**Global Quality Standard for reliever use in asthma**

**Introduction**

The latest global data shows that there are 339 million people living with asthma and preventable deaths continue to occur due to inappropriate management.[[1]](#endnote-1) Experts have called for a fundamental shift in how asthma is treated.[[2]](#endnote-2)

Recent academic discourse has highlighted a ‘paradox’ in asthma treatment whereby patients are becoming reliant on rescue medication (short-acting beta agonists or SABA) and underusing controller medication (inhaled corticosteroids or ICS), which is designed to address the underlying inflammation of the condition.[[3]](#endnote-3) New and significant data on the use of reliever therapy makes clear the need to urgently address SABA over-reliance and ICS underuse.[[4]](#endnote-4)

This Global Quality Standard has been developed by a group of independent global experts in respiratory disease, supported by AstraZeneca. Quality standards describe high-priority areas for quality improvement in a defined care or service area. Each standard consists of a prioritised set of specific, concise and measurable statements.

These quality standards draw on existing Global Initiative on Asthma (GINA) strategic recommendations for asthma care,4,[[5]](#endnote-5),[[6]](#endnote-6) and are intended to provide an underpinning, comprehensive set of standards to drive up the quality of care for adaptation in local systems.

These quality standards are expected to contribute to improvements in the following four outcomes:

* Diagnosis
* Prescribing and dispensing
* Regular asthma reviews
* Post-attack care and quality assurance

**Standard-setting to drive improvements in mild-moderate asthma care**

1. **Diagnosis of asthma**

**1a) People suspected of having asthma are identified and receive an accurate diagnosis based on a step wise diagnostic pathway that includes a range of objective tests**

Rationale

Asthma can be commonly misdiagnosed which means that people can have untreated asthma.[[7]](#endnote-7) People who display symptoms possibly indicative of asthma may not get an accurate diagnosis of their asthma severity given a variable lack of tools and resources in healthcare systems around the world and can be at risk of preventable asthma attacks. However, although there are no set criteria on what constitutes a formal diagnosis of asthma, a diagnostic pathway that includes objective testing to assess the severity of asthma can help healthcare professionals correctly diagnose asthma in patients.

Essential criteria

1ai) The clinical assessment and investigation of people with indicative symptoms of asthma should focus on making a differential diagnosis from uncontrolled mild/moderate asthma through to severe asthma. This should be done by a healthcare professional or respiratory specialist trained in asthma management and include at a minimum:

* Recording of clinical history of a pattern of symptoms (shortness of breath, cough, wheezing and chest tightness), common symptoms and co-morbidities
* History of hospitalisation or unscheduled primary / secondary care visits regarding acute symptoms
* A family history of asthma, atopy or allergy alongside medication history
* Smoking status and exposure to environmental triggers
* Performance of lung function tests such as spirometry and peak expiratory flow variability
* Further testing as needed such as bronchial challenge testing and/or FeNO testing to help work out what type of asthma a patient may have

1. **Prescribing and dispensing**

**2a) Every new patient diagnosed with asthma should receive either symptom-driven or daily ICS-containing treatment**

Rationale

The Global Initiative for Asthma (GINA) published new recommendations in 2019 based on patient safety which aim to reduce exacerbations though evidence based treatment options for patients. GINA no longer recommends treatment in adolescents and adults for Step 1 with SABA alone as there is strong evidence that SABA-only treatment does not protect patients from severe exacerbations.4 Using three or more SABA canisters per year is associated with an increased risk of severe exacerbations and dispensing of more than 12 canisters in a year is associated with increased risk of asthma-related death.4

Essential criteria

2ai) Treatment decisions for patients should be based on the latest evidence

2aii) No patients should be prescribed more than three SABA inhalers per year without being flagged for an asthma review with their primary care physician or respiratory specialist

**2b) SABA canisters should only be dispensed to patients under controlled settings to mitigate against over-reliance**

Rationale

A significant number of patients with asthma still rely on their SABA inhaler as their sole asthma treatment.[[8]](#endnote-8) One factor that could possibly contribute to over-reliance on SABA is the ease of which it can be purchased.8 While SABA could still continue to be an add on treatment option, its dispensing should be controlled and should not be available over the counter without a doctor’s prescription.

