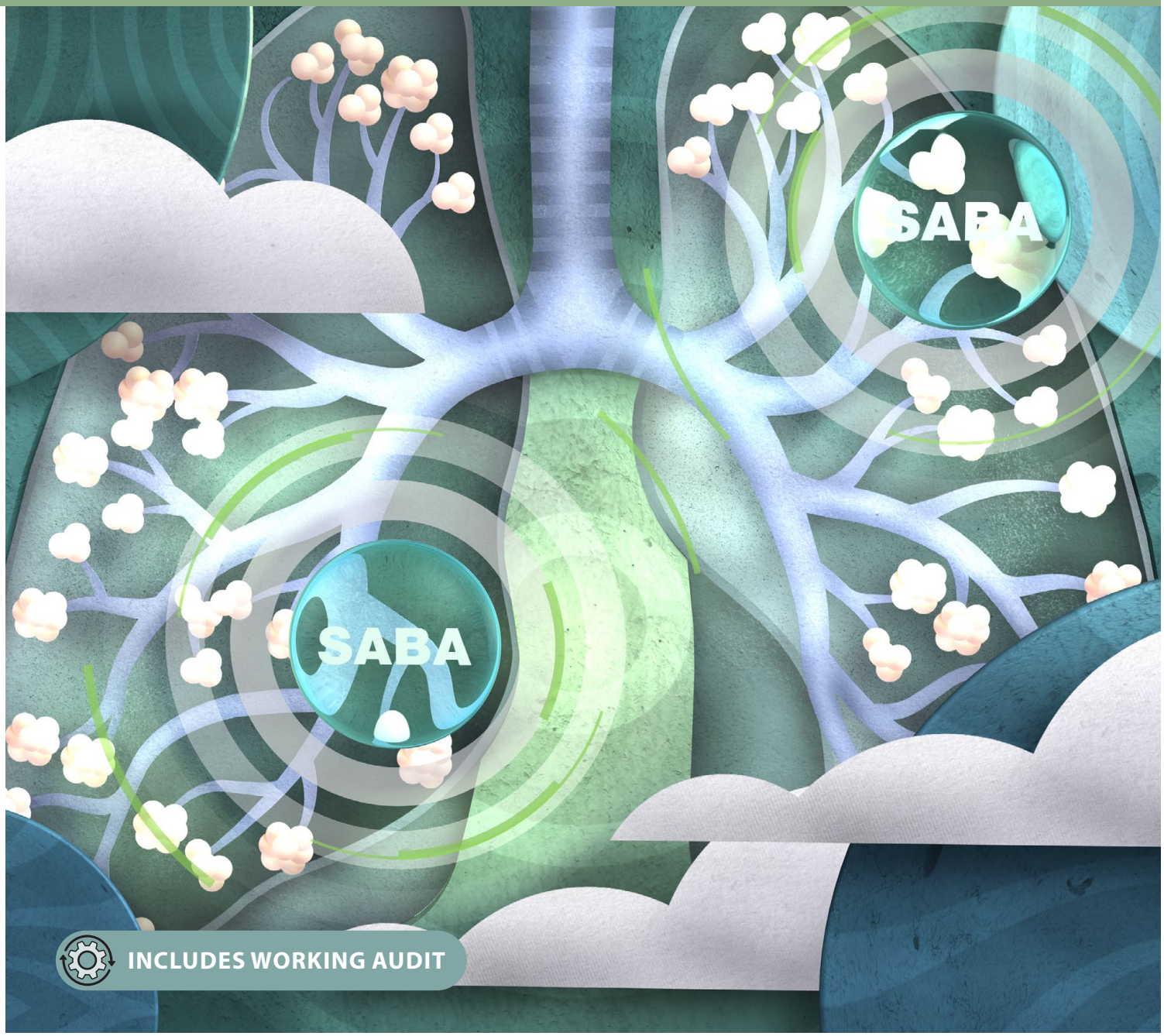
CLINICAL AUDIT

Reviewing **asthma treatment** in adolescents and adults



INCLUDES WORKING AUDIT

Published: August 2025
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bpac nz
better medicine

