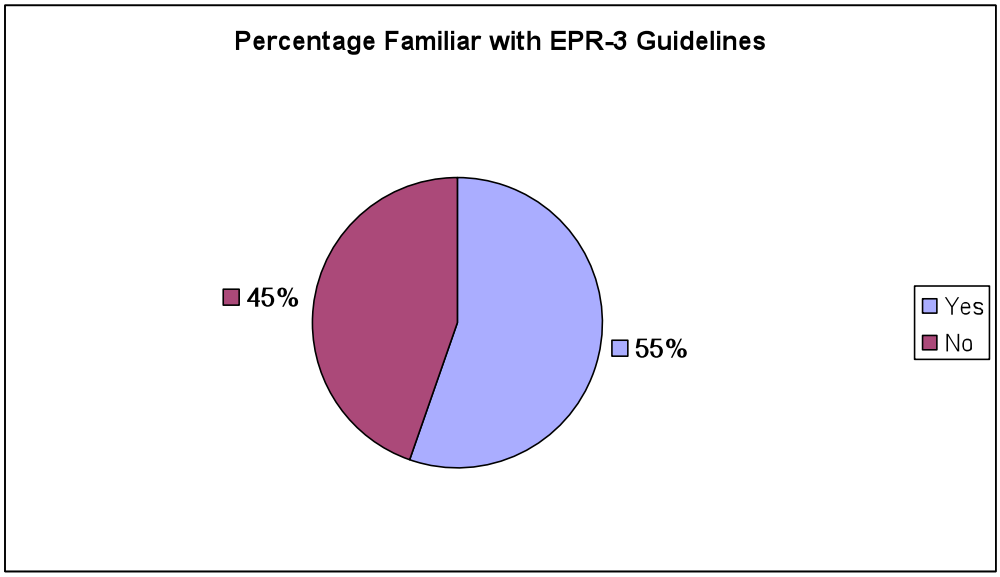


Figure 1
*Includes only those who responded to the question, N = 56

Question #3: Typically, who usually provides health-related assistance for students with asthma in your county school district? (Check all that apply)

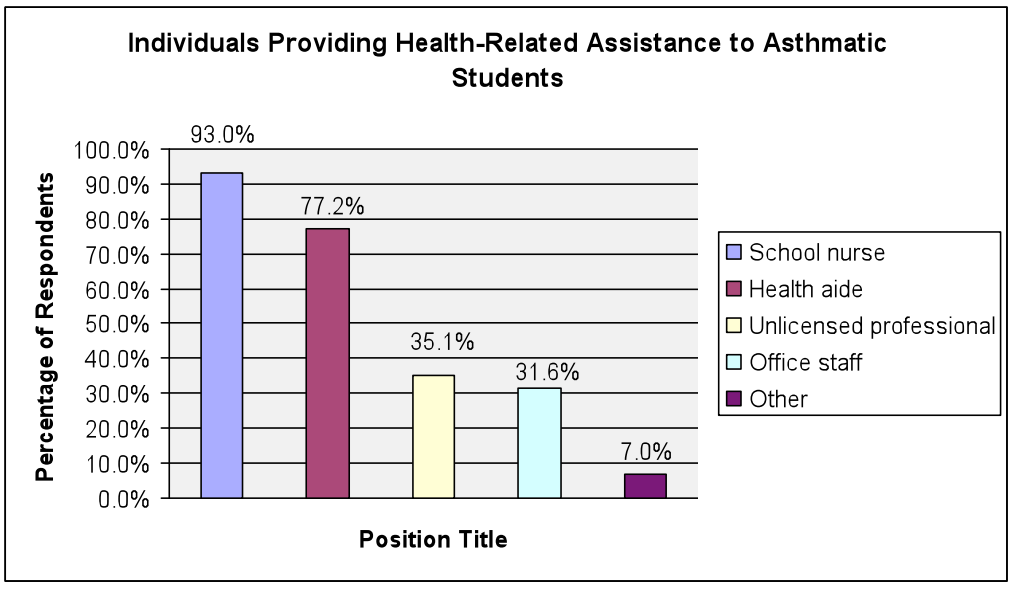


Figure 2
*Includes only those who responded to the question, N = 57

Position titles indicated as *other* included:

- Physical education staff
- Teachers
- Health assistants

Question #4: Which of the following sources of school health information does your county school district use to identify students diagnosed with asthma? (Check all that apply)

