

# Primary Care Standards

## Managing Asthma in Children & Young People

Improving Outcomes  
for Children & Young People (CYP) with Asthma

Through the work of clinicians, commissioners and other stakeholders these standards bring together the aspirations for Greater Manchester Lancashire & South Cumbria and the NICE Asthma Quality Standards, British Thoracic Society guidelines and a number of other key resources into one document. We would like to acknowledge the work of the numerous organisations referenced throughout.

**Asthma in Children & Young People  
Special Interest Group  
December 2015**



## Introduction

The Greater Manchester, Lancashire and South Cumbria Strategic Clinical Network (SCN) was established to promote effective collaboration across traditional and organisational boundaries to facilitate and enable health professions to work in partnership with the public, patients and carers to ensure the best use of resources, facilities, knowledge and experience.

Following extensive consultation with our stakeholders the Children & Young People's (CYP) Asthma Special Interest Group was established focused on improving outcomes for children and young people with asthma. Under the clinical leadership of Dr Kathryn Bibby, GP with Special Interest in Paediatrics, the group has drawn together a suite of minimum standards aimed at reducing variation in care and improving outcomes across all aspects of asthma care (0-19yrs) in primary, secondary and community care. This document draws together national best evidence and clinical consensus to set the minimum standards for care delivered to children and young people with asthma in Primary Care.

*N.B. All specialised services are additionally commissioned against the appropriate national specialised service specification. Severe asthma is currently commissioned as part of specialised paediatric services. These standards are an adjunct to the requirement of the service specifications.*

As outlined by Public Health England, Child Health Profiles, admissions due to Asthma for children and young people (0-19 years) remains significantly higher than the England average across most of Greater Manchester & Lancashire. Only Cumbria falls in line with the national average.

**A plethora of evidence suggests that up to 90% of all asthma admissions are preventable through better management in primary care.**

Over a million children in the UK are currently receiving treatment for asthma. Many children with asthma have poor control of their condition, often as a consequence of poor compliance with therapy. This may lead to exacerbations of the condition and hospital admissions.

The aim of asthma care is to control symptoms and enable people to lead a normal life. Emergency admissions indicate a loss of control of the condition, and many of these could be avoided through early identification and effective and proactive management of the condition. The goal of treatment is for patients to be free of symptoms, and able to lead a normal, active life.

Currently despite a wealth of national reports and guidance emergency admissions for children and young people across our network are still above the national average and children across the country are still dying due to a lack of basic management of their asthma. **This document is not designed to be another set of guidelines instead it supports the implementation of current best evidence by bringing together the key principles into one useable document focused on driving up standards for children and young people with asthma across Greater Manchester, Lancashire and South Cumbria.**

It is projected that utilisation of these standards across Primary Care will improve outcomes for these children and young people and begin to reduce variation in care and emergency hospital admissions.

*\*In this document the term children or child should be taken as meaning children and young people from 0 to 19 years. Although, as outlined by the British Thoracic Society (BTS) it can be difficult to confirm a diagnosis of asthma in preschool children (under the age of 5 years), the standards set in this document should be viewed as best practice for all children. This is regardless of whether children have a confirmed diagnosis of asthma, or those children under 5 years, with a probability of asthma (low, med or high) (BTS) who are currently being monitored and receiving treatment from the GP Practice.*

*The BTS guideline provides clear guidance around the monitoring and treatment of children under 5 years based on the potential probability of an asthma diagnosis. Guidance is also available for the other respiratory conditions common in this age group. e.g. SIGN 91: Bronchiolitis in children.*



*Ensuring that health professionals have the right knowledge and skills to effectively diagnose and manage children with asthma will also promote the correct diagnosis and management of children with other childhood respiratory conditions.*

## Audience

This document is designed for commissioners and providers of asthma services for children and young people. It sets out the aspirations of stakeholders around the quality of children's asthma care across Greater Manchester, Lancashire & South Cumbria, alongside the British Guideline on the Management of Asthma and NICE quality standards to enable the effective commissioning of services which meet these minimum standards.

Providers will be able to use these standards as a self-assessment of their ability to deliver the required quality of acute care for children with asthma. They can be used to validate, challenge and to quality assure services. It is also suggested that CCGs sign the Asthma UK pledge to implement the NICE quality standards within the next 3 years.

<http://www.asthma.org.uk/Sites/healthcare-professionals/pages/compare-your-care-in-england>



## Summary of standards

1. **Every GP Practice or Primary Care Asthma Service must have a named clinical lead, responsible and accountable for asthma (which includes children).** (National Review of Asthma Deaths, 2014)
2. **Every child should receive a diagnosis in accordance with BTS/SIGN guidance.** (NICE Quality Standard 1, 2013)
3. **Every GP Practice should have an auditable Children's Asthma Register (0-19yrs)\*** (BTS Guideline, 2014)
4. **Children and young people with asthma should receive a structured review at least bi-annually** (NICE Quality Standard 5, 2013)
5. **Adequate clinic time should be provided for assessment and management of asthma in children and young people** (Designing and commissioning services for children and young people with asthma: A good practice guide, 2013) (NICE Support for commissioners and others using the quality standard for asthma, February 2013)
6. **Children with asthma are given specific training and assessment in inhaler technique before starting any new inhaler treatment** (NICE Quality Standard 4, 2013)
7. **Children and young people with asthma should receive a written personalised action plan.** (NICE Quality Standard 3, 2013)
8. **Self-management: Children and families should be supported and enabled to self-manage asthma and seek appropriate medical support.** (National Review of Asthma Deaths, 2014)
9. **Every GP Practice or Primary Care Asthma Service should have a pulse oximeter with child finger probe** (BTS Guideline, 2014)
10. **Exposure to tobacco smoke and/or smoking status recorded and smoking cessation offered** (National Review of Asthma Deaths, 2014 page xii)
11. **Children who received treatment in hospital or through out-of-hours services for an acute exacerbation of asthma should be followed up by their own GP within 2 working days of discharge** (NICE Quality Standard 11, 2013)
12. **Each GP Practice should ensure appropriate secondary care follow up is in place for all children and young people following 2 or more A&E attendances and after every hospital admission due to asthma** (BTS Guideline, 2014)
13. **Children with difficult asthma should be offered an assessment by a multidisciplinary difficult asthma service** (NICE Quality Standard 11, 2013)
14. **A system should be in place to ensure that young people or the families of children who fail to attend an appointment are followed up promptly** (BTS Guideline, 2014)
15. **All young people with asthma should have appropriate arrangements in place to support their transition into adult respiratory services or management by GP Practices** (BTS Guideline, 2014)
16. **Every GP Practice or Primary Care Asthma Service should have a programme of asthma audit and ongoing improvements** (National Review of Asthma Deaths, 2014)



## Primary Care Asthma Standards for Children and Young People

### STANDARD ONE

**Every GP Practice or Primary Care Asthma Service must have a named clinical lead, responsible and accountable for asthma**

Every general practice, out of hours centre and walk in centre should have a designated, named clinical lead for asthma services, responsible for maintaining and improving standards of asthma care and formal team training in the management of asthma.<sup>1</sup>

N.B. This standard applies to all organisations providing care for children with asthma in the community.

### MEASUREMENT

1. The Asthma Clinical Lead (doctor or nurse) for all organisations should hold as a minimum an Asthma Diploma<sup>2</sup> or equivalent and be able to demonstrate regular professional updates and recent clinical experience.<sup>3</sup>

N.B. In smaller practices collaboration with other practice/practices may be necessary to ensure access to an Asthma Clinical Lead with the relevant knowledge and skills base.

2. The name of the Asthma Clinical lead should be published on the organisations website, detailing their specialist Asthma qualification<sup>2</sup> and contact number

3. The Asthma Clinical Lead should be responsible for publishing on the website what the patient can expect from the practice around their asthma care. These should include:

Regular structured review of the patient's asthma control<sup>4,3</sup>  
(Frequency depending on your asthma control)

A 20 minute appointment for your review<sup>5,3</sup>  
(30 - 45 minutes for an initial review)<sup>5</sup>

Inhaler technique assessment and training.<sup>3,4</sup>

A reminder for the patient/carer to bring all inhaled medication to every appointment

A Personalised Asthma Action Plan (PAAP)<sup>3,4</sup>

Links to age-appropriate self-management resources for children and young people with asthma and their parents<sup>3,4</sup> e.g. Asthma UK <http://www.asthma.org.uk/>

4. The Asthma Clinical Lead should be responsible for audit of staff training<sup>2</sup> and formal asthma management training for all staff appropriate to their contact with patients<sup>1</sup>



## STANDARD ONE

**Every GP Practice or Primary Care Asthma Service must have a named clinical lead, responsible and accountable for asthma**

### Rationale and Expected Outcomes & Benefits

The report from the National Review of Asthma Deaths (2014) identified factors that could have avoided death in relation to the health professional's implementation of asthma guidelines in 89 (46%) of the 195 deaths, including lack of specific asthma expertise in 34 (17%) and lack of knowledge of the UK asthma guidelines in 48 (25%).

For this reason the report recommended that: ***Every NHS hospital and general practice should have a designated, named clinical lead for asthma services, responsible for formal training in the management of acute asthma.***

This standard is based on an understanding that all healthcare professionals who provide asthma care should have received recognised training in asthma management, and those working with children and young people should have specific knowledge, skills and training in children's asthma.<sup>6</sup>

It also sets out to improve the quality of life for people with asthma and ensure they reach their full potential by:<sup>6</sup>

- informing people with asthma about what a high quality asthma service should look like
- improving their access to services and reducing health inequalities
- ensuring a high standard of care and treatment for all people with asthma.