Audit focus

This audit helps health professionals in primary care identify adolescent* and adult patients with asthma who are currently taking a SABA reliever and are eligible to switch to AIR therapy with budesonide/formoterol (either alone or in combination with maintenance doses; SMART). Maintenance treatment with an ICS in conjunction with a SABA reliever is still a treatment option for some patients, but only if they are likely to be adherent to daily ICS treatment. As a result, AIR therapy is the preferred treatment approach recommended in the Asthma and Respiratory Foundation NZ Guidelines† (2020), and therefore the focus of this audit.

* People aged 12–17 years

† Beasley R, Beckert L, Fingleton J, et al. Asthma and Respiratory Foundation NZ Adolescent and Adult Asthma Guidelines 2020: a quick reference guide. NZMJ 2020; 133 (1517). Available from: **www.asthmafoundation.org.nz/resources/nz-adolescent-and-adult-asthma-guidelines**

Background

Historically, short-acting beta$_2$-agonist (SABA) medicines were used as first-line treatments for asthma. However, increasing evidence has associated SABA-only treatment with an increased risk of exacerbations due to inflammation, sensitivity to allergens and tachyphylaxis. As a result, the 2020 update of the Asthma and Respiratory Foundation NZ **Adolescent & Adult Asthma Guidelines** advise against the use of SABA-only treatment in adolescents* and adults, instead recommending budesonide/formoterol as first-line treatment for all patients with asthma, including those with mild asthma or exercise-induced symptoms.

The use of budesonide/formoterol for symptomatic relief (in place of a SABA) is termed "anti-inflammatory reliever" (AIR) therapy. AIR therapy can be used in two ways:

1. As needed for symptomatic relief
2. As a daily maintenance treatment, with additional doses taken as required for symptomatic relief; i.e. one inhaler is used for both maintenance and relief

When budesonide/formoterol is used for both maintenance and symptomatic relief, this is termed "single combination ICS/LABA inhaler maintenance and reliever therapy", or SMART.

AIR therapy follows a stepwise progression (see **Figure 1**). Patients can be switched immediately to AIR therapy from using an as-needed SABA reliever; step 1 of AIR therapy is appropriate for patients with good control previously taking a SABA alone. Patients can then step up or down as required to manage their symptoms and reduce exacerbation risk.

Treatment of asthma with a SABA alone is no longer recommended. The alternative to AIR therapy is to take an inhaled corticosteroid (ICS) every day for maintenance treatment, with a SABA reliever as needed. This approach is not as beneficial as AIR therapy and is only appropriate for patients who are likely to be adherent to daily ICS treatment. People who experience symptoms less than twice per month are often non-adherent to ICS treatment which increases their

