

Affix patient label within this box.

Pediatric Asthma Education Checklist

Instructions for healthcare professionals: Please review education topics with patient/family and initial beside each topic to indicate completion.

			Initials
Establish primary concerns and learning goals with Patient/Family <i>(please print)</i>			
A	AIRWAYS - Review the basics of asthma <ul style="list-style-type: none"> Airway inflammation (<i>swelling</i>), increased mucous, bronchospasm; intermittent/variable in nature 		
S	SYMPTOMS - Review symptoms and asthma control <ul style="list-style-type: none"> Optimal control of asthma is the goal; optimal control means ZERO symptoms. Signs that asthma is not under optimal control: coughing, wheezing, tightness of chest, shortness of breath, nighttime coughing, decreased exercise, missed work/school, use of reliever/rescue medication 2 or more times a week. 		
T	TECHNIQUE - Assess MDI/spacer technique, assess spacer fit, and demonstrate optimal technique <ul style="list-style-type: none"> Shake canister, place MDI into spacer, place holding chamber mouthpiece between teeth and make a seal with lips, press MDI, inhale and exhale 6 breaths OR breathhold for 10 seconds and exhale (<i>no whistle should be heard</i>); wait 30 seconds between each puff of the MDI. Device recommendations (<i>please check</i>) <ul style="list-style-type: none"> <input type="checkbox"/> Less than 4 years → MDI/spacer with mask <input type="checkbox"/> 4 years and older → MDI/spacer with mouthpiece For all other devices, refer to the back of form for proper device technique. 		
	Comments on patient's device technique <i>(please print)</i>		
	TRIGGERS - Review asthma triggers <ul style="list-style-type: none"> Not everyone has the same triggers; important for patients to know what their asthma triggers are. Trigger avoidance can reduce the amount of medication needed to control the patient's asthma and can reduce their asthma symptoms. 		
H	HELP – Discuss when and where patients/families should go for help <ul style="list-style-type: none"> When to return to Emergency Department (<i>increased symptoms of respiratory distress</i>) Available sources of help locally: asthma education provided by healthcare professionals, written, and online resources. Provide two patient/family handouts <i>(please check)</i> <ul style="list-style-type: none"> <input type="checkbox"/> AHS <i>Pediatric Asthma Discharge Prescription and Short-Term Plan</i> or AHS <i>Childhood Asthma Essentials</i> (if prescription plan cannot be used) <input type="checkbox"/> iCAN <i>Metered Dose Inhaler (MDI) technique</i> handout 		
M	MEDICINE - Review asthma medicines <i>(refer to the back of form for list of medications & actions)</i> <ul style="list-style-type: none"> Reliever/Rescue: Quickly relieves symptoms by temporarily relaxing muscles around airway. Preventer/Controller: Should be used EVERY DAY to control airway swelling, symptoms and provide a good quality of life. Always discuss benefits/side-effects with patients/families: ICS are very safe & very effective, side-effects are uncommon – patients/families should discuss any possible side-effects with a healthcare professional. Prednisone: Potent anti-inflammatory effective within 4 hours 		
A	ASTHMA ACTION PLAN <ul style="list-style-type: none"> Encourage patients/families to complete an Asthma Action Plan <u>with their Family Physician</u>. Asthma Action Plans available at www.ucalgary.ca/icancontrolasthma/actionall 		
Date <i>(yyyy-Mon-dd)</i>	Name <i>(please print)</i>	Signature	Initials

Medically Accurate and Consistent Information for Healthcare Professionals Delivering Asthma Education

Pathophysiology: Asthma is the presence of airways hyper-reactivity in the absence of underlying lung/airway disease. Asthma is a chronic, inflammatory lung disease. Airways obstruction is reversible and symptoms are treatable.

Symptoms: Asthma symptoms are often mild, can be variable, intermittent; may occur during day, night, or with exercise.

Rhinitis: Common comorbidity with asthma. Symptoms, severity and duration are variable and troublesome; rhinitis needs to be treated. Visit <http://www.worldallergy.org/> to learn more.

Proper Device Technique

MDI/Spacer - 1) Shake MDI (10 times). **2)** Insert into spacer. **3)** Place mask over face **or** mouthpiece into mouth (teeth should not block mouthpiece; spacer should be positioned horizontally). **4)** Depress MDI once. **5)** Inhale/exhale for 6 breaths **or** 1 deep breath (no whistle should be heard on inspiration), hold for 10 sec, then breathe out. **6)** Wait 30 sec between each activation of MDI.

Turbuhaler - 1) Remove cap. **2)** Twist and Click (do not shake). **3)** Exhale. **4)** Place between teeth and lips (teeth should not block mouthpiece; spacer should be positioned horizontally). **5)** One deep, fast, forceful breath in (do not breathe into the turbuhaler). **6)** Remove inhaler from mouth before breathing out again. **7)** Replace cap.