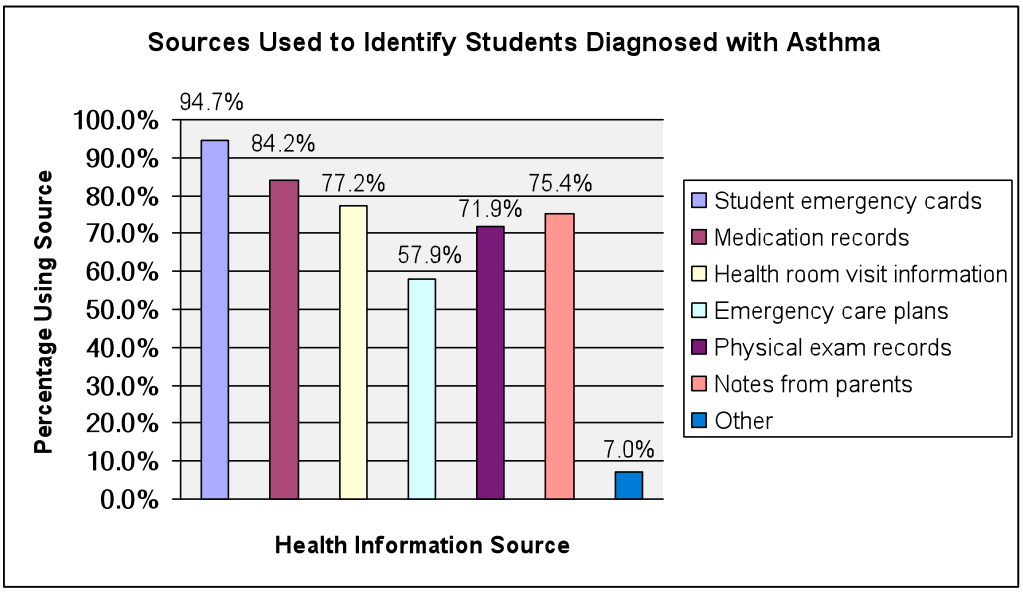


Figure 3
*Includes only those who responded to the question, N = 31

Information sources indicated as *other* included:

- Health information sheet
- Teachers
- Health assistants

Question #5: In your county school district, which of the following information is used to identify students with poorly controlled asthma? (Check all that apply)

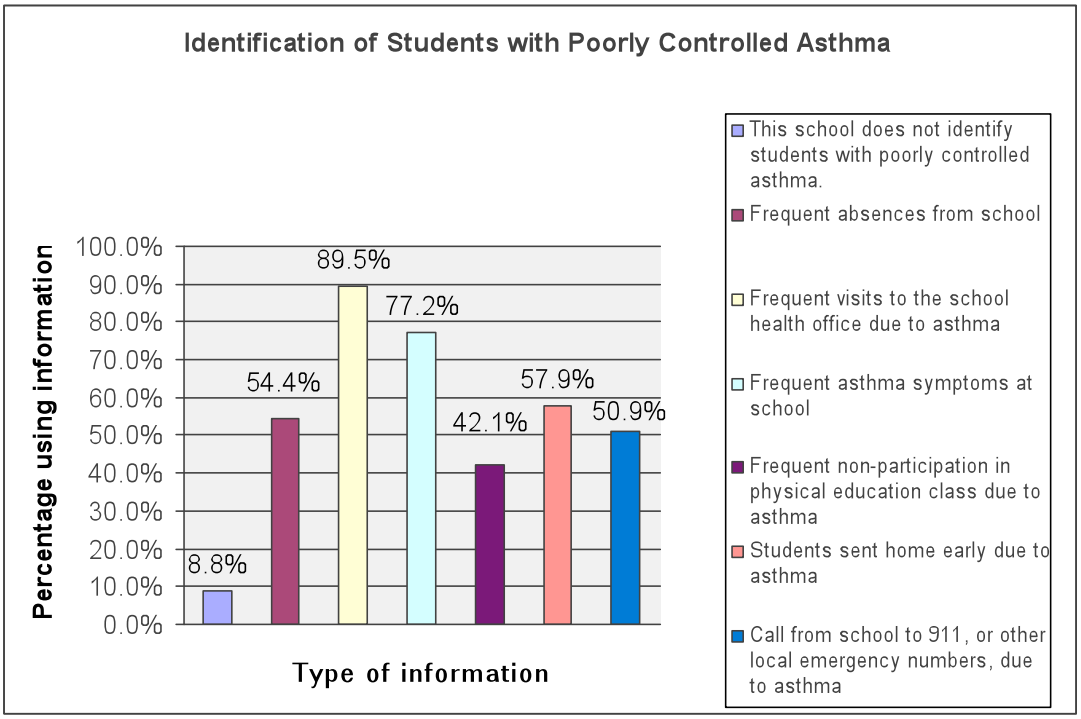


Figure 4
*Includes only those who responded to the question, N = 57

Question #6: Does your county school district provide the following services for students with poorly controlled asthma? (Mark yes or no for each service)

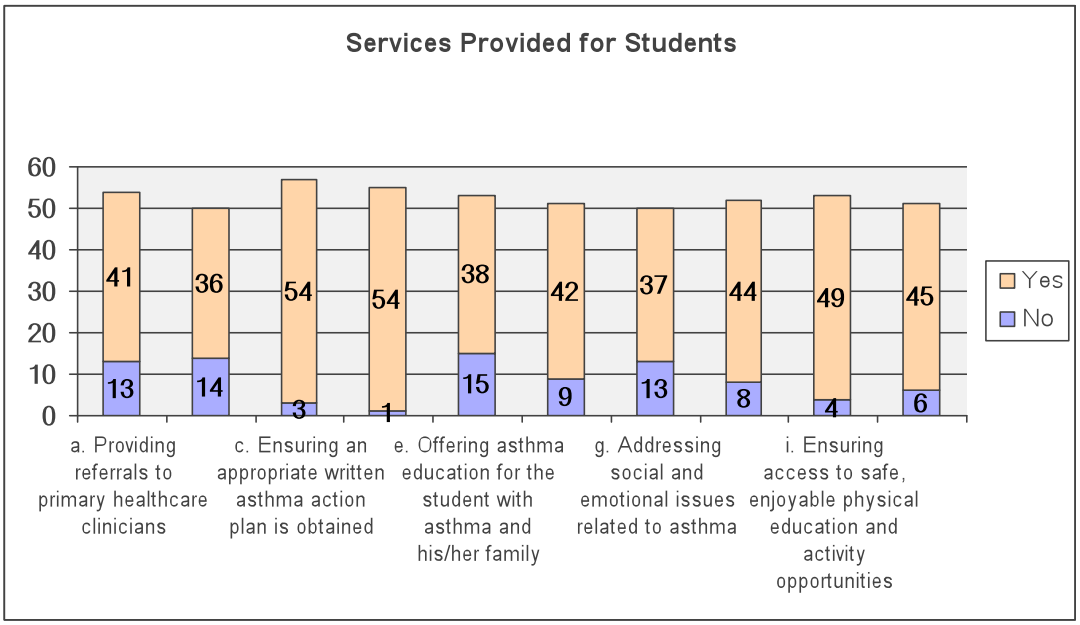


Figure 5
*Includes only those who responded to the question, N = 57

Question #7: Does your county school district have a process to do the following in school buildings? Check all that apply. (Asthma triggers: i.e. mold, cockroaches, aerosol spray, etc.)