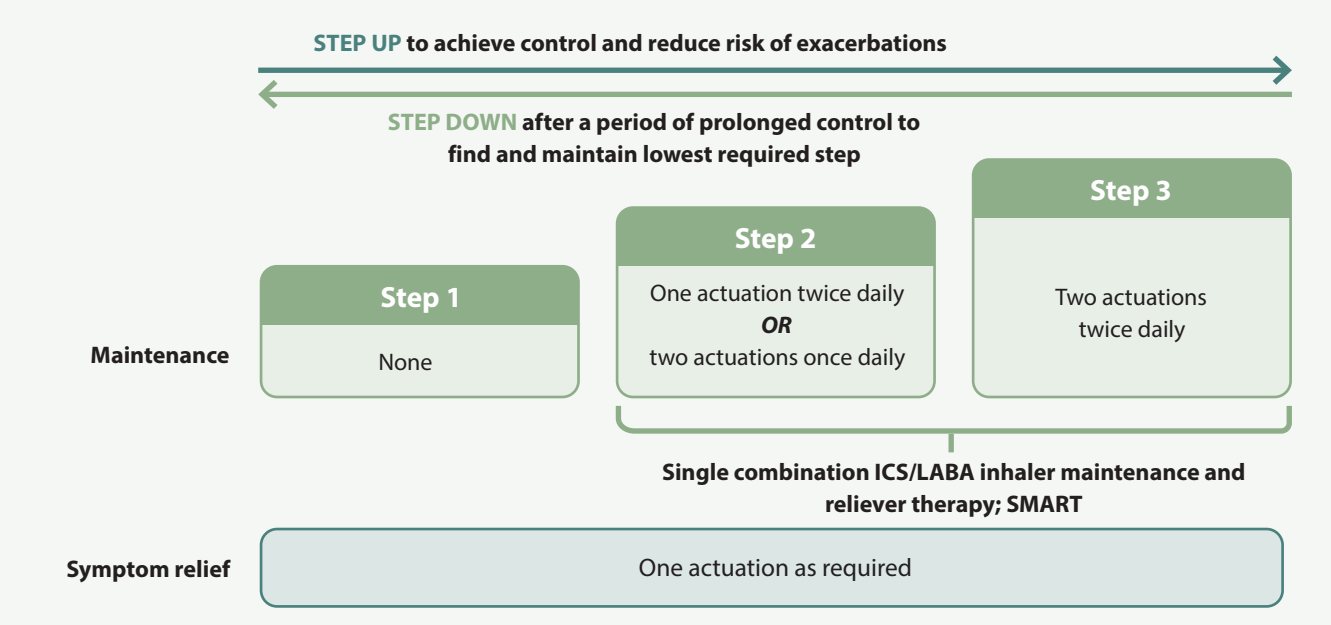

Figure 1. AIR therapy using budesonide/formoterol (200 micrograms + 6 micrograms preferred), adapted from the Asthma and Respiratory Foundation NZ Guidelines (2020).

risk of adverse effects due to SABA overuse. For this reason, AIR therapy is preferred, unless patient-specific characteristics prevent this change being practical.

The previous version of this audit focused on patients taking SABA-only treatment, as they are most at risk of SABA-related adverse effects and therefore will benefit most from being switched to AIR therapy. However, as the guidelines have now been in place since 2020, this revised update focuses on optimising asthma pharmacological control, ensuring that all adolescent* and adult patients with asthma are taking AIR therapy (i.e. budesonide/formoterol) in place of a SABA reliever **unless** clinical justification exists supporting the continued use of a maintenance ICS with a SABA reliever instead.

* People aged 12 – 17 years; a SABA reliever without an ICS continues to be recommended in children aged < 12 years

For further information on AIR therapy, see: "**The pharmacological management of asthma in adolescents and adults has changed**"

It is strongly recommended that this article is read before completing the clinical audit.

Audit plan

Summary

This audit helps health professionals in primary care identify adolescent* and adult patients with asthma who are currently using a SABA reliever and may benefit from a switch to AIR therapy with budesonide/formoterol (either alone or in combination with maintenance doses; SMART).

* People aged 12 – 17 years

Recommended audit standards

Ideally, all patients aged ≥ 12 years with asthma will be taking AIR therapy (i.e. a budesonide/formoterol inhaler, either as a reliever alone, or in combination with maintenance doses; SMART) unless clinical justification exists supporting the continued use of a maintenance ICS with a SABA reliever (i.e. two inhalers).

Alternatively, consider a "working audit" where the data sheet is completed over time when any eligible patient presents. Document whether they are already using AIR therapy, and if not whether there is clinical justification for their continued use of a maintenance ICS with a SABA reliever. Patients for whom there is no justification should be flagged for review to consider AIR therapy.

Audit data

Eligible patients

Any patients aged ≥ 12 years with asthma who are taking an inhaled SABA for symptomatic control.