Research has shown that without the presence of a designated lead for asthma the quality of care is greatly reduced for children and young people with asthma.<sup>2</sup>

It is expected that implementation of this standard will lead to the following outcomes:

- Owned responsibility by each practice to ensure that all staff, i.e. Receptionist, Practice Nurse, GP etc., maintain knowledge, skills and competency around the care of children and young people with asthma in line with national guidelines.
- An annual programme of asthma training and education in every practice
- Appropriately skilled healthcare professionals at every point of the asthma pathway
- Better knowledge and implementation of national asthma guidelines

The benefits of implementing this standard include:

- Improved access to specific asthma expertise
- Asthma care in line with UK asthma guidelines including provision of an asthma plan and regular inhaler technique checks
- Improved communication and better engagement with children and young people with asthma, and their families
- Improved self-management
- Improved quality of life – participation in sports/exercise, school attendance etc.
- Reduction in A&E attendance and hospital admissions
- Reduction in avoidable deaths
- Improved medicines management

### REFERENCES

1. Royal College of Physicians. Why asthma still kills. The National Review of Asthma Deaths (NRAD) Confidential Enquiry Report. (May 2014) Page xi
2. Designing and commissioning services for children and young people with asthma: A good practice guide (2013) Page 68
3. SIGN 141 British Guideline on the Management of Asthma. A national clinical guideline. (October 2014) Page 126
4. NICE Quality. Standard 5: Standard for Asthma (February 2013)
5. NICE support for commissioners and others using the quality standard for asthma (February 2013)
6. Guide to good asthma care for adults and children with asthma. Asthma UK (2010)



## STANDARD TWO

**Every child with newly diagnosed asthma is diagnosed in accordance with BTS/SIGN guidance.<sup>1</sup>**

There should be evidence of local arrangements to ensure people with newly diagnosed asthma are diagnosed in accordance with BTS/SIGN guidance, and that **the process including the probability of asthma is documented in their patient notes.**<sup>1,2</sup>

Diagnosis Confirmed in Accordance with BTS/SIGN:<sup>1,2,3</sup>

- High Probability- diagnosis of asthma likely
- Low probability- diagnosis other than asthma likely
- Intermediate probability- diagnosis uncertain

<https://www.brit-thoracic.org.uk/guidelines-and-quality-standards/asthma-guideline/>

**Appendix 1:** BTS/Sign British guideline on the management of Asthma: flowchart diagnosis in children<sup>4</sup>

## MEASUREMENT

1. Evidence of use of BTS/Sign Guidelines<sup>2</sup> i.e. BTS Guideline available for use in the practice and reflected in any practice documentation
2. Diagnosis process documented in every child or young person's patient record<sup>1</sup>
3. Include this measure in a suite of inquiries auditing the patient records in the Children & Young People's Asthma Register.<sup>3</sup>
4. Auditing general practice records will help to establish whether the probability of asthma (high, intermediate, low) has been determined (particularly in the 0-5 years group) and the basis for diagnosis has been recorded in the notes.<sup>3</sup>





## STANDARD TWO

**Every child with newly diagnosed asthma is diagnosed in accordance with BTS/SIGN guidance.<sup>1</sup>**

### Rationale and Expected Outcomes & Benefits

Making a diagnosis of asthma is a process which is different in adults and children and also varies among children. The process for diagnosing children is clearly described in the BTS/SIGN<sup>2</sup> guidance.

It is important the process followed is documented to ensure continuity in the diagnostic process. It is also important that the basis on which the diagnosis of asthma is made is clearly recorded because this process may have implications for the future management of the condition. Following the process should result in an accurate diagnosis and ensure the child receives appropriate treatment.<sup>1</sup>

There are significant problems in diagnosing asthma in children under the age of five, partly due to their difficulty in performing the diagnostic tests, and partly because viral wheezing illness can be confused with asthma.<sup>2</sup> Many children have episodes of wheezing, cough and difficulty breathing, which are associated with viral upper respiratory tract infections, but these symptoms are not persistent, and such episodes often stop by school age.<sup>3</sup> Therefore The BTS guideline provides clear guidance around the monitoring and treatment of children under 5 years based on the potential probability of an asthma diagnosis.<sup>2</sup>

It is expected that implementation of this standard will lead to the following outcomes:<sup>1,2,3</sup>

- Accurate diagnosis of asthma
- Accurate prediction of probability the of asthma in children presenting with respiratory symptoms (particularly in the 0-5 years age group)
- Accurate identification respiratory conditions that are not asthma
- Appropriate treatment and ongoing management of children with both asthma and non-asthma diagnoses

The benefits of implementing this standard include:

- Timely access to the correct treatment and management of asthma and other childhood respiratory conditions
- Improved self-management of asthma
- A reduction in A&E attendance and hospital admissions
- A reduction in avoidable deaths
- Improved medicines management

### REFERENCES

1. NICE Quality Standard 1: Standard for Asthma (February 2013)
2. SIGN 141 British Guideline on the Management of Asthma. A national clinical guideline. (October 2014)
3. Designing and commissioning services for children and young people with asthma: A good practice guide (2013) Page 30-31





### STANDARD THREE

#### Every GP Practice should have an auditable Children's Asthma Register (0-19yrs)

Primary care should establish a specific 'Children's Asthma Register' to aid audit of their asthma service including asthma diagnosis, safe prescribing monitoring, regular asthma structured reviews and follow up of children after hospital attendance/admission and DNA appointments.<sup>1,2</sup>

The British Guideline on the management of asthma acknowledges it can be difficult to confirm a diagnosis of asthma in preschool children (under the age of 5 years) and therefore provides clear guidance around the monitoring and treatment of children under 5 years based on the potential probability of an asthma diagnosis.

The practice register should therefore include any child under 5 years with a probability of asthma (low, med or high) currently being monitored and receiving treatment from the GP Practice.

### MEASUREMENT

1. Evidence of an auditable Asthma Register for 0 – 19 year olds

N.B. This may form part of a General Practice Asthma Register but the practice must be able to search and run audits on the register by age group

2. Review of QOF AST001 data to ensure exception reporting rates are low

**N.B. QOF data is not extracted for patients under the age of 18, however, review of this measure will act as a proxy indicator of GP Practice follow up procedures**

3. Demonstration of how the register is used to improve the quality of care for children and young people with asthma

4. Evidence that all patients receiving medication for asthma have a diagnosis in accordance with BTS guidelines and are on the Asthma (0-19 years) Register<sup>1,2</sup>

5. Very few children under 5 years will have a confirmed diagnosis of asthma but the GP Practice should provide evidence of those children under 5 with a probable diagnosis of asthma in order to demonstrate appropriate follow up i.e. inhaler technique check, asthma action plan, etc.<sup>1,2</sup>



### STANDARD THREE

#### Every GP Practice should have an auditable Children's Asthma Register (0-19yrs)

##### Rationale and Expected Outcomes & Benefits

All children receiving medication for asthma, or for the probability of asthma should be on an the GP Practice Asthma Register.<sup>1,2</sup> Establishing and maintaining an Asthma Register for children and young people (0–19 years) will help primary care health professionals:<sup>2</sup>

- To demonstrate diagnosis and care in line with national guidance
- Audit the use of short acting bronchodilators, since this is an indicator of poor control
- Audit exposure to tobacco smoke and or smoking status
- Identify children and young people at risk of future exacerbation who need more frequent monitoring and review
- Identify children and young people who are more likely to die from their asthma, since such a register may also help to identify those most likely to require emergency hospital care

It is expected that implementation of this standard will lead to the following outcomes:<sup>1,2,3</sup>

- Improved routine management and follow up of children and young people with asthma
- Improved follow up and treatment of children and young people following exacerbation and hospital admission
- Improved medicines management leading to improved self-management of asthma
- Identification of children and young people at high risk of exacerbation of asthma
- Improved identification and management of children and young people with a high probability of an asthma diagnosis
- Identification of families and young people who may benefit from smoking cessation services

The benefits of implementing this standard include:

- Improved self-management of asthma supported by regular review and follow up
- Increased awareness of the dangers of smoking and increased referrals to the smoking cessation services
- Cost effective prescribing practices
- Reduction in A&E attendance and hospital admissions
- Reduction in avoidable deaths

##### REFERENCES

1. SIGN 141 British Guideline on the Management of Asthma. A national clinical guideline. (October 2014)
2. Designing and commissioning services for children and young people with asthma: A good practice guide (2013)
3. Quality Outcome Framework – Asthma Indicators  
<http://www.nhsemployers.org/~media/Employers/Documents/Primary%20care%20contracts/QOF/QOF%20Home%20Page/2015-16%20Summary%20of%20changes%20to%20QOF.pdf>



## STANDARD FOUR

### Children and Young People with asthma should receive a structured review at least bi-annually<sup>1</sup>

Children and young people with asthma should expect a regular, face-to-face, structured review by a healthcare professional with appropriate asthma training.<sup>1,2,3,4</sup> Whilst adults should be reviewed at least annually, children and young people should expect to receive a structured review every three to six months.<sup>1,2,3,4</sup>

The review must include all the of the components outlined across BTS guidance, NICE Asthma Quality Standards and QOF.<sup>1,3,5</sup>

#### Appendix 2: Components of a structured asthma review for children and young people

##### MEASUREMENT

1. Intention published on the practice website and/or brochure to offer all children and young people an annual review (minimum)
2. Demonstration through training records of staff development and competence (medical, nursing and administrative) around the management of Children & Young People with Asthma.
3. Audit of annual review recorded in patient notes for all children and young people on the Asthma Register (0-19yrs)<sup>4</sup>
4. Review of QOF AST003 data to ensure exception reporting rates are low<sup>4</sup>
5. Evidence of documentation for structured asthma review which includes all the components set out by BTS, NICE and QOF.<sup>1,3, 5</sup>
6. Evidence the use of an age-appropriate tool for monitoring asthma control.<sup>1,3,4</sup>