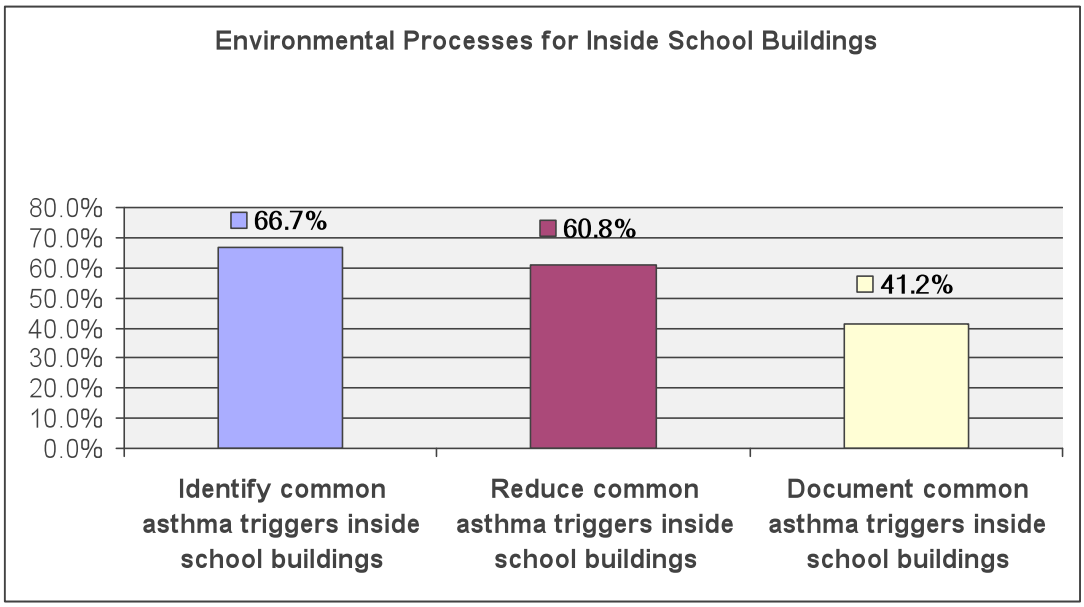


Figure 6
*Respondents were allowed to select more than one answer

Question #8: Does your county school district have a process to do the following outside on school grounds? Check all that apply. (Asthma triggers: i.e. smoke, pesticide spray, fertilizer, etc.)

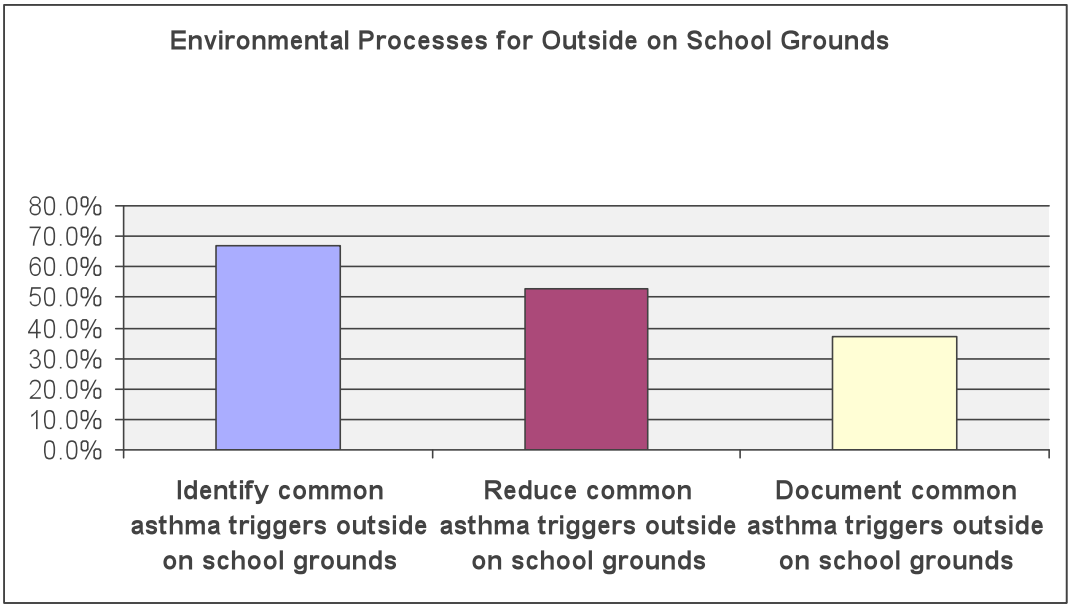


Figure 7
*Respondents were allowed to select more than one answer

Question #9: Does your county school district have a procedure to inform each of the following groups about your school's policy permitting students to carry and self-administer asthma medications? (Mark yes or no for each group)

