

The Asthma 4: an asthma attack bundle - A new care bundle for adult patients with an acute asthma attack

This new care bundle for adult patients with an acute asthma attack, builds on the Asthma Care Bundle produced in 2016 by BTS with Asthma UK (now Asthma + Lung UK) and a number of other organisations, in order to improve outcomes for adults and children with asthma. The original bundle was implemented across the NHS and incorporated into the Royal College of Physicians' National Asthma and COPD Audit Programme (now National Respiratory Audit Programme), as a way of measuring its impact on patient care and outcomes.

Since the publication of the 2016 bundle, a number of new interventions have emerged in the field of asthma clinical practice, which are making significant differences to the lives of patients. These include biologic therapies which effectively reduce risk of asthma attacks and improve quality of life.

In October 2022, a working group was constituted under the auspices of the BTS Quality Improvement Committee, in order to ensure that the care bundle remained aligned with clinical practice. The members of the working group are experts in asthma and quality improvement and are listed at the end of this document.

The updated bundle underwent review by the BTS Quality Improvement Committee, but also by a range of stakeholders including the Royal College of Physicians, the Primary Care Respiratory Society, the Association of Respiratory Nurse Specialists and Asthma + Lung UK.

Aim

Like its predecessor, the new bundle sets out a number of clinical interventions or actions, which when performed reliably, improve patient outcomes. The bundle highlights the importance of basic asthma care, but it also emphasises the need to follow-up patients after they have had an asthma attack. This should enable a more careful review of biomarkers and need for treatment escalation.

Unlike its predecessor, the new care bundle is for use when patients present with an asthma attack in any clinical setting - primary or secondary care. This will ensure equity of care.

The main aim is to:

- reduce the risk of further asthma attacks
- reduce the number of patients who are readmitted to hospital following discharge
- encourage follow-up and appropriate onward referral (if necessary).

Although the bundle is set out as a list of individual actions, it is important that all the elements are carried out in order to achieve the best outcomes for patients.

The Asthma 4

The bundle includes four high impact actions that are most likely to improve the care of patients, which could be measured for quality improvement purposes. These are:

1. Medication review

If the patient does not have an inhaled corticosteroid (ICS) preventer inhaler, they should be prescribed one (along with a spacer device if prescribed a metered dose inhaler) and shown how to use it. Inhaler technique should be assessed, and patients directed to recommended online videos on inhaler technique (QR codes below).

Adherence to existing asthma treatments should be reviewed, both by asking about inhaler use with patients and when possible, using prescription records. If the patient's prescription records suggest sub-optimal adherence to ICS-containing inhalers (medicine possession ratio <75% in previous 6-12 months), the importance of using ICS inhalers as prescribed should be highlighted to the patient. Step up treatment if the exacerbation has occurred despite good adherence (defined as MPR \geq 75% and inhaler technique optimal) to ICS-containing treatment. Use local guidelines as appropriate.

2. A personalised asthma action plan

Personalised asthma action plans are known to have important and beneficial effects in clinical outcomes, such as reducing asthma exacerbations, hospitalisations, and increased treatment adherence. All patients should receive a written (or electronic) self-management personalised asthma action plan that is individualised and has been developed in partnership with the patient. The plan should set out the patient's usual care, any known triggers for their asthma and actions to be taken if their asthma control deteriorates including when and who to contact for help. It should take into account any literacy, language or learning disability issues so that the patient understands fully how to use their personalised asthma action plan.

3. Tobacco dependence advice and support for current smokers

All current smokers should be referred to the in-house tobacco dependency advisor (or the community-based stop smoking service if the patient is not an inpatient or a hospital service is not available). People who are vaping to quit smoking should stop vaping when they feel they will not relapse back to smoking. People who do not smoke, should not vape.

4. Clinical review within 4 weeks

Primary care review within 2 days was previously recommended and can be beneficial in signposting patients to other support when necessary. Rapid review in primary care is difficult to achieve and areas will differ on how they approach this. Where local pathways are set up to deliver the 2-day review, this can continue.

This care bundle recommends clinical review within 4 weeks by a healthcare professional trained in asthma care. The purpose of this review is to:

- confirm the diagnosis of asthma and
- review:
 - number of previous attacks needing treatment with oral corticosteroids
 - biomarkers (blood eosinophil count and FeNO[Fractional Exhaled Nitric Oxide])
 - adherence to prescribed treatment
 - inhaler technique

Based on the above, the need and urgency for further follow-up should be decided.

If the patient is on maintenance oral corticosteroids for their asthma and is not known to secondary/tertiary care, they should be referred directly to a severe asthma centre (as per the [Accelerated Access Collaborative consensus document on management of uncontrolled asthma](#)).