Identifying patients

You will need to have a system in place that allows you to identify eligible patients and audit their clinical notes. Many practices will be able to do this by running a "query" through their PMS to find patients aged ≥ 12 years with asthma who are taking an inhaled SABA reliever for symptomatic control.

If conducting a working audit, fill in the data sheet when you have a consultation for any reason with an eligible patient over the course of an allocated time frame.

Sample size

The number of eligible patients will vary according to your practice demographic. If a large number of results are returned, a sample size of 20 – 30 patients is sufficient for this audit. However, all eligible patients should be reviewed subsequently over time.

If conducting a working audit, a smaller sample size may be necessary to complete it within your planned time frame.

Criteria for a positive outcome

A positive result is any patient with asthma who is taking AIR therapy (i.e. a budesonide/formoterol inhaler, either as a reliever alone, or in combination with maintenance doses; SMART), or has adequate clinical justification to instead support the continued use of a maintenance ICS with a SABA reliever.

If conducting a working audit, and the patient is not taking AIR therapy, a review should be undertaken at the time, or a future appointment booked to review a switch to AIR therapy.

Data analysis

Use the sheet provided to record your data. The percentage achievement can be calculated by dividing the total number of patients with a positive result (sum of 'YES' responses in both columns) by the total number of patients audited.

Using clinical audits for improving practice and patient outcomes

Clinical audits can be an important tool to identify where gaps exist between expected and actual performance. Once completed, they can provide ideas on how to change practice and improve patient outcomes. General practitioners are encouraged to discuss the suitability and relevance of their proposed audit with their practice or peer group prior to commencement to ensure the relevance of the audit. Outcomes of the audit should also be discussed with the practice or peer group; this may be recorded as a learning activity reflection if suitable.

The Plan, Do, Study, Act (PDSA) model is recommended by the Royal New Zealand College of General Practitioners (RNZCGP) as a framework for assessing whether a clinical audit is relevant to your practice. This model has been widely used in healthcare settings since 2000. It consists of two parts, the framework and the PDSA cycle itself, as shown in **Figure 2**.

1. The framework

This consists of three questions that help define the "what" and "how" of an improvement project (in this case an audit). The questions are:

- "What are we trying to accomplish?" – the aim
- "How will we know that a change is an improvement?" – what measures of success will be used?
- "What changes can we make that will result in improvement?" – the concept to be tested

2. The PDSA cycle

This is often referred to as the "engine" for creating, testing and carrying out the proposed changes. More than one cycle is usually required; each one is intended to be short, rapid and frequent, with the results used to inform and refine the next. This allows an ongoing process of continuous learning and improvement.

Each PDSA cycle includes four stages:

- **P**lan – decide what the change to be tested is and how this will be done
- **D**o – carry out the plan and collect the data
- **S**tudy – analyse the data, assess the impact of the change and reflect on what was learned
- **A**ct – plan the next cycle or implement the changes from your plan