#### Appendix 3: Asthma UK – Asthma Control Test



## STANDARD FOUR

### Children and Young People with asthma should receive a structured review at least bi-annually

#### Rationale and Expected Outcomes & Benefits

In 2014 the National Review of Asthma Deaths (NRAD) found that there was no evidence that an asthma review had taken place in general practice in the last year before death for 84 (43%) of the 195 people who died.<sup>2</sup>

A structured review can improve clinical outcomes for people with asthma.<sup>1</sup> People with asthma should expect<sup>2</sup> regular, **at least yearly for adults, three to six monthly for children**, face-to-face meetings with their healthcare professional and a complete assessment of their asthma control. This should include:

- use of a validated asthma control questionnaire
- review of reliever and preventer medicine
- review of the number of asthma attacks they have had
- use of oral steroids (if appropriate)
- side-effects of medicine
- checking correct use of their inhaler and selection of an inhaler device that they can easily use
- age appropriate lung function tests such as spirometry or peak flow
- monitoring of height and weight in children

The incidence of asthma exacerbations increase dramatically in the first few weeks of the academic year when children and young people return to school.<sup>6</sup> NRAD<sup>3</sup> also found that of the 28 children and young people, four (40%) of those aged under 10 years and 14 (78%) of those aged 10–19 years died between March and September, which supports previous research findings that children and young people are more likely to die during the summer months than the rest of the year. Practices could therefore consider a programme of asthma reviews during the summer holiday period utilising the greater flexibility that provides for appointments during the day to ensure children and young people are maintaining good self-management of their asthma prior to their return to school.

It is expected that implementation of this standard will lead to the following outcomes:<sup>1,2,3</sup>

- Improved routine management and follow up of children and young people with asthma
- Improved follow up and treatment of children and young people following exacerbation and hospital admission
- Improved inhaler technique and medicines management leading to improved self-management of asthma
- Identification of children and young people at high risk of exacerbation of asthma
- Improved identification and management of children and young people with a high probability of an asthma diagnosis
- Identification of families and young people who may benefit from smoking cessation services

The benefits of implementing this standard include:

- Improved self-management of asthma supported by regular review and follow up
- Increased awareness of the dangers of smoking and increased referrals to the smoking cessation services
- Cost effective prescribing practices
- Reduction in A&E attendance and hospital admissions
- Reduction in avoidable deaths

#### REFERENCES

1. NICE Quality Standard 5: Standard for Asthma (February 2013)
2. Asthma UK. Guide to good asthma care for adults and children with asthma. (2010)
3. Royal College of Physicians. Why asthma still kills. The National Review of Asthma Deaths (NRAD) Confidential Enquiry Report. (May 2014)
4. SIGN 141 British Guideline on the Management of Asthma. A national clinical guideline. (October 2014)
5. Designing and commissioning services for children and young people with asthma: A good practice guide (2013)
6. <http://www.hscic.gov.uk/article/4989/Asthma-emergency-admissions-fall-in-August-rise-in-September>



<b>STANDARD FIVE</b> <b>Adequate clinic time should be provided for assessment and management of asthma in children and young people</b>
<p>All organisations should allow adequate clinic <b>time for assessment and management of children and young people with asthma.</b><sup>1</sup></p> <p>A first appointment would be approximately <b>30-45 minutes</b><sup>3</sup> and follow-up structured reviews approximately <b>20 minutes.</b><sup>1,3</sup></p> <p>Appointments with children are likely to take longer as a family-centred approach is needed<sup>4</sup></p>
<b>MEASUREMENT</b>
<p>1. Intention published on the practice website and/or brochure to offer all children and young people a 20 minute review appointment<sup>1,2</sup> (30-45 minutes for an initial review)<sup>2</sup></p>
<p>2. Evidence/audit of appointment times to ensure clinic slots are proactively planned in accordance with the above guidance</p>
<p>3. There is a potential to audit patient satisfaction around this measure</p>



## STANDARD FIVE

### Adequate clinic time should be provided for assessment and management of asthma in children and young people

#### Rationale and Expected Outcomes & Benefits

The initial assessment of children suspected of having asthma should focus on the presence of key features in the history and clinical examination – including age at presentation, sex, severity and frequency of previous wheezing episodes, coexistence of atopic disease, family history of atopy, abnormal lung function. Scoring systems such as the Asthma Predictive Index (API) may be of benefit in quantifying these. Alternative diagnoses should be carefully considered.<sup>3</sup>

It is clear that all of the above cannot be adequately assessed in a routine clinic slot and therefore additional time must be allowed to carry out an initial assessment and subsequent structured reviews.<sup>2,3</sup>

Appointments with children are likely to take longer as a family-centered approach is needed<sup>4</sup>

It is expected that implementation of this standard will lead to the following outcomes:<sup>1,2,3</sup>

- Improved initial diagnosis and treatment of asthma
- Improved routine management and follow up of children and young people with asthma
- Improved follow up and treatment of children and young people following exacerbation and hospital admission
- Improved inhaler technique and medicines management leading to improved self-management of asthma
- Identification of children and young people at high risk of exacerbation of asthma
- Improved identification and management of children and young people with a high probability of an asthma diagnosis
- Identification of families and young people who may benefit from smoking cessation services

The benefits of implementing this standard include:

- Improved engagement and understanding of the child, young person and family needs and circumstances
- Improved self-management of asthma supported by regular review and follow up
- Increased awareness of the dangers of smoking and increased referrals to the smoking cessation services.
- Cost effective prescribing practices
- A reduction in A&E attendance and hospital admissions
- A reduction in avoidable deaths

#### REFERENCES

1. SIGN 141 British Guideline on the Management of Asthma. A national clinical guideline. (October 2014)
2. NICE support for commissioners and others using the quality standard for asthma (February 2013)
3. Designing and commissioning services for children and young people with asthma: A good practice guide (2013)
4. Royal College of Physicians. Why asthma still kills. The National Review of Asthma Deaths (NRAD) Confidential Enquiry Report. (May 2014)



## STANDARD SIX

**Children with asthma are given specific training and assessment in inhaler technique, including the use of a spacer device, before starting any new inhaler treatment**

Children and young people with asthma need to be able to use their inhaler correctly to ensure they receive the correct dose of treatment. There are several types of inhaler and it is important that training and assessment are specific to each inhaler.<sup>1</sup>

Training and assessment need to take place before any new inhaler treatment is started, to ensure that treatment does not fail because of poor technique.<sup>1,2,3</sup>

At every asthma consultation including during structured asthma review children and their families should be asked to demonstrate that they can use the inhaler correctly and this should be documented in the clinical record.<sup>1,2,3</sup>

In children, pMDI and spacer are the preferred method of delivery of  $\beta_2$  agonists and/or inhaled corticosteroids. A face mask is required until the child can breathe reproducibly using the spacer mouthpiece.<sup>2</sup>

Staff providing training and assessment of inhaler technique should have the appropriate knowledge<sup>1, 2, 3</sup> Inhaler technique should be demonstrated by the child or young person using their own device and observed by an appropriately trained health professional who is able to correct the technique if required.<sup>1,2,3</sup>

## MEASUREMENT

1. Intention published on the practice website and/or brochure to provide all children and young people with an inhaler technique check during every asthma appointment<sup>1,2</sup>
2. Audit of patient notes on the Asthma Register (0-19yrs) to ensure inhaler technique check, including with or without spacer, has been recorded in the patient's notes during each asthma appointment
3. Demonstration through training records of staff development and competence (medical, nursing and administrative) around the management of Children and Young People with Asthma including inhaler technique training<sup>1,2</sup>
4. Evidence of invitation for review to include a reminder for the child/young person to bring all medication and devices to the review. i.e. Invitation for review letter
5. Evidence of an Asthma training/update programme for all staff overseen by the Asthma Clinical Lead<sup>1,2</sup>
6. Evidence of a staff register of asthma training and competence maintained by the Asthma Clinical Lead<sup>1,2</sup>





## STANDARD SIX

**Children with asthma are given specific training and assessment in inhaler technique including the use of a spacer device before starting any new inhaler treatment**

### Rationale and Expected Outcomes & Benefits

Children and young people with asthma need to be able to use their inhaler correctly to ensure they receive the correct dose of treatment. There are several types of inhaler and it is important that training and assessment are specific to each inhaler.<sup>1,2</sup>

Training and assessment need to take place before any new inhaler treatment is started, to ensure that changes to treatment do not fail because of poor technique.<sup>1,2</sup>

A plethora of evidence indicates that inhaled medications are essential in the treatment of childhood asthma, although they are only effective when used properly. Using an inhaler correctly delivers medication directly to the lungs and leads to a better response to treatment.<sup>2,4</sup>

The use of a Pressurised Metered Dose Inhaler (pMDI) on its own will rarely deliver the optimal treatment to a child. Studies have shown that a spacer will reduce the amount of drug deposited in the oropharynx, while improving the lung deposition of the inhaled drug. Using a spacer slows down the medicine delivered from a metered-dose inhaler. This way the medicine stays in the spacer and the child can breathe it into the lungs. Without a spacer, the medicine sprays directly into the child's mouth and throat, and less of it reaches the lungs.<sup>4</sup>

Younger children will need to use a spacer with a mask, because they may not follow instructions to seal their lips together when using a mouthpiece. When the child is old enough they should change to a spacer with a mouthpiece which will deliver the medicine more effectively.<sup>4</sup>

Unfortunately, many children and young people with asthma do not have the best inhaler technique but with training and practice all children can learn proper inhaler technique.<sup>1,2,3,4</sup>

Teaching and regular review of inhaler technique has been shown to improve the correct usage of inhaled medication in turn leading to better outcomes for children and young people with asthma<sup>2</sup>

It is not possible to adequately check inhaler technique if the child/young person does not have their devices with them. Therefore, the child/young person/family should be asked to bring all medications and devices to the review appointment. Where a new prescription has been given the child should return to the practice to have their inhaler technique taught by the GP Practice unless a special agreement is in place with a designated pharmacy to carry out inhaler technique training for the practice.