Healthcare settings and exclusions

The asthma care bundle is designed to be used in any healthcare setting where a patient could present with an asthma attack. This could be:

- Primary care
- Urgent and emergency care (including emergency department and inpatient admissions)

The bundle only applies to adults, or adolescents (16+) transitioning to adult services.

For children who have an asthma attack, we refer you to the advice outlined in the [National Bundle of Care for CYP with Asthma](#).

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British Thoracic Society Asthma Care Bundle

This Asthma Care Bundle should be used for adult patients, including adolescents 16+ transitioning to adult services, with an acute asthma attack (often referred to as an exacerbation).

THE ASTHMA 4:

Action 1: Medication Review

Action 2: Personalised Asthma Action Plan

Action 3: Tobacco dependence advice and support for current smokers

Action 4: Clinical review within 4 weeks

Action 1: Medication Review	
<p>a) The patient should be observed using their inhalers and coached to improve their technique as necessary (links to videos available below)</p> <p>b) Preventer (inhaled corticosteroid [ICS] containing) inhaler should be prescribed if the patient does not have a preventer inhaler.</p> <p>c) Adherence to the preventer (ICS-containing) inhaler should be assessed objectively (e.g. medication pick up rate). If it is suboptimal (<75% pick up rate in the previous 6-12 months), importance of adherence to preventer inhaler should be discussed and where possible, individualised support provided to improve this.</p> <p>n.b. If the attack occurs despite good inhaler technique and good adherence to a low or medium dose ICS inhaler ($\geq 75\%$ medication pick up rate), treatment should be stepped up as per BTS and/or local guidelines.</p>	
Patient inhaler technique observed and optimised	Yes/No
Preventer (ICS-containing) inhaler prescribed	Yes/Patient already on ICS inhaler
Adherence assessed objectively	Yes/No/Unable to assess objectively
Importance of adherence to preventer (ICS-containing) inhaler discussed	Yes/No

Action 2: Personalised Asthma Action Plan
<p>A Personalised Asthma Action Plan (PAAP) should be provided to the patient on how to carry out disease specific elements of self-care, including identifying factors in their home and/or work environment that could trigger further attacks. Existing plans should be checked and updated. This is associated with improved patient/carer understanding of asthma and thereby reduces risk of further attacks and hospitalisation.</p>

Personalised Asthma Action Plan provided	Yes/No/Already has a plan
If already has plan, has it been checked and updated	Yes/No/Not applicable

Action 3: Tobacco dependence advice and support for current smokers

Patients who are current smokers should be provided with tobacco dependence advice and referred to specialist support. Very Brief Advice (VBA) on tobacco dependence should be given as a minimum.

Current smoker provided with tobacco dependence advice and referred to specialist support	Yes/No/Not applicable
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Action 4: Clinical review within 4 weeks

A clinical review should take place within 4 weeks for all patients, although some patients may need to undergo a review sooner. Clinical review can be by any healthcare professional trained in asthma care. The aim of the review includes reviewing asthma attack history and biomarkers, optimising treatments and arranging onward referral if necessary.

*If the patient has required ≥ 3 courses of oral corticosteroids in the previous 12 months for asthma attacks despite good adherence to a medium-high dose ICS they may require additional treatment with biologic therapy. Therefore, please follow local referral pathways for asthma and ensure follow-up is arranged.

*If the patient is on maintenance oral corticosteroids for their asthma, please refer directly to a severe asthma centre.

Clinical review within 4 weeks arranged	Yes/No
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Resources

- 1) A template care bundle patient record sheet is at Appendix 1 and may be reformatted or revised for local use.
- 2) Links to Asthma + Lung UK personalised asthma action plans and inhaler technique videos

Asthma + Lung UK personalised asthma action plan

URL: <https://www.asthma.org.uk/conditions/asthma/your-asthma-action-plan>



Asthma + Lung UK's videos on improving inhaler technique
 URL: <https://www.asthmaandlung.org.uk/living-with/inhaler-videos>



Appendix 1

1. Asthma Attack care bundle sheet

References

- [Accelerated Access Collaborative consensus document on management of uncontrolled asthma 2022](#)
- [British Thoracic Society and Asthma UK Improving Outcome in Asthma, Asthma Care Bundle 2016](#)
- [National Asthma and Chronic Obstructive Pulmonary Disease Audit Programme \(NACAP\) Adult asthma clinical audit report 2019/20](#)
- [National Asthma and Chronic Obstructive Pulmonary Disease Audit Programme \(NACAP\) Drawing Breath Clinical Audit Report 2021/22](#)
- [National Bundle of Care for CYP with Asthma \(2022\)](#)
- [NICE Asthma Quality Standard QS25 – 2013 \(last updated 2018\)](#)

Acknowledgements

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