



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.

			<b>Initials</b>
<b>Establish primary concerns and learning goals with Patient/Family</b> <i>(please print)</i>			
<b>A</b>	<b>AIRWAYS - Review the basics of asthma</b> <ul style="list-style-type: none"> <li>Airway inflammation (<i>swelling</i>), increased mucous, bronchospasm; intermittent/variable in nature</li> </ul>		
<b>S</b>	<b>SYMPTOMS - Review symptoms and asthma control</b> <ul style="list-style-type: none"> <li>Optimal control of asthma is the goal; optimal control means <b>ZERO</b> symptoms.</li> <li>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.</li> </ul>		
<b>T</b>	<b>TECHNIQUE - Assess MDI/spacer technique, assess spacer fit, and demonstrate optimal technique</b> <ul style="list-style-type: none"> <li>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 <b>OR</b> breathhold for 10 seconds and exhale (<i>no whistle should be heard</i>); wait 30 seconds between each puff of the MDI.</li> <li>Device recommendations (<i>please check</i>)               <ul style="list-style-type: none"> <li><input type="checkbox"/> Less than 4 years → MDI/spacer with mask</li> <li><input type="checkbox"/> 4 years and older → MDI/spacer with mouthpiece</li> </ul> </li> <li>For all other devices, refer to the back of form for proper device technique.</li> </ul> <b>Comments on patient's device technique</b> <i>(please print)</i>		
	<b>TRIGGERS - Review asthma triggers</b> <ul style="list-style-type: none"> <li>Not everyone has the same triggers; important for patients to know what their asthma triggers are.</li> <li>Trigger avoidance can reduce the amount of medication needed to control the patient's asthma and can reduce their asthma symptoms.</li> </ul>		
<b>H</b>	<b>HELP – Discuss when and where patients/families should go for help</b> <ul style="list-style-type: none"> <li>When to return to Emergency Department (<i>increased symptoms of respiratory distress</i>)</li> <li>Available sources of help locally: asthma education provided by healthcare professionals, written, and online resources.</li> <li><b>Provide two patient/family handouts</b> <i>(please check)</i> <ul style="list-style-type: none"> <li><input type="checkbox"/> AHS <i>Pediatric Asthma Discharge Prescription and Short-Term Plan</i> <b>or</b> AHS <i>Childhood Asthma Essentials</i> (if prescription plan cannot be used)</li> <li><input type="checkbox"/> iCAN <i>Metered Dose Inhaler (MDI) technique</i> handout</li> </ul> </li> </ul>		
<b>M</b>	<b>MEDICINE - Review asthma medicines</b> <i>(refer to the back of form for list of medications &amp; actions)</i> <ul style="list-style-type: none"> <li><b>Reliever/Rescue:</b> Quickly relieves symptoms by temporarily relaxing muscles around airway.</li> <li><b>Preventer/Controller:</b> 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 &amp; very effective, side-effects are uncommon – patients/families should discuss any possible side-effects with a healthcare professional.</li> <li><b>Prednisone:</b> Potent anti-inflammatory effective within 4 hours</li> </ul>		
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SAMPLE

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## **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, and 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 B<sub>2</sub> (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, and 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 B<sub>2</sub> 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**.