Alberta Health Services

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 *(please print)*	
A	**AIRWAYS - Review the basics of asthma** • Airway inflammation *(swelling)*, increased mucous, bronchospasm; intermittent/variable in nature	
S	**SYMPTOMS - Review symptoms and asthma control** • 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 and demonstrate optimal technique** • 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 *(no whistle should be heard)*; wait 30 seconds between each puff of the MDI. • Device recommendations *(please check)* ☐ Less than 4 years → MDI/spacer with mask ☐ 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 *(please print)*	
	TRIGGERS - Review asthma triggers • 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** • When to return to Emergency Department *(increased symptoms of respiratory distress)* • Available sources of help locally: asthma education provided by healthcare professionals, written, and online resources. • **Provide two patient/family handouts** *(please check)* ☐ AHS *Pediatric Asthma Discharge Prescription and Short-Term Plan* **or** AHS *Childhood Asthma Essentials* (if prescription plan cannot be used) ☐ iCAN *Metered Dose Inhaler (MDI) technique* handout	
M	**MEDICINE - Review asthma medicines** *(refer to the back of form for list of medications & actions)* • **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** • Encourage patients/families to complete an Asthma Action Plan with their Family Physician. Asthma Action Plans available at **www.ucalgary.ca/icancontrolasthma/actionall**	

Date *(yyyy-Mon-dd)*	**Name** *(please print)*	**Signature**	**Initials**

Alberta Health Services

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 *(please print)*		
A	**AIRWAYS - Review the basics of asthma** • Airway inflammation *(swelling)*, increased mucous, bronchospasm; intermittent/variable in nature	
S	**SYMPTOMS - Review symptoms and asthma control** • 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 and demonstrate optimal technique** • 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 *(no whistle should be heard)*; wait 30 seconds between each puff of the MDI. • Device recommendations *(please check)* ☐ Less than 4 years → MDI/spacer with mask ☐ 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 *(please print)*	
	TRIGGERS - Review asthma triggers • 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** • When to return to Emergency Department *(increased symptoms of respiratory distress)* • Available sources of help locally: asthma education provided by healthcare professionals, written, and online resources. • **Provide two patient/family handouts** *(please check)* ☐ AHS *Pediatric Asthma Discharge Prescription and Short-Term Plan* **or** AHS *Childhood Asthma Essentials* (if prescription plan cannot be used) ☐ iCAN *Metered Dose Inhaler (MDI) technique* handout	
M	**MEDICINE - Review asthma medicines** *(refer to the back of form for list of medications & actions)* • **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** • Encourage patients/families to complete an Asthma Action Plan with their Family Physician. Asthma Action Plans available at **www.ucalgary.ca/icancontrolasthma/actionall**	

Date *(yyyy-Mon-dd)*	**Name** *(please print)*	**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 **www.whiar.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)

MDI alone **- Not recommended - 1)** Shake MDI (10 times). **2)** Breathe out. **3)** Place MDI between lips/teeth (teeth should not block mouthpiece). **4)** Start to breathe in slowly and depress inhaler and keep breathing in slowly until you have taken a full breath. **5)** Hold for 10 sec and breathe out. **6)** Wait 30 sec between each activation of MDI.

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.
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_2 (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)* **-** 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_2 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.

Language/Cultural - For support contact **AHS Interpretation & Translation Services** at **403- 955-1199**. If you require translation support outside of regular office hours contact **Language Line Services** at **1-800-523-1786**.