It is expected that implementation of this standard will lead to the following outcomes:<sup>1,2,3</sup>

- Improved treatment of asthma in children and young people
- Improved inhaler technique leading to improved self-management of asthma
- Improved concordance with treatment

The benefits of implementing this standard include:

- Improved self-management of asthma supported by regular review and follow up
- Improved quality of life for children and young people with asthma and their families
- Better school attendance
- Cost effective prescribing practices
- Reduction in A&E attendance and hospital admissions
- Reduction in avoidable deaths

### REFERENCES

1. NICE Quality Standard 4: Standard for Asthma (February 2013)
2. SIGN 141 British Guideline on the Management of Asthma. A national clinical guideline. (October 2014)
3. Royal College of Physicians. Why asthma still kills. The National Review of Asthma Deaths (NRAD) Confidential Enquiry Report. (May 2014)
4. Watson, P. (2012) Inhaler spacer devices to treat asthma in children. Nursing Times, Vol 108, No. 46, Page 18-20



## STANDARD SEVEN

### Children and young people with asthma should receive a written personalised action plan

All children (families) and young people with asthma should be provided with written guidance in the form of a **Personal Asthma Action Plan (PAAP)**.<sup>1,2,3,4,5</sup>

The intent of the PAAP is for children, young people and families living with asthma to receive the information about their asthma both verbally and in a written format to refer back to at a later date.<sup>1,2,3,4,5</sup>

**Formats, such as pictorial, braille, other languages or digital, may be needed for children, young people and families dependent upon their individual needs.**<sup>4</sup>

- The PAAP should: detail the child/young person's own triggers, current treatment and specify how to prevent relapse. The PAAP should also outline when and how to seek help if asthma control is deteriorating and what to do in an emergency.
- be completed together with the young person or the child and their family as part of asthma education following diagnosis.
- be reviewed at every subsequent review.
- be linked to the child/young person's clinical record.

See **Appendix 4** for PAAP resources produced by Asthma UK and the essential components of a Personalised Asthma Action Plan. Asthma action plans are also available via EMIS <http://www.asthma.org.uk/Sites/healthcare-professionals/news/asthma-uk-action-plans-are-now-live-on-emis-web>

## MEASUREMENT

1. Intention published on the practice website and/or brochure that a Personalised Asthma Action Plan (PAAP) will be discussed and provided/reviewed for all children and young people during every asthma appointment
2. Provision of a Personalised Asthma Action Plan template used by the GP Practice staff. Does the plan include the essential components of a PAAP?
3. Is the PAAP in a 'child friendly' format? Can the PAAP also be provided in different formats i.e. translated into other languages or braille. Provide evidence of this process
4. Provision of a PAAP should be recorded and a copy of the PAAP filed in the patient record
5. Audit of patient notes on the Asthma Register (0-19yrs) to ensure the provision/review of a PAAP has been recorded and a copy filed in the patient's notes during each asthma appointment
6. There is a potential to audit patient satisfaction around this measure



## STANDARD SEVEN

### Children and young people with asthma should receive a written personalised action plan

#### Rationale and Expected Outcomes & Benefits

There is strong research evidence of the effectiveness of PAAPs. NRAD found that in only 44 (23%) of the 195 patients who died was there a record of them having been provided with a PAAP in either primary or secondary care. All people with asthma should be provided with written guidance in the form of a personal asthma action plan (PAAP) that details their own triggers and current treatment, and specifies how to prevent relapse, and when and how to seek help in an emergency.<sup>1</sup>

Written personalised action plans, given as part of structured education, can improve outcomes such as self-efficacy, knowledge, and confidence for people with asthma, particularly for children and young people with moderate to severe asthma whose condition is managed in secondary care. For children and young people with asthma who have had a recent acute exacerbation resulting in admission to hospital, written personalised action plans may reduce readmission rates.<sup>4,3</sup>

It is expected that implementation of this standard will lead to the following outcomes:<sup>1,2,3</sup>

- Improved communication with children, young people and families through the provision of age appropriate, individualised self management advice
- Improved self management of asthma supported by advice about the individual treatment plan, triggers, recognising loss of asthma control, and two or three action points to take if asthma deteriorates, including seeking emergency help; starting oral steroids
- Improved concordance with treatment

The benefits of implementing this standard include:

- Improved self-management of asthma supported by regular review and follow up
- Improved quality of life for children and young people with asthma and their families
- Better school attendance
- Cost effective prescribing practices
- Reduction in A&E attendance and hospital admissions
- Reduction in avoidable deaths

#### REFERENCES

1. Royal College of Physicians. Why asthma still kills. The National Review of Asthma Deaths (NRAD) Confidential Enquiry Report. (May 2014)
2. Designing and commissioning services for children and young people with asthma: A good practice guide (2013)
3. SIGN 141 British Guideline on the Management of Asthma. A national clinical guideline. (October 2014)
4. NICE Quality Standard 3: Standard for Asthma (February 2013)
5. NICE support for commissioners and others using the quality standard for asthma (February 2013)



## STANDARD EIGHT

### Self-management: Children and families should be supported and enabled to self-manage asthma and seek appropriate medical support

Children and their families should be empowered with the knowledge, skills and resources to self-manage their asthma – to be able to recognise triggers and how to avoid these, recognise what good control feels like, and know what to do when they start to lose control of their asthma, and when and how to seek appropriate medical help.<sup>1</sup>

A package of asthma education should be delivered from diagnosis and continued at every review and every consultation with an exacerbation of asthma symptoms.

Children, young people and their families should receive sufficient information, education and support to encourage and enable them to participate actively in all aspects of their care and decision-making. This should be tailored information in an accessible format throughout the care pathway (written information, pictures, symbols, large print, Braille or different languages) extending into schools and community setting.

## MEASUREMENT

1. Provision of a Personalised Asthma Action Plan template used by the GP Practice staff. Does it include the essential components of a PAAP?
2. Provide examples of the information provided for children, parents and young people. Is the format appropriate to the individual and the practice population? i.e. pictorial or translated into a different language<sup>5</sup>
3. Links to age-appropriate self-management resources for children and young people with asthma and their parents published on the practice website<sup>3,4</sup> For example Asthma UK <http://www.asthma.org.uk/><sup>5</sup>
4. Provision of self-management information detailed in the patient record
5. Audit of patient notes on the Asthma Register (0-19yrs) to ensure the provision of self-management materials and asthma education materials have been recorded in the patient's notes during each asthma appointment. Is the PAAP in a 'child friendly' format?



## STANDARD EIGHT

### Self-management: Children and families should be supported and enabled to self-manage asthma and seek appropriate medical support

#### Rationale and Expected Outcomes & Benefits

Parents and children, and those who care for or teach them, should be educated about managing asthma. This should include emphasis on 'how', 'why' and 'when' they should use their asthma medications, recognising when asthma is not controlled, and knowing when and how to seek emergency advice.<sup>2</sup>

The National Clinical Guideline for Asthma<sup>2</sup> highlights a substantial body of evidence to show that self-management education incorporating written PAAPs improves health outcomes for people with asthma. Twenty-two systematic reviews of 261 randomised controlled trials (RCTs) encompass evidence from a broad range of demographic, clinical and healthcare contexts. In addition, 35 RCTs provide further evidence about self-management in pre-school children, ethnic minorities, and primary care-based populations. Self-management education delivered to adults or children with asthma (and/or their parents/carers):

- Reduces emergency use of healthcare resources, including A&E visits, hospital admissions and unscheduled consultations
- Improves markers of asthma control, including a reduction in symptoms and absence from work, and improves quality of life.