Essential criteria

2bi) SABA should only be available to purchase when a patient has a valid prescription or is in a clinical crisis and should not be prescribed alone.

2bii) Any patient collecting three or more SABA inhalers per year should receive an auto-prompt for an asthma review to review their treatment, followed by their pharmacist being informed and a review by someone trained to do so

1. **Regular asthma review**

Rationale

**3a) Patients with asthma have a periodic review, specifically about their asthma every 6 months, and at a minimum, one regular asthma review every 12 months**

Asthma is an inflammatory disease with recurring flare-ups of inflammation and symptoms.[[9]](#endnote-9),[[10]](#endnote-10) Regular monitoring of asthma control, including symptoms and risk of future attacks4 will identify those at risk of poor outcomes and deal with any modifiable factors. In addition to a routine planned review, it is sensible to perform a review after a change in treatment or an exacerbation, that is tailored to offer ongoing education, training and support.

Essential criteria

3ai) An asthma review should be triggered by the following and occur within 48 hours, as a minimum:

* If a patient’s asthma control worsens (patient reports symptoms in spite of an appropriate use of controller medication)
* If a patient experiences an asthma attack
* If a patient hasn’t had a periodic review in the last 6 months
* If a patient has been prescribed more than one SABA inhaler in the last four months

3aii) A periodic review should include, as a minimum:

* Recording of significant medical events and risk factors including asthma attacks
* Adherence assessment of SABA and ICS prescriptions and collections
* Assess use of medications for asthma, including existing barriers and facilitators to appropriate use of ICS
* Confirmation and personal review of a patient’s inhaler technique
* Confirmation of the patient’s smoking habits and an offer to support smoking cessation when relevant
* Review of symptoms and comorbidities that may jeopardize a patient’s asthma control
* Assessment of potential allergens, occupational agents, and environmental or occupational factors triggering asthma symptoms/attacks
* Provision of an agreed personalised acute asthma action plan to help patients recognise when their asthma is poorly controlled and what to do if their medication isn’t working

3aiii) All decisions related to ongoing management of patients with asthma should be integrated within a dedicated personal asthma action plan. This plan should be reviewed regularly and tailored according to a patient’s personal thoughts and goals. It should also be available to all healthcare professionals involved in the care of the individual from initial presentation of symptoms right through to referral to a specialist, if needed.

1. **Post-attack care**

**4a) Every patient who has received treatment in a hospital or emergency department (ED) should have a dedicated follow up within 5 working days of discharge**

Rationale

An asthma attack signifies a major failure of management; therefore, a follow up appointment, ideally before prescribed oral corticosteroids run out, should be conducted as a priority after every episode, exacerbation or visit to an ED to i) determine whether the attack is resolving and to optimise care accordingly; and ii) to identify and manage modifiable risk factors to mitigate the likelihood of future recurrent asthma attacks.

Essential criteria

4ai) Post-asthma attack, all patients should be discharged from an Emergency Department with a review appointment taking place within 5 working days of discharge. In addition, a letter informing their primary care professional or respiratory specialist that an asthma attack has taken place, and what treatment has been given. If oral corticosteroids are prescribed, clear written instructions should be made on the dosage and duration of treatment

4aii) Patients should also be checked by a trained primary care professional or respiratory specialist to ensure that their treatment is working and to understand why their asthma got worse. Information should be provided in a simple and clear format or added into a patients existing asthma action plan to help the individual understand the available treatment options and the implications of different management approaches following an attack

