

# Asthma: Thinking SMART, using AIR, and making a difference

New guidelines for asthma management were published in 2020. Along with incorporating recent advances in the treatment of asthma, they recognise the inequities in asthma care experienced by Māori and Pacific peoples. Pharmacist prescriber **Helen Cant** outlines what has changed in guideline recommendations and, in collaboration with medical writer **Gayle Robins**, discusses strategies for reducing the disproportionate asthma burden in Māori and Pacific peoples

**A**sthma is characterised by a reversible narrowing of the airways due to tightening of muscle in the wall of the airway, and by inflammation and swelling of airway mucosa (Panel 1). Airway narrowing and excess mucous production lead to a variety of symptoms and signs including wheezing, cough, shortness of breath and observed breathing difficulty.

Asthma is a major public health problem in New Zealand affecting up to 20 per cent of children and adults. According to a recent report, the prevalence of asthma in New Zealand has not significantly changed over the years 2000 through 2019 and asthma hospitalisations have even declined slightly. Mortality rates, though, while reaching a low point in 2010 have increased, hitting a high point in 2017 of 2.5 deaths per 100,000 people in New Zealand.<sup>1</sup>

Although overall asthma prevalence has stayed generally static, this is not the case for Māori and Pacific peoples, where asthma remains more prevalent than in non-Māori, non-Pacific peoples, and hospitalisation and death due to asthma are unacceptably high – disparities that have been persistent in New Zealand for years now.<sup>1</sup>

In 2019, asthma hospitalisations for both

Māori and Pacific peoples were more than three times those of New Zealand Europeans (rate ratios 3.24 and 3.22, respectively), with the ratio for Māori increasing markedly from that reported in 2018. Asthma mortality rate ratios over 2012–2017 followed the same pattern: respectively, Māori and Pacific peoples had rates 3.36 and 2.76 times those of New Zealand Europeans.<sup>1</sup>

Despite awareness of these differences, the level of care Māori and Pacific peoples receive does not match their disease burden. And, for a number of years, studies have documented disparities in the two main aspects of asthma management, namely:<sup>2</sup>

- asthma education, knowledge and self-management, and action plans
- asthma medication.

Māori with asthma are less likely to be prescribed inhaled corticosteroids (ICS), have an action plan or receive adequate education, in addition to facing other major barriers to good asthma management such as poor access to care, and services that do not meet their needs. These considerations are likely to be similar in Pacific peoples.<sup>3</sup> Education, knowledge and self-management help to reduce disparities and need to be an ongoing component of asthma care, along with appropriate medication.

## How can health professionals help with asthma education, knowledge and self-management?

People with well-controlled asthma:

- have no or minimal symptoms both during the day and at night
- need little or no as-needed medication
- can participate in physical activities without restriction
- have normal or near-normal lung function
- avoid serious asthma exacerbations, including the need for hospitalisation.

Effective self-management of asthma requires patients and their whānau to have a good understanding of asthma and how it is managed. People who are unaware of what good asthma management looks like are more likely to normalise and accept sub-optimal asthma control. Healthcare professionals have a valuable role in improving this understanding, supporting patients/whānau and improving outcomes by embedding asthma education into their practice.<sup>4</sup>

Asthma education should be tailored to the patient/whānau. Poor asthma literacy is associated with reduced self-efficacy and decreased use of asthma medicines and is likely to contribute to asthma disparities. Always ensure asthma information is communicated in a way that aligns with patient/whānau health literacy, and check for understanding.<sup>4</sup> The Health Quality and Safety Commission's "Three steps to meeting health literacy needs" ([tinyurl.com/yxp7xrsw](https://www.tinyurl.com/yxp7xrsw)) has been developed in the context of achieving equitable health outcomes for Māori and maintaining cultural safety. It provides a useful framework for assessing patient/whānau asthma knowledge, allowing existing information