There is also good evidence that self-management education targeted at people who have a history of A&E attendances or hospital admissions, can reduce subsequent use of health care resources.<sup>2</sup>

#### REFERENCES

1. Royal College of Physicians. Why asthma still kills. The National Review of Asthma Deaths (NRAD) Confidential Enquiry Report. (May 2014)
2. SIGN 141 British Guideline on the Management of Asthma. A national clinical guideline. (October 2014)
3. Designing and commissioning services for children and young people with asthma: A good practice guide (2013)
4. NICE Quality Standard 3: Standard for Asthma (February 2013)
5. NICE support for commissioners and others using the quality standard for asthma (February 2013)



**STANDARD NINE**

**Every GP Practice or Primary Care Asthma Service should have a pulse oximeter with child finger probe**

Oxygen saturation monitors should be available for use by all health professionals assessing acute asthma in both primary and secondary care settings.<sup>1</sup>

**MEASUREMENT**

1. Pulse oximetry with finger probe suitable for children and young people of all ages available at all times within the practice
2. Evidence of pulse oximeter and finger probes being in full use and supported by a maintenance contract
3. Staff trained to use pulse oximetry and act on results as appropriate
4. Evidence of pulse oximetry recorded in patient notes



## STANDARD NINE

**Every GP Practice or Primary Care Asthma Service should have a pulse oximeter with child finger probe**

### Rationale and Expected Outcomes & Benefits

Assessment of patients presenting acutely with new or worsening respiratory symptoms should include: pulse; respiratory rate; pulse oximetry; lung function (peak expiratory flow (PEF) or spirometry); auscultation of the chest; and blood pressure (BP) measurement.<sup>2</sup> Accurate measurements of oxygen saturation are essential in the assessment of all children with acute wheezing. Oxygen saturation monitors should be available for use by all health professionals assessing acute asthma in both primary and secondary care settings.<sup>1</sup>

Low oxygen saturations after initial bronchodilator treatment selects a group of patients with more severe asthma. Inpatient treatment should be considered for children with SpO<sub>2</sub> <92% in air after initial bronchodilator treatment.<sup>1</sup>

A survey of GPs revealed a minority (9%) reported they used a pulse oximeter to measure pulse rate, or to assess respiratory status (20%). In clinical examination, a traditional sign of hypoxia is central cyanosis. However, studies have shown clinicians have difficulty in reliably detecting hypoxemia until the saturation is <80%.<sup>3</sup>

It is expected that implementation of this standard will lead to the following outcomes:

- Improved assessment and management of children and young people with asthma during both acute exacerbation and routine review
- Informed decision making around asthma care and referral to secondary and tertiary services

The benefits of implementing this standard include:

- Improved management of asthma supported by objective measures
- Improved quality of life for children and young people with asthma and their families
- A reduction in A&E attendance and hospital admissions
- A reduction in avoidable deaths

### REFERENCES

1. SIGN 141 British Guideline on the Management of Asthma. A national clinical guideline. (October 2014) Page 126
2. Royal College of Physicians. Why asthma still kills. The National Review of Asthma Deaths (NRAD) Confidential Enquiry Report. (May 2014)
3. Pluddemann A, Thompson M, Price C, Pulse oximetry in primary care: primary care diagnostic technology update. British Journal General Practice. (2011) May; 61(586): 358–359.





## STANDARD TEN

### Exposure to tobacco smoke and or smoking status recorded and smoking cessation offered

Direct or passive exposure to cigarette smoke adversely affects quality of life, lung function, need for rescue medications for acute episodes of asthma and long-term control with inhaled corticosteroids.<sup>1</sup>

Parents with asthma should be advised about the danger to themselves and to their children with asthma, of smoking, and be offered appropriate support to stop smoking.<sup>1</sup>

A systematic approach to help young people and parents of children with asthma quit smoking should be triggered during both an asthma review and an acute episode<sup>2</sup>. The smoking status of parents and 14 -19 year olds should be recorded in the patient record.<sup>3</sup>

Young people aged 12–17 years with asthma should be asked if they smoke personally. If they do and wish to stop, they should be offered advice on how to stop and encouraged to use local NHS smoking cessation services by providing details of when, where and how to access them.<sup>4</sup>

NRAD<sup>3</sup> recommends that:

- A history of exposure to second hand smoke and/or smoking status should be documented in the medical records of all children and young people with asthma.<sup>5</sup>
- Current smokers, both parents and young people aged 12 years and over should be offered a documented referral to a smoking cessation services<sup>1,3,5</sup>

## MEASUREMENT

1. Provide examples of the smoking in asthma education and smoking cessation information provided for children, parents and young people. Is the format appropriate to the individual and the practice population? i.e. pictorial or translated into a different language.<sup>5</sup>
2. Audit of exposure to tobacco smoke and or smoking status recorded in patient notes for all children and young people on the Asthma Register (0-19yrs)
3. Audit of the number of smoking cessation referrals recorded in patient notes for parents and young people on the Asthma Register (0-19yrs). These should be cross referenced to the number of active smokers (parents and young people) recorded on the CYP Asthma Register
4. To check the effectiveness of smoking cessation advice given, a re-audit of the parents/young people identified on the CYP Asthma Register with an active smoking status should be carried out at least annually



## STANDARD TEN

### Exposure to tobacco smoke and or smoking status recorded and smoking cessation offered

#### Rationale and Expected Outcomes & Benefits

The National Review of Asthma Deaths report identified smoking and exposure to second-hand smoke in the home as contributory factors in the death of 65% of those who died.<sup>3</sup>

Direct or passive exposure to cigarette smoke adversely affects quality of life, lung function, need for rescue medications for acute episodes of asthma and long-term control with inhaled corticosteroid therapy (ICS). Inhalation of tobacco smoke also reduces the efficacy of ICS<sup>1</sup>

Exposure to passive smoking remains a significant health risk. One study of asthma morbidity among urban young adolescents (mean approx. 11 years of age) found at baseline that 28% of caregivers reported exposure to environmental tobacco smoke (ETS) in the home and 19% reported exposure outside the primary household.<sup>1</sup>

Children who received a 20 minute educational intervention about ETS exposure and whose ETS exposure had decreased at follow up had fewer hospitalisations ( $p=0.034$ ) and emergency department visits ( $p\leq 0.001$ ) reported in the next 12 months, as well as fewer episodes of poor asthma control ( $p=0.042$ )<sup>1</sup>

There are very few trials which have assessed smoking cessation in relation to asthma control. However, two studies have demonstrated decreases in childhood asthma severity when parents were able to stop smoking.<sup>1</sup>

Among adolescents, smoking is a risk factor for asthma. A longitudinal study of asthma and allergic disease in school children in Sweden found that both passive and active smoking were significantly related to asthma and wheeze in adolescents. Maternal ETS exposure was associated with lifetime symptoms, but daily smoking among the adolescents was more strongly related to current symptoms<sup>1</sup>

Young people with asthma are likely to be exposed to passive smoke and are more likely to take up smoking than their peers.<sup>2</sup> Uptake of smoking in teenagers increases the risks of persisting asthma. One study showed a doubling of risk for the development of asthma over six years in 14 year old children who started to smoke.<sup>1</sup>

NICE has recommended that all smokers should be offered a brief intervention about stopping smoking. Young people aged 12–17 years who have a strong commitment to quit smoking should be offered advice on how to stop and encouraged to use local NHS smoking cessation services by providing details of when, where and how to access them.<sup>1</sup>

It is expected that implementation of this standard will lead to the following outcomes:<sup>1,2,3</sup>

- Improved efficacy of medication
- Reduction in hospital admissions
- Reduction in asthma deaths

The benefits of implementing this standard include:

- Improved self-management of asthma supported by smoking cessation services
- Improved quality of life for children and young people with asthma and their families
- Better school attendance
- Cost effective prescribing practices
- A reduction in A&E attendance and hospital admissions
- A reduction in avoidable deaths

#### REFERENCES

1. SIGN 141 British Guideline on the Management of Asthma. A national clinical guideline. (October 2014)
2. Designing and commissioning services for children and young people with asthma: A good practice guide (2013)
3. Royal College of Physicians. Why asthma still kills. The National Review of Asthma Deaths (NRAD) Confidential Enquiry Report. (May 2014)
4. QRG 141 British Guideline on the Management of Asthma. Quick Reference Guide (October 2014)



## STANDARD ELEVEN

**Children who received treatment in hospital or through out-of-hours services for an acute exacerbation of asthma are followed up by their own GP within 2 working days of discharge**

Children and young people who receive treatment by their own GP, in hospital or through out-of-hours services for an acute exacerbation of asthma should be followed up by their own GP within 2 working days.<sup>1</sup>

For children and young people treated for an exacerbation of asthma in hospital (both in accident and emergency departments and as inpatients) or through out-of-hours services, follow-up appointments are important to explore the possible reasons for the exacerbation and the actions needed to reduce the risk of further acute episodes<sup>1</sup>

*It is essential that the patient's primary care practice is informed within 24 hours of discharge from the emergency department or hospital following an asthma attack. Ideally this communication should be directly with a named individual responsible for asthma care within the practice, by means of fax or email sent before discharge<sup>2</sup>*

**There should be evidence that a structured management plan (to include medication, education and follow-up) has been given to the patient following treatment in primary care or accident and emergency for acute asthma<sup>3</sup>**

## MEASUREMENT

### 1. Structure:

- a) Evidence of local arrangements to ensure children and young people who received treatment in hospital or through out-of-hours services for an acute exacerbation of asthma are followed up by their own GP practice within 2 working days of treatment.
- b) Evidence of local arrangements to ensure effective communication between secondary care centres (such as hospitals and out-of-hours services) and primary care.

**Process:** Proportion of people who received treatment in hospital or through out-of-hours services for an acute exacerbation of asthma who are followed up by their own GP practice within 2 working days of treatment.

**Numerator** – the number of people in the denominator followed up by their own GP practice within 2 working days of treatment.

**Denominator** – the number of people who received treatment in hospital or through out-of-hours services for an acute exacerbation of asthma.