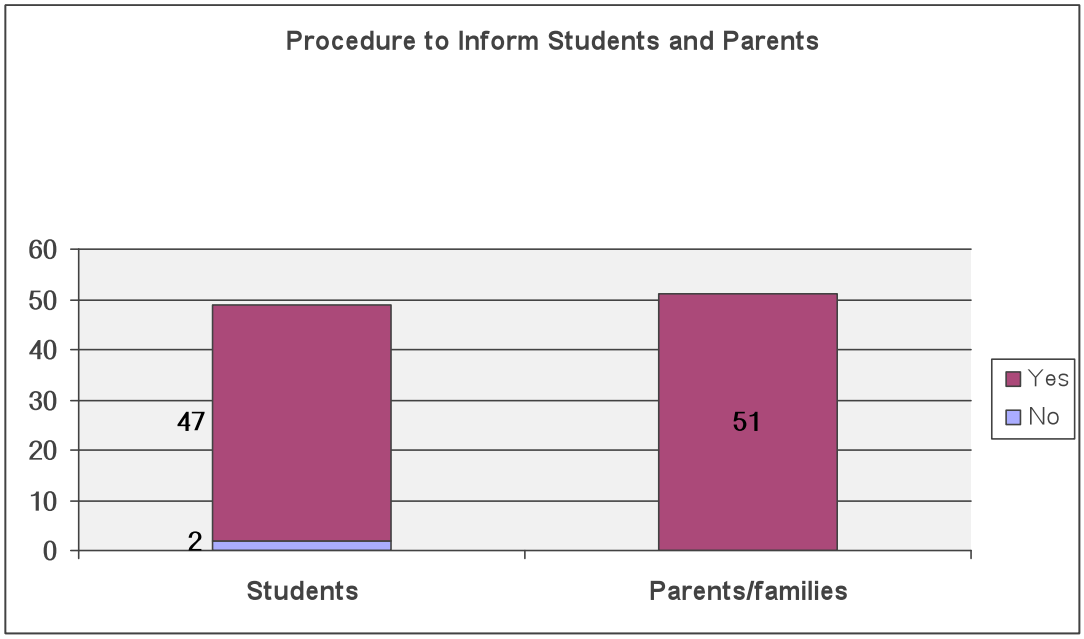


Figure 8
*Includes only those who responded to the question, N = 51

Question #10: How often are school staff members receiving general training on recognizing and responding to severe asthma symptoms? (Check one response)

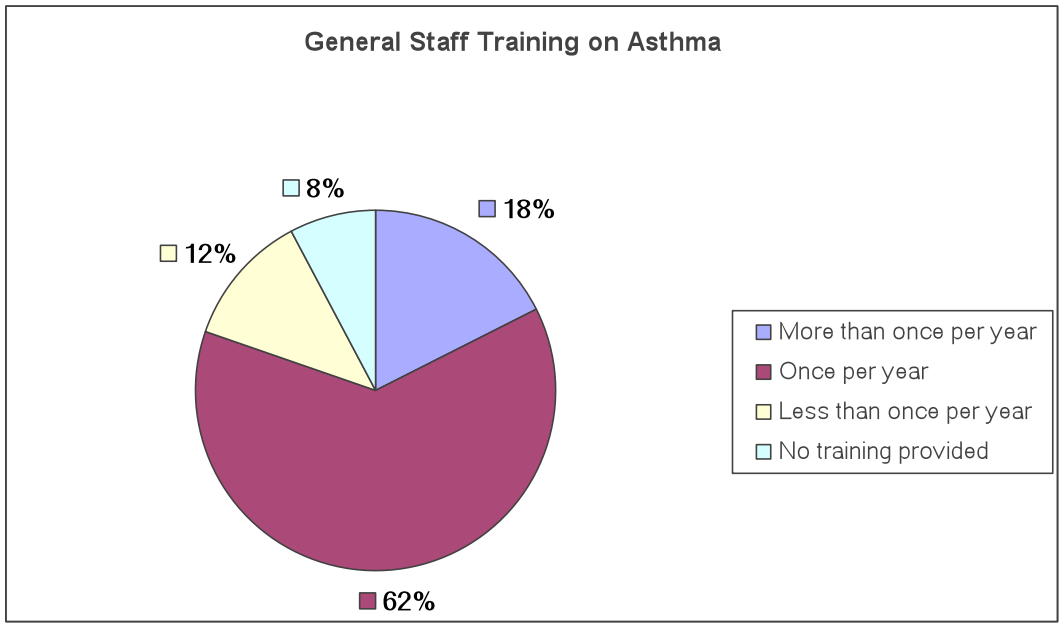


Figure 9
*Includes only those who responded to the question, N = 51

Question #11: What asthma-related programs are you utilizing in your county school district? Check all that apply.