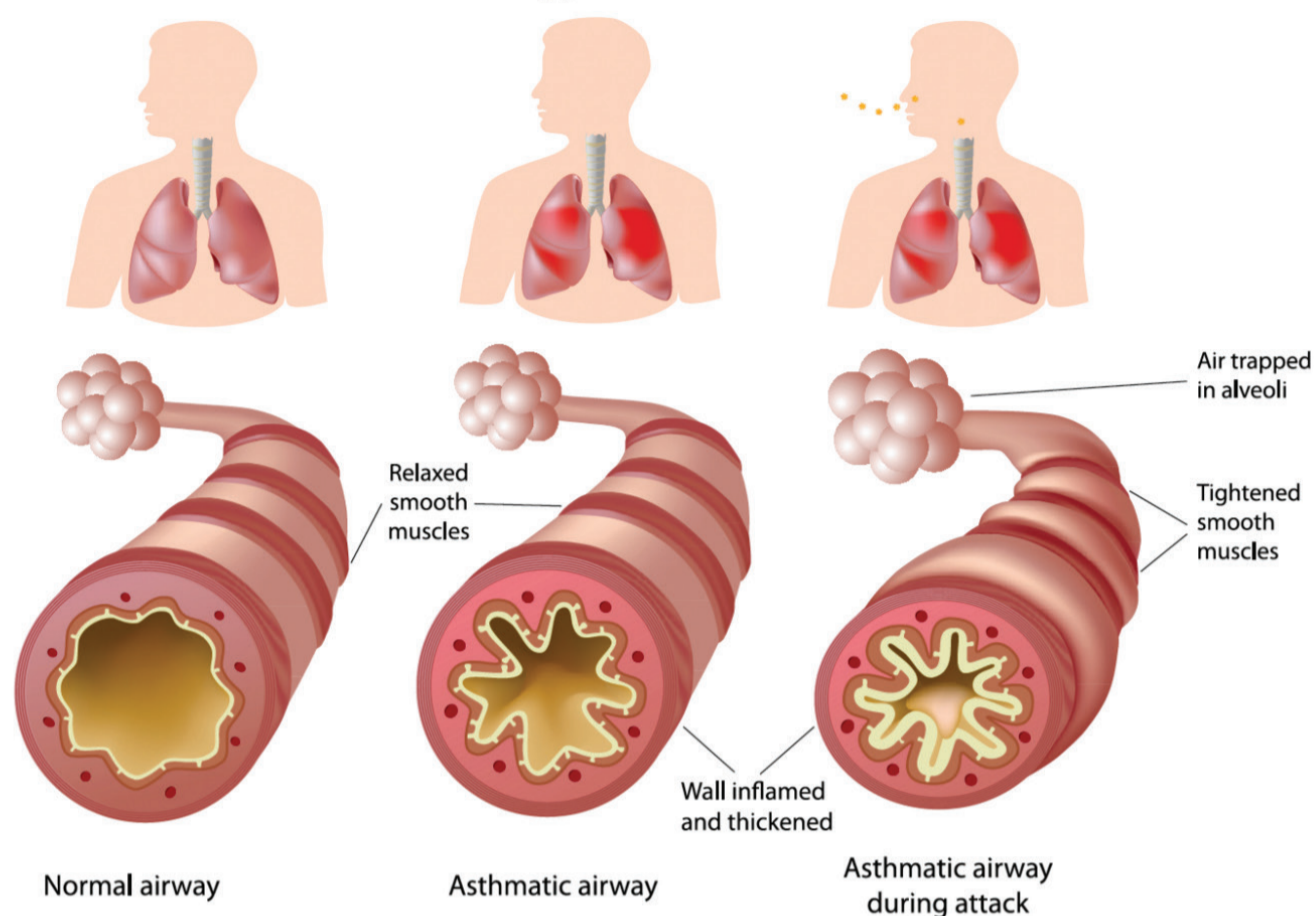
## KEY POINTS

- Asthma prevalence, hospitalisations and deaths remain markedly high among Māori and Pacific peoples.
- Māori with asthma are less likely to be prescribed inhaled corticosteroids (ICS), have an action plan or receive adequate education.
- Strategies to achieve equitable health outcomes include increasing patient/whānau asthma knowledge, and providing care that is appropriate, acceptable and effective.
- Treatment with a short-acting beta2 agonist (SABA) alone is not recommended for adults and adolescents as it increases exacerbation risk.
- AIR therapy with combined ICS/fast onset long-acting beta2 agonist (LABA), initiated from first diagnosis, is the preferred treatment for adults and adolescents with asthma.
- Inadequate technique, along with poor adherence, are the two most common reasons for sub-optimal asthma control.

to be reinforced and gaps in understanding or misconceptions to be corrected.

