Red Light, Yellow Light, Green Light GO!!!
Asthma Action Plans in Practice
Provider Education Program

AFHTO Conference

October 16th, 2012

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Objectives

By the end of this presentation, the participant will:

- Have a baseline knowledge of the components of an asthma action plan;
- Be aware of the evidence for asthma action plans; and
- Be able to complete a basic asthma action plan

Important to remember…..

- Discussing Action Plans for those with a confirmed diagnosis of asthma with objective measures
  - reversible airway obstruction (post bronchodilator)
  - variable airflow limitation over time or
  - airway hyper-responsiveness (Methacholine)
- Paediatrics age 7 – 12
- Adult 12+

Canadian Respiratory Journal 2010;17(1) : 15-24.

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What is an Action Plan?

- Document that provides written instructions on when and how to
  - Increase reliever (beta-2 agonist) use
  - Increase controller (inhaled ± oral corticosteroid) dose
  - Seek medical attention
- Multiple steps or “zones”
  - Traffic light system
  - 2 to 4 steps
- Symptom ± Peak Flow guided
- All patients and caregivers should receive patient self-management education, including a written AAP

Canadian Asthma Consensus Report, 2003 Update

***Canadian Respiratory Journal* 2010;17(1) : 15-24.**

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Why use Action Plans?

- Asthma Action Plans (AAP), regular medical review and self-management education improve outcomes for asthma in adults

  Gibson PG, Cochrane Database Syst Rev 2003; (1): CD001117

- AAPs based on personal best peak flow, 2 to 4 action points and both inhaled and oral corticosteroids for treatment consistently improved asthma health outcomes Gibson PG & Powell H, Thorax 2004; 59: 94-99

- Individuals without a written AAP were 4 times more likely to be admitted to hospital and 2.2 times more likely to visit the ED in the next 12 months than those with a written AAP

  Adams RJ et al. Thorax 2000; 55: 566-573

- Written AAPs associated with a 70% reduction in the risk of death Abramson MJ et al. Am J Resp Crit Care Med 2001; 163(1): 12-18

Action Plans – The Reality

- In Canada, only 21% of patients with asthma possess a written asthma action plan
- Of those who had a written AAP, only 11% were able to recall if their AAP contained information about what to do if they had a flare

Asthma in Canada Survey. Glaxo Wellcome Inc, 2000

What to do in the "Yellow Zone"

"Specific evidence-based recommendations to guide adjustment of controller medication in the 'yellow zone' have not been clearly stipulated in previous guidelines"

Lougheed MD et al. *Can Respir J 2012; (19)2: 127-164*

- **CTS 2012 Guideline Update**
  - **Initiation of inhaled corticosteroids (ICS)**
  - **Escalating ICS therapy**
  - **Fixed-dose ICS/LABA combination**
  - **Systemic corticosteroids**

Written Action Plans: Intermittent ICS

- Evidence does not support the use of intermittent ICS started only at the onset of an episode of loss of asthma control in children or adults, which underlines the importance of prescribing and ensuring adherence to daily controller therapy.

Lougheed MD et al. *Can Respir J 2012; (19)2: 127-164*

Written Action Plans: Escalating ICS

- The common practice of doubling the dose of ICS has not been shown to be efficacious in randomized controlled trials, and therefore is not routinely recommended.

  Lougheed MD et al. *Can Respir J 2012; (19)2: 127-164*

- A trial of four-fold or greater increase in ICS dose for 7 to14 days is suggested in adults with a history of severe exacerbations in the past year. This is not recommended in preschoolers, children or adolescents.

  Lougheed MD et al. *Can Respir J 2012; (19)2: 127-164*

Written Action Plans: Fixed-dose ICS/LABA Combination

- The most appropriate yellow-zone therapy in individuals on fixed-dose ICS/LABA therapy is not yet known.
  - There is insufficient evidence to make a recommendation for or against escalating ICS strengths of fluticasone/salmeterol or mometasone/formoterol as part of self-management action plans.