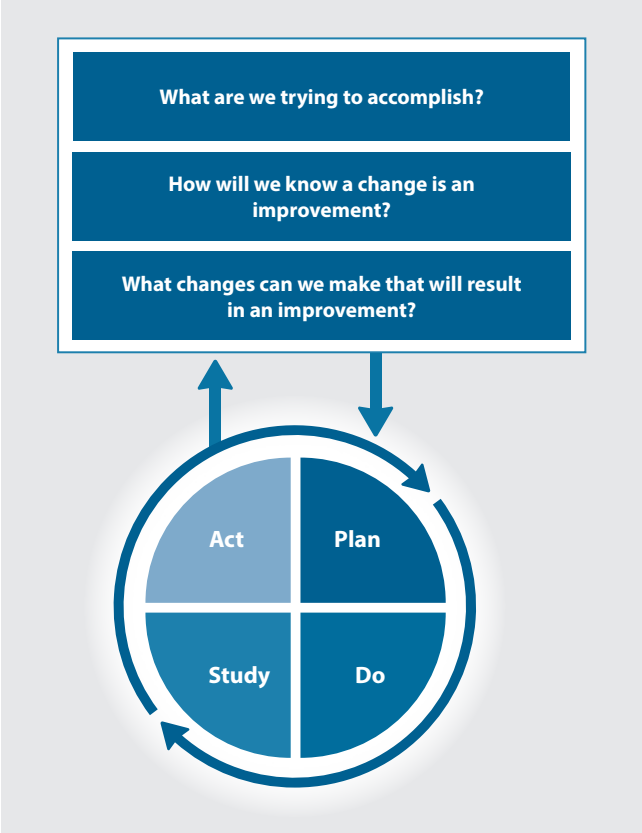

Figure 2. The PDSA model for improvement.

Source: Plan, Do, Study, Act (PDSA) cycles and the model for improvement

Claiming credits for Te Whanake CPD programme requirements

Practice or clinical audits are useful tools for improving clinical practice and credits can be claimed towards the Patient Outcomes (Improving Patient Care and Health Outcomes) learning category of the Te Whanake CPD programme, on a credit per learning hour basis. A minimum of 12 credits is required in the Patient Outcomes category over a triennium (three years).

Any data driven activity that assesses the outcomes and quality of general practice work can be used to gain credits in the Patient Outcomes learning category. Under the refreshed Te Whanake CPD programme, audits are not compulsory and the RNZCGP also no longer requires that clinical audits are approved prior to use. The college recommends the PDSA format for developing and checking the relevance of a clinical audit.

To claim credits go to the RNZCGP website: **www.rnzcgp.org.nz**

If a clinical audit is completed as part of Te Whanake requirements, the RNZCGP continues to encourage that evidence of participation in the audit be attached to your recorded activity. Evidence can include:

1. A summary of the data collected
2. An Audit of Medical Practice (CQI) Activity summary sheet (Appendix 1 in this audit or available on the RNZCGP website).

N.B. Audits can also be completed by other health professionals working in primary care (particularly prescribers), if relevant. Check with your accrediting authority as to documentation requirements.

Data sheet – cycle 1

Reviewing asthma treatment in adolescents and adults

A	B		C		D
Patient with asthma aged ≥ 12 years	**Currently taking AIR therapy?**		**If 'NO' in column B: is there clinical justification for continued use of a SABA reliever?**		**If 'NO' in column C: flag for treatment review**
	YES	NO	YES	NO	✔
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30					
Totals:					

Please retain this sheet for your records to provide evidence of participation in this audit.

Data sheet – cycle 2

Reviewing asthma treatment in adolescents and adults

A	B		C		D
Patient with asthma aged ≥ 12 years	**Currently taking AIR therapy?**		**If 'NO' in column B: is there clinical justification for continued use of a SABA reliever?**		**If 'NO' in column C: flag for treatment review**
	YES	NO	YES	NO	✔
1					
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Totals:					

Please retain this sheet for your records to provide evidence of participation in this audit.

SUMMARY SHEET

Audit of medical practice (CQI activity)

Topic:

Reviewing asthma treatment in adolescents and adults

Activity designed by (name of organisation, if relevant):

Bpac^{nz}

Doctor's name:

Results discussed with peer group or colleagues?

☐ Yes ☐ No

Date:

FIRST CYCLE

DATA: Date of data collection:

CHECK: Describe any areas targeted for improvement as a result of analysing the data collected.

ACTION: Describe how these improvements will be implemented.

MONITOR: Describe how well the process is working. When will you undertake a second cycle?

SECOND CYCLE

DATA: Date of data collection:

CHECK: Describe any areas targeted for improvement as a result of analysing the data collected.

ACTION: Describe how these improvements will be implemented.

MONITOR: Describe how well the process is working.

COMMENTS:

DECEMBER 2016