Once a patient's level of asthma knowledge has been established, it can be built on step by step – with a focus on expanding one aspect in the understanding of asthma at every point of contact.<sup>4</sup>

## Pathology of Asthma



Allia Medical Media on Shutterstock

### Why were recommendations changed?

Previous recommendations date back many years and were based on the belief that mild asthma was primarily bronchoconstriction. We now know that inflammation of the airways is found in most people with asthma, even if they only have symptoms intermittently.

Clinical studies have shown that treatment with an ICS significantly reduces the frequency and severity of asthma symptoms, and markedly reduces the risk of experiencing, or even dying from, an asthma attack.

Strong evidence shows that, although short-term relief of asthma is achieved with short-acting beta2 agonist (SABA)-only treatment, this does not protect from severe exacerbations. In fact, regular or frequent use of SABA treatment increases the risk of exacerbations, worsening airway inflammation and lung function, and increasing allergic reaction.

The GINA report states that overuse of SABA treatment (eg, three or more canisters per year) is associated with an increased risk of severe exacerbations, and 12 or more canisters per year is associated with increased risk of asthma-related death.<sup>6</sup>

The new recommendations aim to:

- reduce the risk of serious exacerbations
- reduce the pattern of people depending on SABA-only treatment to manage their asthma
- provide consistent treatment plans across the whole range of asthma severity.

### PANEL 1

#### QUICK REFRESHER ON ASTHMA

Asthma is caused by a combination of genetic and environmental factors. For many people, it occurs in combination with allergic conditions, such as eczema or allergic rhinitis (hay fever), or they may have relatives with these conditions.

There are different types of asthma, but the underlying airway narrowing is a result of:

- bronchoconstriction due to contraction of smooth muscle
- airway wall thickening due to swelling of the lining (inflammation)
- increased mucous production.

**Symptoms** – wheezing, shortness of breath, cough, chest tightness, difficulty breathing out and increased mucous production.

**Triggers** – infections, allergens (eg, pollen, dust mites, pets), smoke, exercise, weather (eg, cold or humidity), chemicals (eg, perfumes, cleaning products, aerosol sprays) and stress.

Medicines, such as beta-blockers (including in eye drops), NSAIDs and aspirin, can also trigger asthma. NSAIDs and aspirin can often be taken safely as they do not trigger asthma in everyone.

ACE inhibitors frequently cause a cough that can be confused with asthma, and in some people with unstable airways, these drugs may trigger an asthma attack.

People should be encouraged to identify their asthma triggers.

be customised by the health professional and emailed to the patient.

Action plans may be based on symptoms with or without peak flow measurements and are either three or four-stage depending on both patient and health professional preference. The four-stage plan has an extra step giving patients the option of increasing the dose of ICS up to four-fold, by increasing the frequency of use and/or the dose.<sup>3</sup>

Asthma management is a cycle of ongoing assessment, treatment and review. Remember, when discussing asthma management with patients/whānau, personal goals should be included and documented as shared goals of care.

#### Guidelines reviewed and updated in 2020

New asthma guidelines were published by the ARFNZ in 2020 and include recommendations for improving care in Māori and Pacific peoples.<sup>3</sup> There are no longer separate guidelines for adults and adolescents (people aged 12 and over) as treatment is the same. The child guidelines have also been reviewed and updated.<sup>5</sup> These guidelines are based on recommendations by the Global Initiative for Asthma (GINA).

The GINA Assembly includes members from 45 countries. Every year, they publish a report<sup>6</sup> and a pocket guide,<sup>7</sup> with the intent to provide a comprehensive international approach to management of asthma and to provide clear guidelines and feasible tools for clinical practice, using a strong evidence base.

In 2019/20, there were major changes to GINA's recommendations for asthma treatment. The large, double-blind study used to support the GINA recommendations investigated AIR/SMART therapy – combined inhaled corticosteroid (ICS)/fast onset long-acting beta2 agonist (LABA) budesonide/formoterol, used either as needed or regularly plus as needed.

It is important to note that these recommendations apply only to people with asthma, not to people with chronic obstructive pulmonary disease (COPD).

