

# Improving the care of children with asthma

**The majority of children with asthma, especially Māori children, do not have good control of their asthma**

**Studies suggest that the majority of children with asthma do not have good control. This appears to be associated with low asthma pharmaceutical use compared to the recommendations of asthma management guidelines.**

Asthma has been identified as one of the most heavily under treated diseases. In children there is low usage of long acting beta agonists (LABAs) despite high average daily doses of inhaled corticosteroids.

New Zealand has one of the highest asthma prevalence rates in the world. It affects over 200,000 children, which is approximately one in four. Rates of hospital admissions due to asthma are highest in children, being about double that of adults, with the majority occurring in children under five years.

Although the prevalence of childhood asthma in New Zealand is similar for Māori and non-Māori, Māori children with asthma have more severe symptoms when presenting for routine or acute asthma care, require more time off school because of asthma and require hospitalisation for asthma almost twice as often as non Māori children. While admission rates for childhood asthma have gradually decreased in New Zealand Europeans, rates for Māori and Pacific children have risen.

Despite increased need for good asthma management Māori children are less likely to receive adequate education, have an asthma action plan or be prescribed preventive medication. Other commonly cited barriers for Māori with asthma include cost for consultation, access to transport and telephone and the attitude of the doctor/provider including bias and discrimination.

Implementation of The Paediatric Society of New Zealand evidence based guideline 'Management of Asthma in Children Aged 1-15 Years' should lead to improved asthma outcomes for all children. LABAs do not feature in the management of asthma in children under the age of four years for primary care but its use in children aged 5-15 years is well represented in the following algorithm from the guideline.

The text for this article is adapted from: Asher I, Byrnes C, Editors 'Trying to Catch Our Breath - The Burden of Preventable Breathing Diseases in Children and Young People.' The Asthma and Respiratory Foundation, 2006. Available from: <http://snipurl.com/12apl>

# Summary of Stepwise Pharmacological Management in Children Aged 5-15 Years

## Step 1: Mild Intermittent Asthma

Inhaled short acting  $\beta_2$  agonist as required

## Step 2: Regular Preventer Therapy

Add inhaled steroid 200-400 microgram/day beclomethasone dipropionate (BDP) or budesonide (BUD), or 100-200 microgram/day fluticasone

- use the higher dose for greater severity,

(cromoglycate, nedocromil or montelukast<sup>1</sup> if inhaled steroid cannot be used)

## Step 3: Add on Therapy

1. Add inhaled long acting  $\beta_2$  agonist (LABA)<sup>2</sup>

2. Assess response to LABA:

- good response to LABA - continue LABA  
some benefit from LABA in maximum dose but control still inadequate, increase inhaled steroid to 400 microgram/day BDP or BUD, **or** 200 microgram/day FP (if not already on this dose)
- no response to LABA - Stop LABA consider trial of montelukast **or** SR theophylline

## Step 4: Persistent Poor Control

Increase inhaled steroid to 600-800 microgram/day BDP or BUD, or 300-400 microgram/day fluticasone<sup>3</sup>

Continue to review add on therapy

Refer to paediatrician if not improving

## Step 5: Continued Poor Control

Refer to paediatrician

Maintain high dose inhaled steroid

Consider steroid tablet in lowest dose providing adequate control

1. The only NZ Registered Leukotriene Receptor Antagonist, montelukast, is not currently on the Pharmaceutical Schedule.
2. Maximum recommended dose of eformoterol is 12 microgram/bd, and salmeterol 50 microgram/bd.
3. These levels of ICS are greater than usually required to achieve optimal control, do not hesitate to seek advice from a paediatrician.

The algorithm is taken from: 'Management of Asthma in Children Aged 1-15 Years' Paediatric Society of New Zealand Available from: <http://snipurl.com/thzj>