Lougheed MD et al. Can Respir J 2012; (19)2: 127-164

- Older adolescents (16 years of age and over) and adults on budesonide/formoterol may benefit from adjustable maintenance dosing (increasing to a maximum of 4 inhalations twice daily).

Lougheed MD et al. Can Respir J 2012; (19)2: 127-164

Written Action Plans: Oral Corticosteroids (OCS)

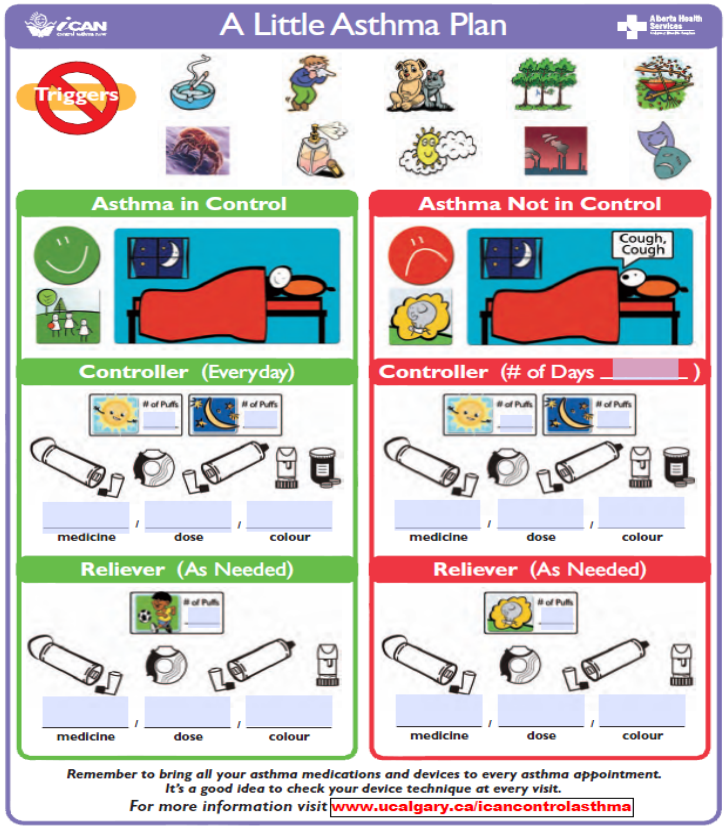
- OCS are beneficial in the management of established asthma exacerbations
  - In adults, most of the evidence of the efficacy of OCS arises from trials of treatment of asthma in the emergency department setting and it may not be valid to extrapolate that as justification for its inclusion in action plans
  - There is at least some direct evidence from RCTs of the efficacy of OCS in pediatric action plans

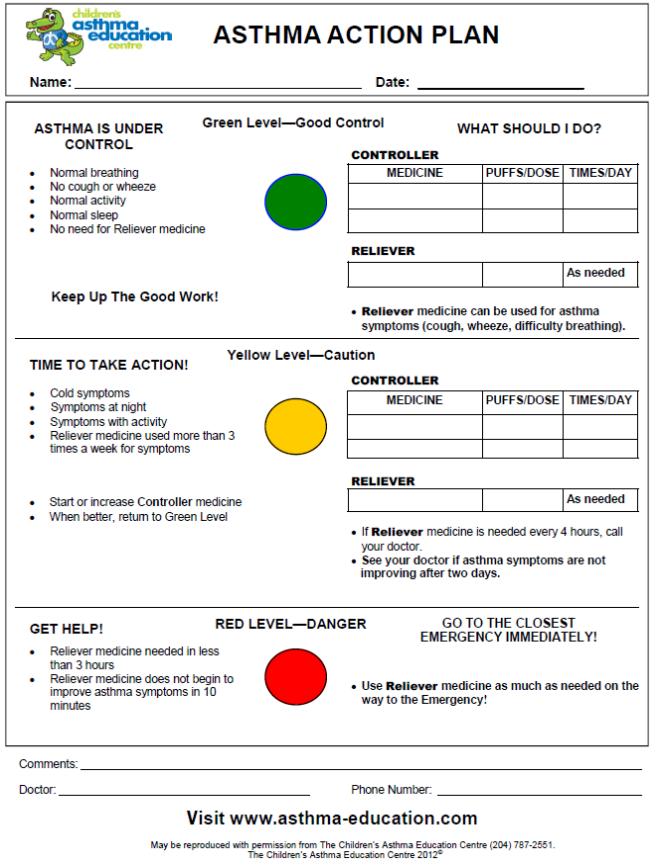
Lougheed MD et al. Can Respir J 2012; (19)2: 127-164