Diskus - 1) Push cover open (do not shake). **2)** Slide button down. **3)** Exhale. **4)** Place between teeth and lips (teeth should not block mouthpiece; spacer should be positioned horizontally). **5)** One deep, fast, forceful breath in (do not breathe into the Diskus). **6)** Remove Diskus from mouth before breathing out again. **7)** Close cover.

Twisthaler (Asmanex) - 1) Twist cap off. **2)** Exhale. **3)** Place between teeth and lips (teeth should not block mouthpiece; spacer should be positioned horizontally). **4)** One deep, fast, forceful breath in (do not breathe into the twisthaler). **5)** Remove inhaler from mouth before breathing out again. **6)** Twist cap on fully to close & reload (should hear 'click')

Ellipta - 1) Open the foil tray and discard the desiccant. **2)** Mark the discard date 6 weeks from date opened on device. **3)** Open the cover until you hear a click. **4)** Exhale. **5)** Place between teeth and lips (teeth should not block mouthpiece; spacer should be positioned horizontally; do not block air vent with fingers). **6)** One long, steady, deep breath in (do not breathe into Ellipta). **7)** Remove Ellipta from mouth before breathing out again. **8)** Hold breath for 3 to 4 sec and breathe out. **9)** Close cover.

How to check for Empty, Expired, Broken Devices

MDI - Shake metal canister to confirm presence of liquid inside. **DO NOT** float in water to test amount of medication in canister.

Turbuhaler - Window ½ red = 20 doses left. Window all red = empty. Note: Desiccant will always remain in empty device.

Diskus - Counter reads 0 when device is empty. **Twisthaler -** Counter reads 0, cap will lock when device is empty.

Ellipta - Counter reads 0 when device is empty.

Expired - Check expiry dates on medication

Valves - Confirm valves are properly in place and intact on Spacer and/or mask. If valves are missing replace the device.

Action of Medications

Short acting B₂ (Reliever/Rescue) (e.g. Ventolin, Bricanyl) - Onset of action within few minutes. Temporarily relax the muscles around the airways. Relieves symptoms of Cough, Wheeze, SOB, Tightness of chest. Side effect(not toxic): shakiness, ↑ heart rate, hyperactivity, headache and nervousness, tremors

Inhaled Corticosteroid (Preventer/Controller) (e.g. Alvesco, Pulmicort, QVAR, Flovent, Asmanex, Arnuity) - Observable effect within 2-3 days & significant results within 2 weeks. Use daily as prescribed to help heal and prevent swelling in the airways. Local side effects: Hoarse voice, thrush – rinse mouth after using. Systemic side effects: Uncommon at doses used to treat asthma

Leukotriene Receptor Antagonist (e.g. Singulair) - Taken daily or with viral exacerbations. Bronchodilator & mild anti-inflammatory properties. No expected side effects

Oral Corticosteroid (e.g. Prednisone, Dexamethasone) - Effective within 4 hrs. Powerful anti-inflammatory; used for acute treatment.

Combination Medication (e.g. Advair, Symbicort, Zenhale) - Combines an anti-inflammatory and long-acting (12 hour) bronchodilator. Generally use ICS first before going to this modality of treatment. Local side effect: Hoarse voice, thrush – rinse mouth after using.

Anticholinergic (e.g. Atrovent) - Onset of action 5-15 minutes. Bronchodilator properties by reducing vagal tone to the airways. Side effects: Bad taste, dry mouth, tremor. Used as an adjunct to B₂ agonists in emergency department. **DO NOT** send home with patient.

When and Where to Get Help / Signs and Symptoms of Respiratory Distress:

- If there is an increase in the frequency/severity of asthma symptoms, parents should contact their family physician.
- Parents should return to the hospital with their child if:
 - Their child's cough, wheeze and/or shortness of breath is getting worse
 - The reliever medication does not improve the symptoms or the improvement does not last for three hours
- If the child has trouble breathing (breathing fast/gasping), blue lips/fingernails or difficulty speaking, parents should call 911.

Barriers to asthma control:

Medication side effects - ICS are safe at doses used to treat asthma. ICS do not affect growth – expected height achieved.

Finances (i.e. associated with medication costs, time missed at school/work) - Ensure treating physician is aware of issue prior to discharge and referral for follow up with patient's family physician. Involve social work if needed and/or if available at your site.

Adherence/Compliance - A significant factor contributing to poor asthma control is low adherence/compliance; provide medically accurate/consistent information to help patients/families understand the importance of adherence.

Interpretation & Translation Services - AHS Interpretation & Translation Services at **1-800-523-1786**.