2. Evidence of date of notification of hospital admission and receipt of follow up plan from hospital staff within 24 hours. GP's and commissioners may need to engage with secondary care providers if practice records indicate a delay in the communication of the discharge information to GP's<sup>3</sup>
3. Evidence/audit of appointments offered to children and young people within 2 working days of receipt by GP Practice of notification of hospital attendance or admission for an exacerbation of asthma
4. Provision of management plans as outlined above given to a child/parent and a young person by GP Practice following an exacerbation of asthma



## STANDARD ELEVEN

**Children who received treatment in hospital or through out-of-hours services for an acute exacerbation of asthma are followed up by their own GP within 2 working days of discharge**

### Rationale and Expected Outcomes & Benefits

Patients with severe asthma (indicated by need for admission) and adverse behavioural or psychosocial features are at risk of further severe or fatal attacks.<sup>2</sup>

NRAD found that ten per cent of the deaths occurred in patients who had received hospital treatment within the previous 28 days and at least 21% had been seen for asthma in accident and emergency departments in the previous 12 months.<sup>3</sup>

The review recommended that practices should press for prompt communication from hospitals and other urgent care providers about patients seen with asthma exacerbations, and should ensure primary care follow-up within two working days of receiving such notification, so as to allow optimisation of treatment and to identify those patients whose asthma remains out of control despite their hospital attendance.<sup>3</sup>

For people treated for an exacerbation of asthma in hospital (both in accident and emergency departments and as inpatients) or through out-of-hours services, follow-up appointments are important to explore the possible reasons for the exacerbation and the actions needed to reduce the risk of further acute episodes.<sup>1</sup>

A careful history should elicit the reasons for the asthma attack and explore possible actions the patient should take to prevent future emergency presentations. Medication should be altered depending upon the assessment and the patient provided with an asthma action plan aimed at preventing relapse, optimising treatment and preventing delay in seeking assistance in the future.<sup>2</sup>

Follow up should be arranged prior to discharge with the patient's general practitioner or asthma nurse within two working days and with a hospital specialist asthma nurse or respiratory physician at about one month after admission.<sup>2</sup>

It is expected that implementation of this standard will lead to the following outcomes:<sup>1,2,3</sup>

- Improved efficacy of medication
- Reduction in hospital admissions
- Reduction in asthma deaths

The benefits of implementing this standard include:

- Improved self-management of asthma supported by smoking cessation services
- Improved quality of life for children and young people with asthma and their families
- Better school attendance
- Cost effective prescribing practices
- A reduction in A&E attendance and hospital admissions
- A reduction in avoidable deaths

## REFERENCES

1. NICE Quality Standard 10: Standard for Asthma (February 2013)
2. SIGN 141 British Guideline on the Management of Asthma. A national clinical guideline. (October 2014)
3. Royal College of Physicians . Why asthma still kills. The National Review of Asthma Deaths (NRAD) Confidential Enquiry Report. (May 2014) Page 7



## STANDARD TWELVE

**Each GP Practice should ensure appropriate secondary care follow up is in place for all children and young people following 2 or more A&E attendances and after every hospital admission due to asthma**

Each GP Practice should have a process in place to ensure that an appointment for follow up in secondary care is arranged for every child or young person where asthma has necessitated hospital attendance or 2 or more A&E attendances in the previous 12 months<sup>1</sup>

### MEASUREMENT

1. Evidence of date of notification of hospital admission and receipt of follow up plan from hospital staff within 24 hours. GP's and commissioners may need to engage with secondary care providers if practice records indicate a delay in the communication of the discharge information to GP's<sup>2</sup>
2. Evidence of A&E attendances and hospital admissions recorded in the patient record
3. Regular audit of patient records to identify those children and young people where asthma has necessitated hospital admission or 2 or more A&E attendances in the previous 12 months
4. Evidence recorded in the patient record that secondary care follow up is in place for those children and young people identified as meeting the above criteria



## STANDARD TWELVE

**Each GP Practice should ensure appropriate secondary care follow up is in place for all children and young people following 2 or more A&E attendances and after every hospital admission due to asthma**

### Rationale and Expected Outcomes & Benefits

NRAD found that the majority of people (112/195 - 57%) who died from asthma (60% adults) were not under specialist supervision during the 12 months prior to death. Only 29 /83 (15% of total) were reviewed in secondary or tertiary care during this period. Primary care health professionals did not refer 32 patients to secondary care when this seemed clinically indicated<sup>2</sup>

Many of the deaths occurred in patients who had received inadequate treatment with ICS or steroid tablets and/or inadequate objective monitoring of their asthma. Follow up was inadequate in some and others should have been referred earlier for specialist advice. There was widespread underuse of written management plans. Heavy or increasing use of  $\beta_2$  agonist therapy was associated with asthma death<sup>2</sup>

For people treated for an exacerbation of asthma in hospital (both in A&E departments and as inpatients) or through out-of-hours services, follow-up appointments are important to explore the possible reasons for the exacerbation and the actions needed to reduce the risk of further acute episodes.<sup>1</sup>

NRAD recommended that GP practices should press for prompt communication from hospitals and other urgent care providers about patients seen with asthma exacerbations, and should ensure primary care follow-up within two working days of receiving such notification, so as to allow optimisation of treatment and to identify those patients whose asthma remains out of control despite their hospital attendance.<sup>2</sup>

Follow up should be arranged prior to discharge with the patient's general practitioner or asthma nurse within two working days and with a hospital specialist asthma nurse or respiratory physician at about one month after admission.<sup>1,2</sup>

National guidelines on the Management of Asthma also sets out clear guidance and a stepwise approach to referral and management of children and young people following a hospital admission or attendances at A&E.<sup>1</sup>

It is expected that implementation of this standard will lead to the following outcomes:<sup>1,2,3</sup>

- Improved efficacy of medication
- Reduction in hospital admissions
- Reduction in asthma deaths

The benefits of implementing this standard include:

- Improved self-management of asthma supported by smoking cessation services
- Improved quality of life for children and young people with asthma and their families
- Better school attendance
- Cost effective prescribing practices
- A reduction in A&E attendance and hospital admissions
- A reduction in avoidable deaths

### REFERENCES

1. SIGN 141 British Guideline on the Management of Asthma. A national clinical guideline. (October 2014)
2. Royal College of Physicians. Why asthma still kills. The National Review of Asthma Deaths (NRAD) Confidential Enquiry Report. (May 2014)



### STANDARD THIRTEEN

#### Children with difficult asthma are offered an assessment by a multidisciplinary difficult asthma service

People with difficult asthma should have access to specialist assessment to accurately diagnose their asthma, exclude alternative causes of persistent symptoms, manage comorbidities, confirm adherence to therapy and ensure they are receiving the most appropriate treatment.<sup>1</sup>

The term difficult asthma generally refers to a clinical situation where a prior diagnosis of asthma exists, and asthma-like symptoms and asthma attacks persist, despite prescription of high-dose asthma therapy.<sup>2</sup>

Poor adherence, psychosocial factors and concomitant conditions are associated with difficult asthma, so a comprehensive approach to assessment, diagnosis and management is key. Children with severe asthma may also have behavioural difficulties<sup>3</sup>

Children with difficult asthma should be systematically evaluated, including:<sup>2</sup>

- confirmation of the diagnosis of asthma, and
- identification of the mechanism of persisting symptoms and assessment of adherence to therapy.

Although this group of children and young people will have attended A&E or have been admitted to hospital due to exacerbations of their asthma they should also be receiving follow up in secondary care.<sup>2</sup>

**This assessment should be facilitated through a dedicated multidisciplinary difficult asthma (tertiary) service, by a team experienced in the assessment and management of difficult asthma<sup>2</sup>**

#### MEASUREMENT

**Structure:** Evidence of local arrangements to ensure people with difficult asthma are offered an assessment by a multidisciplinary difficult asthma service

**Process:** Proportion of children and young people with difficult asthma who receive an assessment by a multidisciplinary difficult asthma service

**Numerator** – the number of children and young people in the denominator receiving an assessment by a multidisciplinary difficult asthma service

**Denominator** – the number of patients with difficult asthma on the Children and Young People's Asthma Register

1. Evidence of the process for referral to the tertiary difficult asthma service, in line with BTS guidance. Provide evidence of referrals where appropriate

2. Audit of all children and young people who are on the Asthma Register at stage 4/5 to ensure they are under the care of the tertiary difficult asthma service





## STANDARD THIRTEEN

**Children with difficult asthma are should be offered an assessment by a multidisciplinary difficult asthma service**

### Rationale and Expected Outcomes & Benefits

While most children and young people with asthma will be managed in primary care with some input from secondary care, there is a small proportion with asthma that is very difficult to control. This group will be covered by specialised services as outlined in Specification 128 in the Manual for Prescribed Specialised Services<sup>4</sup> and will be managed by specialised services in tertiary care.<sup>4</sup>

Patients with asthma must be referred to a specialist asthma service if they have required more than two courses of systemic corticosteroids, oral or P P P injected, in the previous 12 months or require management using British Thoracic Society (BTS) stepwise treatment 4 or 5 to achieve control<sup>5</sup>

**See Appendix 5** BTS Summary of stepwise management in children aged 5-12 years<sup>2</sup>

It is expected that implementation of this standard will lead to the following outcomes:<sup>1,2, 3,5</sup>

- Improved efficacy of medication
- Reduction in hospital admissions
- Reduction in asthma deaths

The benefits of implementing this standard include:

- Improved self-management of asthma supported by smoking cessation services
- Improved quality of life for children and young people with asthma and their families
- Better school attendance
- Cost effective prescribing practices
- A reduction in A&E attendance and hospital admissions
- A reduction in avoidable deaths

### REFERENCES

1. NICE Quality Standard 11: Standard for Asthma (February 2013)
2. SIGN 141 British Guideline on the Management of Asthma. A national clinical guideline. (October 2014)
3. Designing and commissioning services for children and young people with asthma: A good practice guide (2013)
4. <http://tinyurl.com/awz3dlu>
5. Royal College of Physicians. Why asthma still kills. The National Review of Asthma Deaths (NRAD) Confidential Enquiry Report. (May 2014)



#### STANDARD FOURTEEN

**A system should be in place to ensure that young people or the families of children who fail to attend an appointment are followed up promptly**

Children and young people and their families who fail to attend for routine asthma appointments or review following an exacerbation should be **proactively identified** and **contacted**. **Every effort should be made** to address the reasons for non-attendance and work with the child/family to offer more convenient time or method for review.<sup>1</sup>

N.B This requires there to be a process for engagement with the wider multi-disciplinary team to identify and report DNA's (Did Not Attend).