### Asthma action plans are available in te reo Māori, Samoan, Tongan and English

#### Are you familiar with 'AIR' therapy?

Anti-inflammatory reliever (AIR) therapy is the use of a combination budesonide/formoterol inhaler as a reliever medication. It can be used either only as needed, or regularly *plus* as needed. This approach includes and extends the “single combination ICS/LABA inhaler maintenance and reliever therapy” (SMART) approach previously recommended. The AIR regimen and the use of asthma action plans have been shown to improve outcomes for Māori.<sup>3</sup>

- AIR therapy requires an ICS in combination with a fast-onset LABA. In New Zealand this is budesonide/formoterol (formoterol and efomoterol are alternative names for the same medication).
- Other combinations of ICS/LABA should not be used in this way.
- When using budesonide/formoterol as maintenance and reliever therapy, a SABA reliever should not be prescribed.
- For people using a combination ICS/LABA maintenance inhaler that is not budesonide/formoterol, a SABA reliever should still be used.
- The budesonide/formoterol reliever combination should not be prescribed in addition to other ICS/LABA preparations.
- A LABA should not be prescribed without an ICS for people with asthma.
- Note that the budesonide/formoterol 400µg/12µg formulation should not be used as a reliever, due to the potential for use of inappropriately high ICS and LABA doses.

**AIR therapy in New Zealand** – the only ICS/fast-onset LABA combination currently available in New Zealand is budesonide/formoterol, and only the dry powder inhalers are approved for reliever use. A budesonide/formoterol pressurised metered dose inhaler is available, but this would represent an off-label prescription. ➔

When in discussion with patients be sure to use appropriate language, not jargon, and try to adopt terms the patient or their whānau has used, thereby building a common language. For example, use “puffer” if the patient refers to their inhaler in this way. Avoid overloading patients with too much information at a time – start with the most important point. Be creative when trying to increase understanding – use illustrative analogies, and “what-if” scenarios where patients describe how they would manage a situation likely to result in asthma.

Offer targeted resources for patients to take away; check with asthma service providers for availability of these. A map providing a directory of local asthma societies with contact details is available from the Asthma and Respiratory Foundation NZ ([tinyurl.com/astsocmap](http://tinyurl.com/astsocmap)). ARFNZ has a variety of asthma resources, with some offered in te reo Māori, and in Samoan, Tongan and Chinese languages.

#### Asthma action plans

Everybody with asthma should be encouraged to have a personalised asthma action plan. These provide direction to patients on when and how to adjust treatment over the short term in response to worsening symptoms, and when to access additional medical care. They have been shown to improve health outcomes and reduce hospitalisations.<sup>3,4</sup>

Plans should be updated annually, and be appropriate for treatment level, asthma severity, health literacy, culture and self-management ability.

Action plans come in a range of formats – written, pictorial, electronic, app – with adult and child asthma action plans available in te reo Māori, Samoan, Tongan and English. They can be downloaded from the ARFNZ website, ordered in print and are available on the My Asthma App (see Asthma resources near the end of this article). The foundation also provides adult asthma action plans as interactive PDFs; these can

## PANEL 2

### TOP 10 WAYS HEALTH PROFESSIONALS CAN HELP CHILDHOOD ASTHMA (APART FROM PRESCRIBING MEDICINES)

#### Access

- Help the family/whānau understand how to access care appropriate to asthma severity, and identify any barriers they have.
- Consider referral to an asthma educator, nurse practitioner, public health nurse, Māori health provider or paediatrician where these are available and if considered appropriate.

#### Ambulance

- Ensure the child and whānau know when and how to call an ambulance.
- In some regions, this service may incur a charge, so ensure families have ambulance membership.

#### Asthma action plan

- Develop an appropriate asthma action plan with the child and whānau, and check the plan on each visit.
- Plans should be made available to schools and childcare facilities where appropriate (see Asthma resources).

#### Concordance

- First, assume inhaler device technique is poor, and check it.
- Second, assume adherence is imperfect, and don't judge.
- Ask questions in an open way, such as: "Many people take less preventer than the doctor prescribes – about how many times a week do you forget to take your asthma preventer?"

#### Health literacy

- Assume little health literacy, and use steps described in He Māramatanga Huangā: Asthma Health Literacy for Māori Children in New Zealand ([tinyurl.com/yc5z7mx8](http://tinyurl.com/yc5z7mx8)).
- Specifically, ask the child and whānau what they understand, what they want to know, and use simple language to explain about asthma (eg, use the term "asthma flare-up" rather than "asthma exacerbation", and use "puffer" instead of "inhaler").
- Work with families to attain and maintain wellness, and not accept sickness as the norm.

#### Housing

- Ask about housing and unhealthy features (eg, crowding, cold and dampness, mould, unflued gas heaters).
- Provide the family/whānau with information about having a healthy home ([tinyurl.com/zyhdubn3](http://tinyurl.com/zyhdubn3)).
- Refer for healthy housing assessment if available in your region.