- As part of a written action plan, in children and adults, we suggest OCS be reserved for individuals with recent severe exacerbations who fail to respond to inhaled SABA

Lougheed MD et al. Can Respir J 2012; (19)2: 127-164

Pediatric Asthma Action Plan





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Case Study

- Lisa is a 20 year old woman who has recently been diagnosed with asthma with pulmonary function testing
  - Personal best peak flow is 400 L/min
  - Her main trigger is cigarette smoke
  - She has allergies to tree, grass and ragweed pollen and is allergic to dust and dust mites
  - Currently she is complaining of shortness of breath, cough and wheeze while playing soccer and is waking at night one or two nights per week due to cough

Canadian Respiratory Journal **2010;17(1) : 15-24.**

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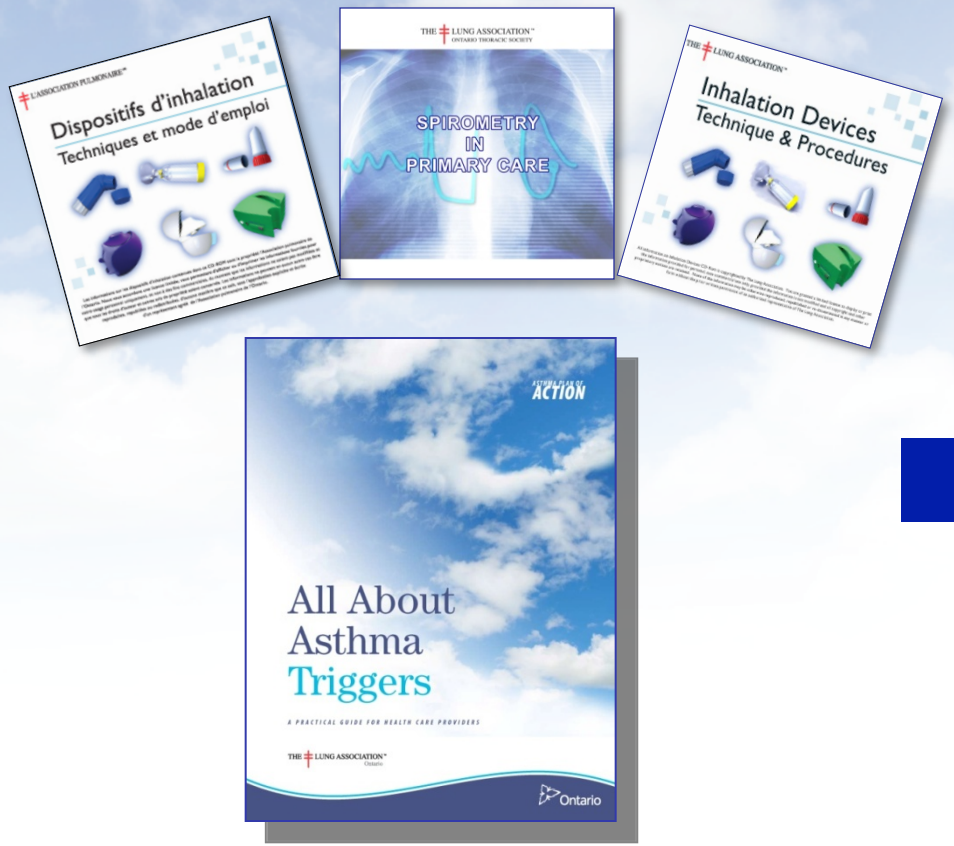
Resources



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PEP Website

www.olapep.ca

Online CME

http://asthma.discoverycampus.com

Thank You

This program is funded by the Ministry of Health and Long-Term Care

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