Practices should have proactive methods of identifying and contacting patients who fail to attend for routine asthma appointments.<sup>1</sup>

A range of methods of engagement should be explored:<sup>1</sup>

- telephone consultations – by clinicians not support staff
- telephone follow-up if patients do not attend
- personalised letters explaining possible risks of not attending
- alerts on prescription screen limiting inhaler issue in future
- opportunistic review of patients attending for other conditions
- major alert on screen for all to see lack of asthma review

#### MEASUREMENT

1. Review of QOF AST003 data linked to ensure exception reporting rates are low.<sup>2</sup>

**N.B. QOF data is not collected for patients under the age of 18, however, review of this measure will act as a proxy indicator of GP Practice follow up procedures**

2. Evidence of a DNA follow up process for children, young people who fail to attend for appointments

3. Evidence of flags on GP system, appointments and prescription

4. Provision of an example of the follow up of a child or young person following a DNA



## STANDARD FOURTEEN

**A system should be in place to ensure that young people or the families of children who fail to attend an appointment are followed up promptly**

### Rationale and Expected Outcomes & Benefits

NRAD found that for 43% of patients, there was no evidence that the patient had an asthma review in general practice in the last year before death. Twenty-two per cent had missed a routine GP asthma appointment in the previous 12 months.<sup>1</sup>

Evidence also suggests that there is an increased correlation between asthma deaths and behavioral and adverse psychosocial factors. Compared with control patients those who died from asthma were significantly more likely to have learning difficulties, psychosis or prescribed antipsychotic drugs, financial or employment problems, repeatedly failed to attend appointments or discharged themselves from hospital, drug or alcohol abuse, obesity or a previous near-fatal attack.<sup>3</sup>

Those who died in the community had more severe disease, more likelihood of a hospital admission or visit to A&E for their asthma in the previous year, more likelihood of a previous near-fatal attack, poor medical management, failure to measure pulmonary function, and non-adherence.<sup>3</sup>

Whilst many of these observations were focused around adults it must be remembered that these issues impact on all members of the family, particularly as in relation to younger children where the care giver may be affected by the above problems.

Practices should have proactive methods of identifying and contacting patients who fail to attend for routine asthma appointments. A range of methods of engagement should be explored (e.g. telephone consultations – by clinicians not support staff, telephone follow-up if patients do not attend, personalised letters explaining possible risks of not attending, alerts on prescription screen limiting inhaler issue in future, opportunistic review of patients attending for other conditions, major alert on screen for all to see lack of asthma review).<sup>1</sup>

**Safeguarding issues:** robust systems for safeguarding children need to be in place. Concordance in children may be poor and impact control of symptoms which may also be due to insufficient parental supervision or understanding<sup>4</sup>

When a child does not attend for appointments this could be viewed as neglect. Children do not DNA; instead whoever has parental responsibility has a duty to ensure a child is brought to health appointments. A DNA process/policy should be in place to manage failure to attend appointment. If this does not rectify the situation guidance should be sought from the safeguarding team and depending on the level of harm, can be managed under section 17 or 47 of the Children's Act<sup>5, 6</sup>.

### REFERENCES

1. Royal College of Physicians. Why asthma still kills. The National Review of Asthma Deaths (NRAD) Confidential Enquiry Report. (May 2014) Page xi
2. Quality Outcome Framework – Asthma Indicators  
<http://www.nhsemployers.org/~media/Employers/Documents/Primary%20care%20contracts/QOF/QOF%20Home%20Page/2015-16%20Summary%20of%20changes%20to%20QOF.pdf>
3. SIGN 141 British Guideline on the Management of Asthma. A national clinical guideline. (October 2014) Page 81
4. Designing and commissioning services for children and young people with asthma: A good practice guide (2013)
5. The Children's Act (2004)
6. Royal College of General Practitioners. Safeguarding Children & Young People A Toolkit for General Practice (2011)



## STANDARD FIFTEEN

### All young people with asthma should have appropriate arrangements in place to support their transition into adult respiratory services or management by GP Practices

Effective transition involves preparing adolescents to take responsibility for their own asthma. In primary care young people should be given the opportunity to consult without their parents/carers; however it is important that the needs of parents/carers are taken into consideration while this process is evolving. It is important to help adolescents negotiate the health care system effectively (such as how to order and collect a prescription for their inhalers).<sup>1,2</sup>

Primary care practitioners need to educate and empower adolescents to manage as much of their asthma care as they are capable of doing while supporting parents to gradually hand over responsibility to their child.<sup>3,4</sup> Clinicians should also discuss future career choices with adolescents with asthma and highlight occupations that might increase susceptibility to work related asthma symptoms.<sup>4</sup>

## MEASUREMENT

1. Evidence of an auditable Asthma Register for 0 – 19 year olds with clear identification of the adolescent cohort on the register
2. Intention published on the practice website and/or brochure to offer all young people support during their transition to adult services
3. Audit of transition conversation recorded in patient notes for all children and young people on the Asthma (14-19yrs) Register
4. Evidence that young person is responsibly managing their asthma by medication review, monitoring SABA use <6 every 6 months, inhaled steroid use and corticosteroid use
5. Evidence that young person is managing their asthma by audit of hospital attendances and GP attendances.
6. Evidence of communication with both paediatric and adult services in relation to referral and future plan of care



## STANDARD FIFTEEN

### All young people with asthma should have appropriate arrangements in place to support their transition into adult respiratory services or management by GP Practices

#### Rationale and Expected Outcomes & Benefits

As adolescents move towards adulthood and independence, theirs can be a particularly challenging and high-risk group in which to maintain good asthma control.<sup>3</sup> Adolescents make less use of structured reviews than others, and have more frequent use of emergency asthma services. They are particularly vulnerable to the adverse effects of asthma<sup>3</sup>

Symptoms may reduce or disappear altogether in adolescence, yet these young people should be appraised of the risk of asthma returning again in later life, sometimes after years of apparent improvement<sup>3</sup>

It is important that services and communication with adolescents moving towards adulthood need to be organised in a manner that engages them, meets their needs and encourages them to take more responsibility for their asthma.<sup>3</sup>

Transitional age young people, aged 16 to 19, are much more likely to be admitted to hospital with an asthma exacerbation than other age groups and stay in hospital longer when they are.<sup>3</sup> Smooth transition from paediatric to adult services results in better adherence and clinical outcomes for young people and improves young people's long-term health.<sup>4,5</sup>

Specific recommendations for pharmacological management in adolescents is limited and the BTS/SIGN<sup>6</sup> step wise treatment steps have been extrapolated from current adult and paediatric studies as there have been no specific studies carried out in this group. The guideline does however suggest that although adolescents may be competent in the use of their device, adherence to treatment may be affected by preference for a specific device and this should be taken into consideration when choosing an inhaler. In addition it is important to consider the portability of a device and how discreet it is to use, particularly for delivery of reliever therapy in public.<sup>1</sup>

In an American study 41% of adolescents did not know the name of their asthma medicine. Only 38% reported taking an inhaler with them when leaving the house. While 70% reported feeling in control over their asthma symptoms, 63% reported feelings of anxiety and 39% could remember a time when they felt like they were going to die from asthma. Subjects who reported feeling in control over their asthma were more likely to take their reliever inhaler with them when leaving the house. Because the teenage years are times of great changes for young people, they need special support and understanding if they have an ongoing health problem such as asthma.<sup>1,7</sup>

It is expected that implementation of this standard will lead to the following outcomes:

- Adolescents confident in self-management of their asthma
- Safe transfer and management of adolescents with difficult asthma into the appropriate adult respiratory service
- Cost effective medicines management
- Better management of asthma in primary care
- Appropriate treatment and ongoing management of adolescents and adults with asthma

The benefits of implementing this standard include:

- Improved self-management of asthma
- Improved quality of life including education/work attendance, participation in sports
- A reduction in A&E attendance and hospital admissions
- A reduction in avoidable deaths
- Improved medicines management

#### REFERENCES

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6. <http://www.uhs.nhs.uk/OurServices/Childhealth/TransitiontoadultcareReadySteadyGo/Transitiontoadultcare.aspx>
7. Cohen R, Franco K, Motlow F, et al. Perceptions and attitudes of adolescents with asthma. J Asthma 2003; 40:207-11.



## STANDARD SIXTEEN

### Every GP Practice or Primary Care Asthma Service should have an ongoing annual programme of asthma audit and ongoing improvements

There should be a programme of **audit and ongoing improvements** within general practice.