#### Income

- Assume most families struggle with income, and ask about it.
- Enquire about the ability to access the doctor, a pharmacy, and pay prescription costs.
- Does the child have partly or uncontrolled persistent asthma and meet criteria for a Child Disability Allowance ([workandincome.govt.nz](http://workandincome.govt.nz))?
- Encourage all family/whānau to use the same pharmacy to reduce prescription copayments ([tinyurl.com/6bb46dwp](http://tinyurl.com/6bb46dwp)).

#### Influenza vaccine

- Ensure children with asthma or recurrent wheeze receive the influenza vaccine every year from six months of age.

#### Relationships

- Encourage continuity of care with doctors, nurses, asthma nurse educators and pharmacists in primary and secondary care.
- Easy access to a trusted nurse and telephone follow-up is recommended.

#### Smoke exposure

- Ask about smoke exposure, including vaping.
- Encourage reducing tobacco smoke exposure in the child's environment (home and car) and recommend smoking cessation.
- If appropriate, give advice and refer to a local smoking cessation service or Quitline (0800 778 778).
- Provide the Health Promotion Agency pamphlet A guide to making your home and car smokefree ([health.govt.nz](http://health.govt.nz)).

Source: New Zealand Child Asthma Guidelines [nzrespiratoryguidelines.co.nz](http://nzrespiratoryguidelines.co.nz)

Image: Asthma and Respiratory Foundation NZ

Spacers are fully subsidised on PSO and should be supplied free of charge to patients

### What has changed for treatment of adults and adolescents?

Starting asthma treatment with a SABA (ie, salbutamol or terbutaline) alone is no longer recommended. Instead, it is recommended an ICS be initiated from first diagnosis.

This can be done either by introducing AIR treatment or by using traditional ICS/SABA therapy (see later). One of the risks of traditional ICS/SABA therapy is that people do not use the ICS and rely solely on the SABA. AIR therapy removes this risk as the ICS is included in both the reliever and maintenance treatment.

#### Stepwise AIR-based algorithm using budesonide/formoterol 200µg/6µg<sup>3</sup>

The stepwise approach to asthma management entails a patient stepping up management levels as required to achieve and maintain asthma control and reduce exacerbation risk. A step down is considered if symptoms are controlled for three months and the patient is at low exacerbation risk.

**Step 1** – one inhalation as required to relieve symptoms to a maximum of six inhalations on a single occasion or a total of up to 12 inhalations daily.<sup>8</sup> This results in a similar short-term bronchodilator response to that of a 200µg dose (ie, two 100µg doses) of salbutamol and, in adults and adolescents with mild asthma, reduces the risk of a severe asthma exacerbation by at least 60 per cent compared with SABA reliever alone.

**Step 2** – regular maintenance treatment is implemented as either one inhalation twice daily or two inhalations once daily, depending on patient preference.

Plus one inhalation as required, to a maximum of six inhalations on a single occasion or a total of up to 12 inhalations daily.<sup>8</sup>

**Step 3** – maintenance treatment is stepped up to two inhalations twice daily. Plus one inhalation as required, to a maximum of six inhalations on a single occasion or a total of up to 12 inhalations daily.<sup>8</sup>

In adults and adolescents taking maintenance ICS/LABA therapy, budesonide/formoterol used as a reliever reduces the risk of a severe asthma exacerbation by about one-third compared with using a SABA reliever. Thus, budesonide/formoterol used both as a reliever plus regularly as maintenance therapy is the preferred treatment for patients with moderate to severe asthma.

Plus one inhalation as required, to a maximum of six inhalations on a single occasion or a total of up to 12 inhalations daily.<sup>8</sup>

#### Stepwise ICS/SABA-based algorithm for asthma management

The current recommendations are:<sup>3</sup>

**Step 1** – introduce standard-dose ICS as maintenance treatment, plus a SABA as needed.

**Step 2** – use standard-dose ICS/LABA as maintenance treatment, plus a SABA as needed.

**Step 3** – use high-dose ICS/LABA as maintenance treatment, plus a SABA as needed.

Note the recommendation that if a severe exacerbation of asthma occurs, consider switching to AIR therapy.

#### ICS doses

For most people, most of the clinical benefit is obtained with low-dose ICS. Some people will need standard-dose ICS if their asthma is not well controlled with low-dose ICS, but concordance and inhaler technique should be checked first. A few will need high-dose ICS.