4aiii) Post-attack, patients should receive as a minimum a review of their inhaler technique, their current preventer and reliever usage as well as a consideration of a step-up of treatment to help manage their symptoms. A patient’s acute asthma action plan should also be revised, and clear preventer and reliever guidance should be included. Patients are to be defined as continued ‘at-risk’ if they have any of the risk factors detailed in the latest GINA strategy4 or the latest BTS/SIGN guidelines[[11]](#endnote-11) or if they have another asthma attack or exacerbation

4aiv) Each asthma attack should be entered into the primary care record so that those with recurrent attacks are readily identifiable for referral to experts[[12]](#endnote-12),[[13]](#endnote-13)

1. Global Asthma Network 2018. Available at <http://globalasthmareport.org/Global%20Asthma%20Report%202018.pdf> Last accessed November 2018 [↑](#endnote-ref-1)
2. Pavord, ID et al, 2017, ‘After asthma: redefining airways diseases’, *The Lancet*, 2017, 391:10118 [↑](#endnote-ref-2)
3. O’Byrne, PM et al, 2017, ‘The paradoxes of asthma management: time for a new approach?’, *European Respiratory Journal*, 2017, 50: 1701103 [↑](#endnote-ref-3)
4. The Global Strategy for Asthma Management and Prevention, Global Initiative for Asthma (GINA). 2019. Available from: <https://ginasthma.org/gina-reports/> Last accessed July 2019 [↑](#endnote-ref-4)
5. Reddel HK, FitzGerald JM, Bateman ED, Bacharier LB, Becker A, Brusselle G, et al. GINA 2019: a fundamental change in asthma management: Treatment of asthma with short-acting bronchodilators alone is no longer recommended for adults and adolescents. Eur Respir J. 2019 Jun 27;53(6).Available at<https://erj.ersjournals.com/content/53/6/1901046.short> Last accessed July 2019 [↑](#endnote-ref-5)
6. Global Initiative for Asthma. Pocket Guide for Asthma Management and Prevention (for Adults and Children over five) Available at <https://ginasthma.org/wp-content/uploads/2019/04/GINA-2019-main-Pocket-Guide-wms.pdf> Last accessed July 2019 [↑](#endnote-ref-6)
7. Asthma UK. Diagnosing Asthma, A 21st century challenge. London: Asthma UK 2017. Available at <https://www.asthma.org.uk/globalassets/get-involved/external-affairs-campaigns/diagnostics/diagnosing-asthma-21st-century-challenge.pdf> Last accessed July 2019 [↑](#endnote-ref-7)
8. Reddel HK et al. Risks associated with managing asthma without a preventer: urgent healthcare, poor asthma control and over-the-counter reliever use in a cross-sectional population survey*. BMJ Open* 2017;7:e016688. Available at <https://bmjopen.bmj.com/content/bmjopen/7/9/e016688.full.pdf>. Last accessed July 2019 [↑](#endnote-ref-8)
9. Beasley R, Burgess C, Crane J, *et al*. Pathology of asthma and its clinical implications. *J Allergy Clin Immunol*. 1993; 92 : 148-154. [↑](#endnote-ref-9)
10. Busse WW, Lemanske RF. Asthma. *N Engl J Med*. 2001; 344 : 350-362. [↑](#endnote-ref-10)
11. British Thoracic Society, Scottish Intercollegiate Guideline Network. SIGN 158 - The British Guideline on the Management of Asthma. 2019 Available at <https://www.brit-thoracic.org.uk/quality-improvement/guidelines/asthma/> Last accessed July 2019 [↑](#endnote-ref-11)
12. Radcliffe, S. Regulation 28: Report to prevent future deaths (Sophie Holman). Courts and Tribunals Judiciary; 2019. Available at <https://www.judiciary.uk/publications/sophie-holman/> Last accessed July 2019 [↑](#endnote-ref-12)
13. The British Medical Association (BMA) ‘A Neglected Killer’ Available at <https://www.bma.org.uk/news/2019/april/a-neglected-killer> Last accessed July 2019 [↑](#endnote-ref-13)