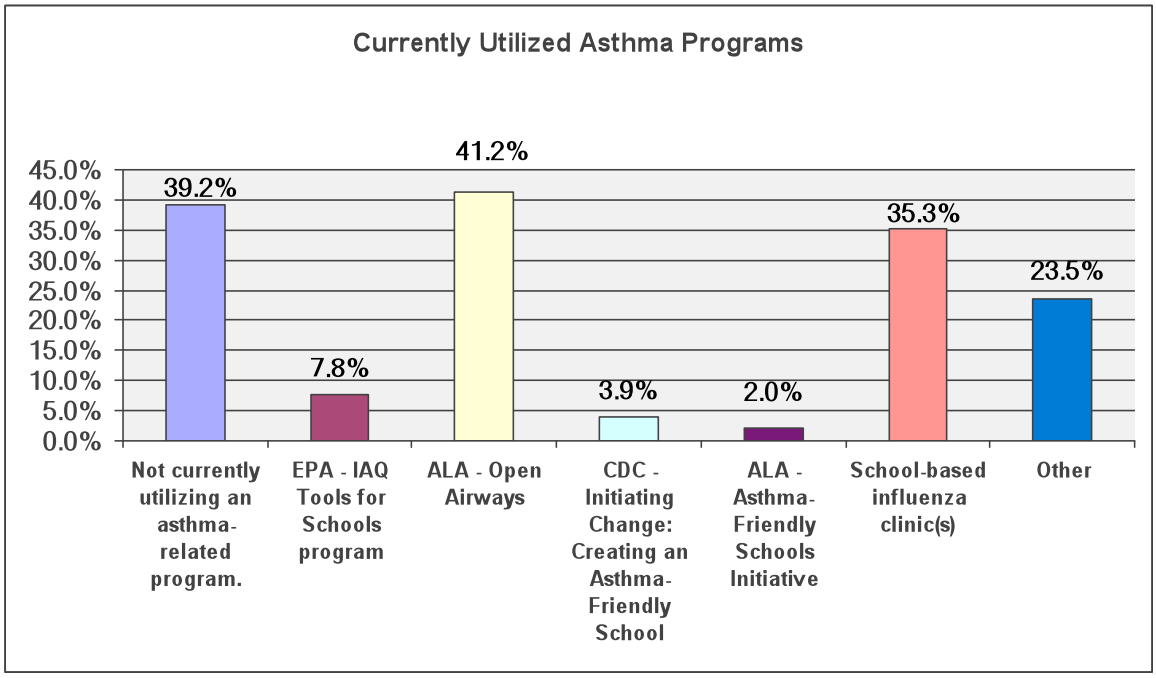


Figure 10
*Includes only those who responded to the question, N = 31

Asthma-related programs indicated as *other* included:

- Power Breathing
- Wee Wheezers
- National Asthma Education Program
- Asthma Training 2006 PPC At The University of Florida
- School Health Nursing Guidelines
- Kickin' Asthma
- Step-wise

Question #12: What are your major asthma-related concerns in your county school district?

- Children with documented Asthma whose parents do not supply rescue meds for school. Usually get them after the student has an asthma event at school. Also providers issue medication but do not provide information on or provide other tools for asthma management such as peak flow meters.

- Students not having inhalers at school due to lack of parent responsibility.
- Many children do you have medication for an asthma attack on hand due to lack of finances for medication.
- Have no information on what each individual school is doing to reduce asthma triggers outside of the school setting. School specific information is not shared with the county health department. In previous years one CHD school nurse facilitated the Open Airways program. This has not been an option due to lack of nursing staff and

demands placed on teachers during the instructional day.

- Western community/Belle Glade/Pahokee-burning of sugar cane
- Missed school days due to asthma related illness
- Not staffed with a school nurse per school to provide health education to students with asthma. Work with schools to decrease asthma triggers, work with parents to educate on asthma issues or even provide one on one counseling/education for students in need.
- High rates of asthma, Limited pediatric providers, No insurance
- Old buildings, mold, students and staff that wear strong perfumes/scents, kids that do not use their asthma meds appropriately (prevent vs. rescue), and kids that do not have current medications- due to cost.
- Absence from school, proper care and management of students.
- Proper education for students, staff and parents.
- Health care providers for our children with no financial means or insurance.
- Economic unable to fix sick buildings parents without jobs being able to supply school with rescue inhalers.
- Not having asthma care plans on students because parents don't bring them back on their child. The school nurse identifies the need but the parent doesn't get the necessary documentation from the provider. Not enough nurses in each school to identify all of the needs.
- Student who have asthma and the parent or guardian do not disclose information. Students with Asthma and there is no rescue inhaler on campus. Asthma education to school district staff.
- Trying to balance the needs of the students with limited staffing.
- Lack of parent education and second hand smoke from parents.
- Not enough health personnel to review and contact parents in regards to asthma identification
- Lack of funding to employ registered nurses to identify and work with schools and families.
- Students not being identified with a diagnosis of asthma. Physicians not properly treating students with asthma. Lack of education and adequate health coverage for students and families with asthma. Stigma attached to the diagnosis of asthma in different cultures. Unfriendly schools relating to asthma.
- Training for all parents and staff.
- Being able to provide routine curriculum-based asthma education.
- Limited use of peak flow meters for prevention and control. Physicians do not seem to be ordering the use of peak flow meters and students don't use them.
- Would like to be able to do general asthma in-service for all school personnel.
- Numbers are increasing.
- Decreased funding leading to a decrease in janitorial staff etc.
- Non-medical staff being asked to deal with asthma and other health-related conditions on top of their workload.

Discussion

Based upon the findings of this survey, the following recommendations are provided to the Asthma Prevention and Control Program:

1. Provide technical assistance to counties not utilizing an asthma education program in the district. Doing so will build capacity and infrastructure in other districts throughout the state.

2. Cross-reference interventions state in the CDC grant application with those being implemented in the school districts, then conduct a follow-up survey via Survey Monkey or telephone to inquire if the asthma education program is available at all schools. If not, the asthma program could collaborate with the school health coordinator to provide the program at additional schools, assisting the program in reaching program objectives.

3. Develop a standard training module for school staff to ensure everyone is receiving the same information.

4. Conduct an additional round of surveys to elicit responses from school health coordinators not included in these results. Analysis will provide a clear picture of asthma management and control practices in Florida schools.

5. Responses to question four indicate the need for a standard form to collect necessary information on students with asthma.

6. Utilize qualitative responses to question twelve in conjunction with surveillance data to identify activities for the statewide coalition and state asthma program.