When an ICS is initiated as maintenance therapy together with a SABA reliever, a standard dose of ICS should be used. The recommended standard daily doses of the different ICS preparations for adults are<sup>3</sup>:

- beclomethasone dipropionate 400–500µg/day (Beclazone\*)
- beclomethasone dipropionate extrafine (Qvar\*) 200µg/day
- budesonide 400µg/day
- fluticasone propionate 200–250µg/day
- fluticasone furoate 100µg/day.

\*Subsidised brands at time of publishing

#### What if optimal inhaled therapy doesn't work?

Alternative treatments for asthma may include:

**Long-acting muscarinic antagonists** – are not subsidised in New Zealand for the treatment of asthma, although tiotropium is Medsafe-approved for add-on maintenance treatment. Note that LAMAs are funded for patients with COPD, and there will be a significant cohort who have coexisting asthma and COPD.

**Montelukast** – is a leukotriene receptor antagonist. In New Zealand, it is indicated for adults and children over the age of two for prophylaxis of asthma or relief of allergic rhinitis (seasonal or perennial). Montelukast should be considered as add-on therapy when control is not achieved with optimal standard treatment; for everyone with respiratory conditions exacerbated by aspirin; and may be useful in exercise-induced asthma or people with coexisting rhinitis.<sup>3</sup>

Note the precaution around neuropsychiatric side effects with montelukast.<sup>9</sup> Patients taking montelukast should be advised to contact a health professional if they experience sleeping problems, unusual dreams, changes in behaviour, hallucinations, anxiousness or agitation, confusion or suicidal thoughts.<sup>10</sup>

**Mast cell stabilisers** – sodium cromoglicate and nedocromil inhalers are approved for use in mild asthma; however, the supplier, Sanofi, has discontinued supply in New Zealand and these inhalers are no longer available. Patients should be managed on alternative treatments, in line with current asthma guidelines.<sup>11</sup>

**Other treatments** – include oral corticosteroids, theophylline, azithromycin and monoclonal antibodies, many of which will only be used following specialist review.

### Children aged under 12

The New Zealand Child Asthma Guidelines were updated in June 2020.<sup>5</sup> As well as prescribing recommendations, these guidelines include important ways that all health professionals can help children with asthma (see Panel 2).

The guidelines also summarise the medication approaches for children of different ages (see later). The goal is for all children to use an inhaler device that is appropriate for their development, including consideration of whether a spacer or mask is appropriate.

It is important that children's treatment includes regular review to allow step-up or step-down through treatment options as appropriate for symptom control.

**Children aged one to four years** – who wheeze are considered in a different way



from children aged five to 11, as many preschool children with post viral wheeze do not have asthma or do not go on to develop asthma.

The current recommendations are:<sup>5</sup>

- Step 1 – SABA reliever alone (one to two puffs when needed)**
- Step 2 – add maintenance low-dose ICS**
- Step 3 – add montelukast**
- Step 4 – refer to a paediatrician.**

Note that if SABA, ICS and montelukast are insufficient, Step 4 is referral to a paediatrician. This means that LABAs are not part of the routine management of wheeze or asthma in this age group.

**Children aged five to 11 years** – assessment of inhaler technique and adherence to treatment remains key in this age group.

The current recommendations are:<sup>5</sup>

- Step 1 – SABA reliever alone (one to two puffs when needed)**
- Step 2 – add maintenance low-dose ICS**
- Step 3 – add LABA**
- Step 4 – increase to standard dose of maintenance ICS/LABA; add montelukast; consider referral to a paediatrician**
- Step 5 – consider high-dose ICS/LABA; refer to a paediatrician.**

At Step 5, the child will likely be having frequent oral steroids and should definitely be referred to a paediatrician.

Currently, there is insufficient evidence to recommend SMART as first-line therapy in children aged 11 years and younger. However, SMART using budesonide/formoterol 100µg/6µg may be considered on specialist advice, in select children aged five to 11 years, who are poorly controlled at Steps 3 to 5.

### Review treatments with your patients

Asthma attacks can be very serious, even fatal. They are more common and more severe in people with poorly controlled asthma and in high-risk people, but they can occur in anyone with asthma. High use of SABA inhalers indicates poor asthma control and increases the risk of severe exacerbation and mortality.