The purpose of this report was to summarize survey findings and offer recommendations drawn from the information gathered. Overall, the survey of school health coordinators yielded useful information for the Asthma Prevention and Control Program. Responses to the survey questions indicate a need for asthma education among children, parents, and school personnel.

The responses to this survey suggest the need for and benefit of assistance from the FLAPCP. Qualitative responses show major asthma concerns among school health coordinators, ranging from education to environmental factors. This survey is essential for the FLAPCP in identifying asthma issues in the state in order to begin developing strategies to reduce them.

School Asthma Survey - Tier 1

1. General Information

The Florida Department of Health, Asthma Prevention and Control Program is conducting a 2-tiered survey to assess current asthma control practices in schools. The results of the survey will provide information to guide state and local efforts to improve the quality of asthma care and management in your school. Your cooperation is essential to making the results of this survey comprehensive, accurate, and timely. For the purposes of this survey, Asthma refers to Reactive Airway Disease. Your responses will be kept confidential.

1. Please provide the following information.

Position Title: _____

School District County: _____

2. Are you familiar with the Expert Panel Report 3 (EPR3): Guidelines for the Diagnosis and Management of Asthma? (The report can be found at http://www.nhlbi.nih.gov/guidelines/asthma/asthgdln.htm)

- ◯ Yes
- ◯ No

3. Typically, who usually provides health-related assistance for students with asthma in your county school district? (Check all that apply)

- ☐ School nurse
- ☐ Health aide
- ☐ Unlicensed professional
- ☐ Office staff
- ☐ Other

_____

4. Which of the following sources of school health information does your county school district use to identify students diagnosed with asthma? (Check all that apply)

- [ ] Student emergency cards
- [ ] Medication records
- [ ] Health room visit information
- [ ] Emergency care plans
- [ ] Physical exam records
- [ ] Notes from parents
- [ ] Other

2. Poorly Controlled Asthma

5. In your county school district, which of the following information is used to identify students with poorly controlled asthma? (Check all that apply.)

- [ ] This school does not identify students with poorly controlled asthma.
- [ ] Frequent absences from school
- [ ] Frequent visits to the school health office due to asthma
- [ ] Frequent asthma symptoms at school
- [ ] Frequent non-participation in physical education class due to asthma
- [ ] Students sent home early due to asthma
- [ ] Call from school to 911, or other local emergency numbers, due to asthma

6. Does your county school district provide the following services for students with poorly controlled asthma? (Mark yes or no for each service.)

	Yes	No
a. Providing referrals to primary healthcare clinicians	○	○
b. Providing referrals to child health insurance programs	○	○
c. Ensuring an appropriate written asthma action plan is obtained	○	○
d. Ensuring access to and appropriate use of asthma medications, spacers, and peak flow meters at school	○	○
e. Offering asthma education for the student with asthma and his/her family	○	○
f. Minimizing asthma triggers in the school environment	○	○
g. Addressing social and emotional issues related to asthma	○	○
h. Providing additional support services as needed	○	○
i. Ensuring access to safe, enjoyable physical education and activity opportunities	○	○
j. Team coaches ensure access to preventive medications before physical activity	○	○

Other (please specify)

3. Asthma Management

7. Does your county school district have a process to do the following in school buildings? Check all that apply. (Asthma triggers: i.e. mold, cockroaches, aerosol spray, etc.)

- ☐ Identify common asthma triggers inside school buildings
- ☐ Reduce common asthma triggers inside school buildings
- ☐ Document common asthma triggers inside school buildings

8. Does your county school district have a process to do the following outside on school grounds? Check all that apply. (Asthma triggers: i.e. smoke, pesticide spray, fertilizer, etc.)

- ☐ Identify common asthma triggers outside on school grounds
- ☐ Reduce common asthma triggers outside on school grounds
- ☐ Document common asthma triggers outside on school grounds

9. Does your county school district have a procedure to inform each of the following groups about your school's policy permitting students to carry and self-administer asthma medications? (Mark yes or no for each group.)

	Yes	No
Students	◯	◯
Parents/families	◯	◯

10. How often are school staff members receiving general training on recognizing and responding to severe asthma symptoms? (Check one response.)

- ◯ More than once per year
- ◯ Once per year
- ◯ Less than once per year
- ◯ No training provided

11. What asthma-related programs are you utilizing in your county school district? Check all that apply.

- ☐ Not currently utilizing an asthma-related program.
- ☐ EPA - IAQ Tools for Schools program
- ☐ ALA - Open Airways
- ☐ CDC - Initiating Change: Creating an Asthma-Friendly School
- ☐ ALA - Asthma-Friendly Schools Initiative
- ☐ School-based influenza clinic(s)
- ☐ Other (please name):

School Asthma Survey - Tier 1

4. Additional Information

12. What are your major asthma-related concerns in your county school district?

13. Please provide contact information (name and email address) for each school health nurse in your county to participate in a follow-up survey.

14. Additional Comments

Appendix H

Students with Chronic Health Conditions

1. Students with Chronic Illnesses: Guidance for Families, Schools, and Students
2. When Should Students with Asthma or Allergies Carry and Self-Administer Emergency Medications at School?

Students With Chronic Illnesses: Guidance for Families, Schools, and Students

Chronic illnesses affect at least 10 to 15 percent of American children. Responding to the needs of students with chronic conditions, such as asthma, allergies, diabetes, and epilepsy (also known as seizure disorders), in the school setting requires a comprehensive, coordinated, and systematic approach. Students with chronic health conditions can function to their maximum potential if their needs are met. The benefits to students can include better attendance, improved alertness and physical stamina, fewer symptoms, fewer restrictions on participation in physical activities and special activities, such as field trips, and fewer medical emergencies. Schools can work together with parents, students, health care providers, and the community to provide a safe and supportive educational environment for students with chronic illnesses and to ensure that students with chronic illnesses have the same educational opportunities as do other students.

Family's Responsibilities

- Notify the school of the student's health management needs and diagnosis when appropriate. Notify schools as early as possible and whenever the student's health needs change.
- Provide a written description of the student's health needs at school, including authorizations for medication administration and emergency treatment, signed by the student's health care provider.
- Participate in the development of a school plan to implement the student's health needs:
  - Meet with the school team to develop a plan to accommodate the student's needs in all school settings.
  - Authorize appropriate exchange of information between school health program staff and the student's personal health care providers.
  - Communicate significant changes in the student's needs or health status promptly to appropriate school staff.
- Provide an adequate supply of student's medication, in pharmacy-labeled containers, and other supplies to the designated school staff, and replace medications and supplies as needed. This supply should remain at school.
- Provide the school a means of contacting you or another responsible person at all times in case of an emergency or medical problem.
- Educate the student to develop age-appropriate self-care skills.
- Promote good general health, personal care, nutrition, and physical activity.

School District's Responsibilities

- Develop and implement districtwide guidelines and protocols applicable to chronic illnesses generally and specific protocols for asthma, allergies, diabetes, epilepsy (seizure disorders), and other common chronic illnesses of students.
- Guidelines should include safe, coordinated practices (as age and skill level appropriate) that enable the student to successfully manage his or her health in the classroom and at all school-related activities.
- Protocols should be consistent with established standards of care for students with chronic illnesses and Federal laws that provide protection to students with disabilities, including ensuring confidentiality of student health care information and appropriate information sharing.
- Protocols should address education of all members of the school environment about chronic illnesses, including a component addressing the promotion of acceptance and the elimination of stigma surrounding chronic illnesses.

National Asthma Education and Prevention Program

American Diabetes Association. Cure • Care • Commitment™

ASHA American School Health Association

EPILEPSY FOUNDATION®

The Food Allergy & Anaphylaxis Network

NSBA

- Develop, coordinate, and implement necessary training programs for staff that will be responsible for chronic illness care tasks at school and school-related activities.
- Monitor schools for compliance with chronic illness care protocols.
- Meet with parents, school personnel, and health care providers to address issues of concern about the provision of care to students with chronic illnesses by school district staff.

School's Responsibilities

- Identify students with chronic conditions, and review their health records as submitted by families and health care providers.
- Arrange a meeting to discuss health accommodations and educational aids and services that the student may need and to develop a 504 Plan, Individualized Education Program (IEP), or other school plan, as appropriate. The participants should include the family, student (if appropriate), school health staff, 504/IEP coordinator (as applicable), individuals trained to assist the student, and the teacher who has primary responsibility for the student. Health care provider input may be provided in person or in writing.
- Provide nondiscriminatory opportunities to students with disabilities. Be knowledgeable about and ensure compliance with applicable Federal laws, including Americans With Disabilities Act (ADA), Individuals With Disabilities Education Act (IDEA), Section 504, and Family Educational Rights and Privacy Act of 1974 (FERPA). Be knowledgeable about any State or local laws or district policies that affect the implementation of students' rights under Federal law.
- Clarify the roles and obligations of specific school staff, and provide education and communication systems necessary to ensure that students' health and educational needs are met in a safe and coordinated manner.
- Implement strategies that reduce disruption in the student's school activities, including physical education, recess, offsite events, extracurricular activities, and field trips.
- Communicate with families regularly and as authorized with the student's health care providers.
- Ensure that the student receives prescribed medications in a safe, reliable, and effective manner and has access to needed medication at all times during the school day and at school-related activities.
- Be prepared to handle health needs and emergencies and to ensure that there is a staff member available who is properly trained to administer medications or other immediate care during the school day and at all school-related activities, regardless of time or location.
- Ensure that all staff who interact with the student on a regular basis receive appropriate guidance and training on routine needs, precautions, and emergency actions.
- Provide appropriate health education to students and staff.
- Provide a safe and healthy school environment.
- Ensure that case management is provided as needed.
- Ensure proper record keeping, including appropriate measures to both protect confidentiality and to share information.
- Promote a supportive learning environment that views students with chronic illnesses the same as other students except to respond to health needs.
- Promote good general health, personal care, nutrition, and physical activity.

Student's Responsibilities

- Notify an adult about concerns and needs in managing his or her symptoms or the school environment.
- Participate in the care and management of his or her health as appropriate to his or her developmental level.

When Should Students With Asthma or Allergies Carry and Self-Administer Emergency Medications at School?

Guidance for Health Care Providers Who Prescribe Emergency Medications

Physicians and others authorized to prescribe medications, working together with parents and school nurses, should consider the list of factors below in determining when to entrust and encourage a student with diagnosed asthma and/or anaphylaxis to carry and self-administer prescribed emergency medications at school.

Most students can better manage their asthma or allergies and can more safely respond to symptoms if they carry and self-administer their life saving medications at school. **Each student should have a personal asthma/allergy management plan on file at school that addresses carrying and self-administering emergency medications**. If carrying medications is not initially deemed appropriate for a student, then his/her asthma/allergy management plan should include action steps for developing the necessary skills or behaviors that would lead to this goal. All schools need to abide by state laws and policies related to permitting students to carry and self-administer asthma inhalers and epinephrine auto-injectors.

Health care providers should assess student, family, school, and community factors in determining when a student should carry and self-administer life saving medications. **Health care providers should communicate their recommendation to the parent/guardian and the school**, and maintain communication with the school, especially the school nurse. Assessment of the factors below should help to establish a profile that guides the decision; however, responses will not generate a "score" that clearly differentiates students who would be successful.