Many people will still be using SABA-only treatment for mild asthma. In 2018, over two million salbutamol inhaler devices were dispensed in the community setting in New Zealand<sup>12</sup>, making it the eighth most dispensed Pharmac-funded medicine.<sup>13</sup>

It is worth asking people how much SABA they are actually using – inhalers tend to get lost or given to someone else, and some people will want to have inhalers in different rooms of the house, or in the car or sports bag, for example.

Also be aware that many people on ICS/SABA therapy don't collect their ICS prescriptions, and may rely on high doses of SABA to relieve symptoms. AIR/SMART therapy may be beneficial for these people as having one combined ICS/LABA inhaler for as-needed use, and for regular use if required, not only ensures that the ICS is taken more regularly but also provides safer treatment right from the start.

Another important reminder is that people with asthma should continue taking all prescribed asthma medications during the ongoing COVID-19 pandemic.

### Inhaler technique

Worldwide, it is estimated that up to 80 per cent of people do not use their inhaler

correctly, and at least 50 per cent do not use their maintenance medications as prescribed.<sup>7</sup> Inhaler technique remains critical to optimal therapy, no matter which inhaler device is being used.

Inadequate technique is among the most common reasons, along with poor adherence, for sub-optimal asthma control,<sup>3</sup> so it is a good idea to routinely check patient technique at each visit. Remember, always ensure good technique before initiating any increase in treatment.

Patients can access videos on correct inhaler technique on the National Asthma Council Australia website ([tinyurl.com/inhaletec](http://tinyurl.com/inhaletec)). If a patient has persistent difficulty with their technique, consider switching to an alternative inhaler device. The UK's National Institute for Clinical Excellence has a patient inhaler decision aid ([tinyurl.com/5n6ksdne](http://tinyurl.com/5n6ksdne)) that contains information to help adults with asthma, and their healthcare professionals, when discussing options for inhaler devices.

People who use a metered-dose inhaler may benefit from administering their dose with a spacer, as many will find it challenging to coordinate their inhaler use with their breathing. Spacers help deliver the medicine directly into the lungs, rather than the mouth and throat, thus markedly increasing medicine effectiveness. Spacers also reduce local side effects from ICS inhalers such as hoarseness, throat irritation and oral candidiasis – but remind patients to still rinse their mouth after ICS use.

Spacers should be supplied free of charge to patients; they can be ordered, fully subsidised, on a Practitioners Supply Order. Instruct patients to wash spacers weekly with warm water and detergent, and to let them air dry to reduce static charge.

### Reducing the asthma burden for Māori and Pacific peoples

All health professionals have a role in improving health outcomes and health equity as well as delivering high quality, effective asthma care. Ways for health professionals and services to achieve this include:<sup>2-4</sup>

- Ensuring their own knowledge of asthma and clinical practice is up to date and consistent with the current evidence-based guidelines.
- Supporting all health professionals to develop culturally safe skills for engaging with Māori and Pacific peoples with asthma and their whānau.
- Building and maintaining long-term, high-quality, trusting relationships with patients.
- Regularly undertaking clinical audits to determine if care is consistent with the current guidelines and to identify ethnic disparities in care. Strategies that address disparities and improve asthma care should then be developed and implemented, and a follow-up clinical audit undertaken to assess their effectiveness.
- Ensuring access for all patients to individualised, understandable, appropriately formatted asthma action plans, including provision of updated electronic access to asthma plans for whānau, community health workers and schools.
- Being aware of local Māori health providers who have asthma programmes, and asthma services that employ Māori and Pacific staff, and referring people to these services when appropriate.
- Using every opportunity to increase patient/whānau knowledge about all aspects of asthma and its management, providing information that is appropriate, acceptable and effective for Māori. When appropriate, direct

patients/whānau to online learning sites that contain useful resources in a variety of media.

- Being mindful of individual, institutional and structural racism when treating Māori and Pacific patients.