Student factors:

- Desire to carry and self-administer
- Appropriate age, maturity, or developmental level
- Ability to identify signs and symptoms of asthma and/or anaphylaxis
- Knowledge of proper medication use in response to signs/symptoms
- Ability to use correct technique in administering medication
- Knowledge about medication side effects and what to report
- Willingness to comply with school's rules about use of medicine at school, for example:
    - Keeping one's bronchodilator inhaler and/or auto-injectable epinephrine with him/her at all times;
    - Notifying a responsible adult (e.g., teacher, nurse, coach, playground assistant) during the day when a bronchodilator inhaler is used and *immediately* when auto-injectable epinephrine is used;
    - Not sharing medication with other students or leaving it unattended;
    - Not using bronchodilator inhaler or auto-injectable epinephrine for any other use than what is intended;
- Responsible carrying and self-administering medicine at school in the past (e.g. while attending a previous school or during an after-school program).

NOTE: Although past asthma history is not a sure predictor of future asthma episodes, those children with a history of asthma symptoms and episodes might benefit the most from carrying and self-administering emergency medications at school. It may be useful to consider the following.

- Frequency and location of past sudden onsets
- Presence of triggers at school
- Frequency of past hospitalizations or emergency department visits due to asthma

Parent/guardian factors:

- Desire for the student to self-carry and self-administer
- Awareness of school medication policies and parental responsibilities
- Commitment to making sure the student has the needed medication with them, medications are refilled when needed, back-up medications are provided, and medication use at school is monitored through collaborative effort between the parent/guardian and the school team

School and community factors:

In making the assessment of when a student should carry and self-administer emergency medicines, it can be useful to factor in available school resources and adherence to policies aimed at providing students with a safe environment for taking medicines. Such factors include:

- Presence of a full-time school nurse or health assistant in the school all day every day
- Availability of trained staff to administer medications to students who do not self-carry and to those who do (in case student looses or is unable to properly take his/her medication); to monitor administration of medications by students who do self-carry
- Provision for safe storage and easy, immediate access to students' medications for both those who do not self-carry and for access to back-up medicine for those who do
- Close proximity of stored medicine in relationship to student's classroom and playing fields
- Availability of medication and trained staff for off-campus activities
- Communication systems in school (intercom, walkie-talkie, cell phones, pagers) to contact appropriate staff in case of a medical emergency
- Past history of appropriately dealing with asthma and/or anaphylaxis episodes by school staff
- Provision of opportunities for asthma and anaphylaxis basic training for school staff (including after-school coaches and bus drivers)

NOTE: The goal is for all students to eventually carry and self-administer their medications. However, on one hand, if a school has adequate resources and adheres to policies that promote safe and appropriate administration of life-saving medications by staff, there may be less relative benefit for younger, less mature students in this school to carry and self-administer their medication. On the other hand, if sufficient resources and supportive policies are NOT in place at school, it may be prudent to assign greater weight to student and family factors in determining when a student should self-carry.

This guidance sheet was developed as a partnership activity facilitated by the NAEPP, coordinated by the NHLBI of the NIH/DHHS

March 2005

Appendix I

Florida Asthma-Friendly School Award

The Florida Asthma-Friendly School Award

http://floridaasthmacoalition.com/schools/

Background: The number of school-aged children with asthma is on the rise in Florida and across the nation. Schools are increasingly burdened by the poor outcomes resulting from the disease, namely frequent nurse visits, increased absenteeism, decreased academic performance, and limitations on participation in physical activity. The Florida Asthma Coalition developed the Asthma-Friendly School Award to recognize schools that meet criteria for excellence in asthma management. The award criteria was designed with input from the Florida Department of Health, school staff and various professional organizations, including the Florida School Health Association, the Florida Association of School Nurses, the Florida Association of School Administrators, the Coordinated School Health Partnership, and the Florida Alliance for Heath, Physical Educations, Recreation, Dance, and Sport.

Getting Started: The first step for schools is signing up for an Asthma-Friendly School Mentor. Your mentor will be available to answer any questions you have. They will guide you through the application process. An *Asthma-Friendly School Resource Guide* is also available. It provides written step-by-step instructions on how to implement a school-based asthma management program to support students, faculty, and staff in dealing with this disease. It also includes details about how to fill out the *Asthma-Friendly School Award Application,* which can be submitted via e-mail or fax.

Benefits: The Asthma-Friendly School Award provides the blueprint for school administrators, faculty, and staff so they can help children manage their asthma, reduce absenteeism and improve health and academic outcomes. Award winners can enjoy a healthier student body and opportunities to show off their school's success through local and state marketing efforts.

Award Levels: There are four award levels (bronze, silver, gold, and platinum) based on the number and type of criteria achieved by the school. The table below provides a summary of the criteria.

Recognition Level	Recognition Criteria *Derived from evidence-based recommendations from the National Asthma Education and Prevention Program*
BRONZE	1. Establish an Asthma Leadership Team
	2. Provide Professional Development for School Nurses & School Staff on Asthma
	3. Ensure Access to Medication
	4. Provide Student Centered Asthma Management Support
	5. Post Asthma Awareness Posters
	6. Provide Physical Education and Activity Opportunities for Individuals with Asthma
SILVER	7. Provide Asthma-Self Management Education for Students
	8. Provide Asthma Education for Parents & Caregivers
GOLD	9. Implement a Healthy Schools Environment / Indoor Air Quality Program
PLATINUM	10. Adopt and Implement Asthma & Comprehensive Tobacco Free School Policies

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