### What about wider barriers to care?

Research has shown that appropriately designed and delivered health programmes improve Māori health outcomes.<sup>2</sup> Leadership from Māori is needed in developing asthma management programmes that improve access and enable “wrap around” services targeting the wider barriers Māori face in asthma care.<sup>3</sup>

These barriers include cost and affordability of care, poor access to care and poor quality or discontinuous care, services or approaches not meeting needs, culturally inappropriate services, institutional racism, lack of trust and confidence in the health system, unhealthy indoor environments in high deprivation areas, and increased risk factors such as obesity and smoking.<sup>3</sup>

Systemic changes will be required to address these wider barriers to care for Māori and Pacific peoples. A paradigm shift is under way with New Zealand's health reforms. The role of the newly formed partnership between Te Aka Whai Ora – Māori Health Authority, Te Whatu Ora – Health New Zealand, and Manatū Hauora – Ministry of Health is to lead and monitor transformational change in the way the entire health system understands and responds to the health and wellbeing needs of Māori and their whānau. A central tenet is ensuring everyone has the same opportunities to achieve good health outcomes by creating a fairer, more coordinated and connected health system. It is long overdue. ●

### Acknowledgements

Helen Cant is a pharmacist prescriber working in general practices in Tokoroa.

Gayle Robins is a freelance medical writer and regular contributor to He Ako Hiringa resources.

Check patients' inhaler technique at every visit and before initiating any dose increase

### Further reading

- BPACnz. Asthma education in primary care: A focus on improving outcomes for Māori and Pacific peoples *BPJ* 2016;73:24–25 ([tinyurl.com/43dmz6ba](http://tinyurl.com/43dmz6ba)) – a summary of key practice points for improving asthma education in Māori and Pacific peoples.
- Medical Council of New Zealand. *Our Standards: Cultural Safety* ([tinyurl.com/3um8jw9e](http://tinyurl.com/3um8jw9e)) – lists key documents and resources for health professionals to learn about cultural safety and bias, and examine their practice.
- Health Quality and Safety Commission New Zealand. *Three steps to meeting health literacy needs | Ngā toru hiko e mōhiotia ai te hauora* ([tinyurl.com/yxp7xrsu](http://tinyurl.com/yxp7xrsu)) – a guide for health professionals, developed in the context of achieving equitable health outcomes for Māori and maintaining cultural safety, reinforcing useful knowledge/skills, building on them and checking how effective the process has been.
- Ryan D, Grey C, Mischewski B. *Tofa Saili: A review of evidence about health equity for Pacific Peoples in New Zealand*. Wellington: Pacific Perspectives Ltd; 2019 ([tinyurl.com/3swfy5ur](http://tinyurl.com/3swfy5ur)) – a report describing the health equity issues faced by Pacific families and communities and the barriers and facilitators to accessing healthcare.

### Asthma resources for patients/whānau and health professionals

- ARFNZ ([asthmafoundation.org.nz/resources](http://asthmafoundation.org.nz/resources)) – has a dedicated page of resources (many are downloadable) for patients, carers and health professionals, including guidelines, diaries, teachers' toolkits, parental educational resources, checklists and asthma first aid posters.
- ARFNZ asthma action plans ([asthmafoundation.org.nz/resources](http://asthmafoundation.org.nz/resources)) – downloadable plans in several languages and orderable in print.
- My Asthma App (ARFNZ) for Android ([tinyurl.com/AsthmaAppAndroid](http://tinyurl.com/AsthmaAppAndroid)) and Apple ([tinyurl.com/AsthmaAppApple](http://tinyurl.com/AsthmaAppApple)) – downloadable app providing education, with individualised asthma action plan ability, asthma signs and symptoms, triggers, treatment, medicines, Asthma Control Test, and helpful contacts and resources.
- Asthma New Zealand ([asthma.org.nz](http://asthma.org.nz)) – has many resources (some downloadable) providing education and support to people with asthma and their whānau, including young people and children.

### Courses for clinical learning

- ARFNZ asthma and COPD fundamentals eLearning course ([tinyurl.com/aabr537](http://tinyurl.com/aabr537)) – updated February 2021 and designed for all registered health professionals including nurses, pharmacists, physiotherapists and GPs.
- Asthma New Zealand, Nurse Education in Asthma Treatment (NEAT) course ([asthma.org.nz/pages/neat-courses](http://asthma.org.nz/pages/neat-courses)) – full-day, in-person or online course suitable for nurses, pharmacists, physiotherapists, GPs and other qualified health professionals.

The *Asthma and Respiratory Foundation NZ Adolescent and Adult Asthma Guidelines 2020* and *New Zealand Child Asthma Guidelines* are available on the NZ Respiratory Guidelines website ([nzrespiratoryguidelines.co.nz](http://nzrespiratoryguidelines.co.nz))

More clinical asthma education including a bulletin, recorded webinar, EPiC dashboard and reflection activities are available at He Ako Hiringa

REFERENCES for this article can be found on the He Ako Hiringa website