Monitoring and audit arrangements should be in place to ensure all levels of care are available and delivered according to the British Asthma Guideline. Auditing general practice records will help to establish whether the probability of asthma (high, intermediate, low) has been determined and the basis for diagnosis has been recorded in the notes.<sup>1</sup>

Practices should audit their Children and Young People's Asthma Register to determine the number of prescriptions for short acting bronchodilators prescribed, since this is an indicator of poor control. Use of a short acting bronchodilator three times a week or more is an indication that treatment should be stepped up.<sup>1</sup>

Prescribing records should also be audited to check whether inhaled steroids have been tried on their own and whether control can be achieved, before stepping up to combination treatment, in line with guideline recommendations. Considerable savings may be possible by using inhaled steroids appropriately first.<sup>1</sup>

It is good practice to audit the percentage of patients reviewed 3-6 monthly. Consider focusing on particular groups such as those overusing bronchodilators, patients on higher treatment steps, those with asthma attacks or from groups with more complex needs.<sup>2</sup>

Audit of the CYP Asthma Register should be carried out to provide evidence that written copies of asthma action plans are available in the notes of all children and young people. Notes should also be audited to see whether there has been any documented discussion of stepping down treatment following an exacerbation of asthma.<sup>1</sup>

It is recommended that an audit be undertaken of the percentage of clinicians who have undertaken a suitable educational update on asthma in the previous two years. The named Clinical Lead for Asthma should audit the number of primary care clinicians who have received specific education in asthma in the previous two years in order to plan future staff training requirements around asthma management.<sup>1,3</sup>



## STANDARD SIXTEEN

**Every GP Practice or Primary Care Asthma Service should have an ongoing annual programme of asthma audit and ongoing improvements**

### MEASUREMENT

1. Audit of staff training<sup>2</sup> and the formal training of asthma management for all staff appropriate to their contact with patients<sup>1</sup>
2. Audit to demonstrate that every child or young person receiving asthma medication has a confirmed diagnosis of asthma or has had their probability of asthma recorded in the patient record as per BTS guidelines; and is entered onto the practice Asthma Register
3. Asthma Register in place that is auditable by age
4. Audit that demonstrates all children and young people on the Asthma Register have received at least a bi-annual review that is recorded in the patient record
5. Audit of appointment times for structured review to ensure that adequate time is being allocated for structured review of asthma (30-45 minute initial review/20 minute follow-up reviews)
6. Audit of practice Asthma Register (0-19years) to ensure inhaler technique check including with or without a spacer, is recorded in the patient notes at every appointment.
7. Audit of SABA bronchodilator prescribing for all children and young people on the Asthma Register
8. Audit of all children and young people on the Asthma Register to ensure that the provision of self-management education, including a written personalised action plan is documented at every appointment, and a copy of the PAAP is filed in the patient record
9. Audit of exposure to tobacco smoke and or smoking status recorded in patient notes for all children and young people on the Asthma Register (0-19yrs)
10. Audit of the number of smoking cessation referrals recorded in patient records for parents and young people on the Asthma Register (0-19yrs). The should be cross referenced to the number of active smokers (parents and young people) recorded on the CYP Asthma Register
11. Audit of length of time discharge summaries received from secondary care in relation to asthma in children and young people (0-19years).
12. Audit of patient records to identify those children and young people where asthma has necessitated hospital admission or 2 or more A&E attendances in the previous 12 months
13. Audit of all children and young people patient records to ensure appropriate secondary care follow up is in place for all children and young people following 2 or more A&E attendances and after every hospital admission due to asthma
14. Audit of all children and young people who are on the Asthma Register at stage 4/5 to ensure they are under the care of the tertiary difficult asthma service
15. Audit of all children and young people who fail to attend asthma review appointments including appointments following A&E attendance or hospital admission to trigger further urgent follow up of this group of patients
16. Audit of transition conversation recorded in patient notes for all children and young people on the Asthma Register (14-19yrs)





## STANDARD SIXTEEN

**Every GP Practice or Primary Care Asthma Service should have an ongoing annual programme of asthma audit and ongoing improvements**

### **Rationale and Expected Outcomes & Benefits**

There is strong evidence that educating clinicians can improve health outcomes for patients<sup>1</sup>. It is recommended that an audit be undertaken of the percentage of clinicians who have undertaken a suitable educational update on asthma in the previous two years<sup>1</sup>. The training needs of clinicians responsible for managing people with asthma need to be assessed and monitored to ensure that the clinicians are competent for the task. Each primary care practice should have a named health professional responsible for the maintenance and improvement of standards of asthma care in the practice and these professionals should engage in additional training and updating in respect of this role.<sup>3</sup>

Monitoring and audit arrangements should be in place to ensure all levels of care are available and delivered according to the British Asthma Guideline<sup>2</sup>. Auditing general practice records will help to establish whether a confirmed diagnosis of asthma or the probability of asthma (high, intermediate, low) has been determined and recorded in the notes giving the basis for diagnosis.<sup>2</sup>

It is good practice to audit the percentage of children and young people reviewed 3-6 monthly. Practices should consider focusing on particular groups such as those overusing bronchodilators, patients on higher treatment steps, those with asthma attacks or from groups with more complex needs.<sup>2</sup> Practices could consider a programme of asthma reviews during the summer holiday period to improve access to clinic appointments.

All children and young people receiving medication for asthma should be on an Asthma Register, all those on the register should have an assessment of their asthma control using a recognised tool, those over 8 years old should have had their diagnosis confirmed, and 14-19 year olds should have their smoking status recorded.<sup>2</sup>

Inhaled medications are essential in the treatment of childhood asthma but they are only effective when used properly. Bronchodilator prescription should also be audited to identify children and young people who are using one SABA inhaler or more each month.<sup>3</sup> This group of children and young people should be called in by the to their asthma assessed urgently and measures taken to improve asthma control if this is poor<sup>1</sup>. Practices should also receive and record notification from pharmacies of SABA inhalers supplied without a prescription under patient group directions<sup>3</sup>.

The provision of a written personalised asthma action plan as part of structured education can improve outcomes for children and young people and may result in reducing admission to hospital<sup>1,4</sup>

NRAD identified direct and passive exposure to cigarette smoke in the home as contributory factors in the death of 65% of those who died.<sup>3</sup> Smoking and exposure to cigarette smoke also adversely affect quality of life, lung function, need for rescue medications for acute episodes of asthma and long-term control with ICS<sup>1</sup> Patient records and audit of the Asthma Register should therefore enable the practice to identify parents who smoke to ensure they are offered referral to smoking cessation services.

Young people with asthma are likely to be exposed to passive smoke and are more likely to take up smoking than their peers.<sup>3</sup> Uptake of smoking in teenagers increases the risks of persisting asthma. One study showed a doubling of risk for the development of asthma over six years in 14 year old children who started to smoke.<sup>1</sup>

NICE has recommended that all smokers should be offered a brief intervention about stopping smoking<sup>4</sup>. Young people aged 12–17 years who have a strong commitment to quit smoking should be offered advice on how to stop and encouraged to use local NHS smoking cessation services by providing details of when, where and how to access them.<sup>1</sup>

It is essential that the patient's primary care practice is informed within 24 hours of discharge from the emergency department or hospital following an asthma attack. Ideally this communication should be directly with a named individual responsible for asthma care within the practice, by means of fax or



email sent before discharge<sup>1</sup>

NRAD found that ten per cent of the deaths occurred in patients who had received hospital treatment within the previous 28 days and at least 21% had been seen for asthma in accident and emergency departments in the previous 12 months.<sup>3</sup>

NRAD also found that the majority of people (112/195 - 57%) who died from asthma (60% adults) were not under specialist supervision during the 12 months prior to death. Only 29 /83 (15% of total) were reviewed in secondary or tertiary care during this period. Primary care health professionals did not refer 32 patients to secondary care when this seemed clinically indicated<sup>3</sup>

The review recommended that practices should press for prompt communication from hospitals and other urgent care providers about patients seen with asthma exacerbations, and should ensure primary care follow-up within two working days of receiving such notification, so as to allow optimisation of treatment and to identify those patients whose asthma remains out of control despite their hospital attendance.<sup>3</sup>

Patients with asthma must be referred to a specialist asthma service in tertiary care if they have required more than two courses of systemic corticosteroids, oral or P P P injected, in the previous 12 months or require management using British Thoracic Society (BTS) stepwise treatment 4 or 5 to achieve control<sup>1</sup>

NRAD found that for 43% of patients, there was no evidence that the patient had had an asthma review in general practice in the last year before death. Twenty-two per cent had missed a routine GP asthma appointment in the previous 12 months.<sup>3</sup>

Practices should have proactive methods of identifying and contacting patients who fail to attend for routine asthma appointments. A range of methods of engagement should be explored (e.g. telephone consultations – by clinicians not support staff, telephone follow-up if patients do not attend, personalised letters explaining possible risks of not attending, alerts on prescription screen limiting inhaler issue in future, opportunistic review of patients attending for other conditions, major alert on screen for all to see lack of asthma review).<sup>3</sup>

As adolescents move towards adulthood and independence, theirs can be a particularly challenging and high-risk group in which to maintain good asthma control.<sup>2</sup> Adolescents make less use of structured reviews than others, and have more frequent use of emergency asthma services. They are particularly vulnerable to the adverse effects of asthma<sup>3</sup>

Symptoms may reduce or disappear altogether in adolescence, yet these young people should be appraised of the risk of asthma returning again in later life, sometimes after years of apparent improvement<sup>2</sup>

It is important that services and communication with adolescents moving towards adulthood need to be organised in a manner that engages them, meets their needs and encourages them to take more responsibility for their asthma.<sup>2</sup>

Transitional age young people, aged 16 to 19, are much more likely to be admitted to hospital with an asthma exacerbation than other age groups and stay in hospital longer when they are.<sup>2</sup> Smooth transition from paediatric to adult services results in better adherence and clinical outcomes for young people<sup>3</sup> and improves young people's long-term health.<sup>4</sup>

## REFERENCES

1. SIGN 141 British Guideline on the Management of Asthma. A national clinical guideline. (October 2014)
2. Designing and commissioning services for children and young people with asthma: A good practice guide (2013)
3. Royal College of Physicians. Why asthma still kills. The National Review of Asthma Deaths (NRAD) Confidential Enquiry Report. (May 2014) Page xi
4. NICE Quality Standard 5: Standard for Asthma (February 2013)
5. NICE support for commissioners and others using the quality standard for asthma (February 2013)



These standards have been developed by the GMLSC Improving Outcomes for Children & Young People's Special Interest Group (Asthma SIG) with the support of the clinical community and local commissioners.

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# Greater Manchester, Lancashire and South Cumbria

## Management of acute asthma in children in general practice

### Age 2-5 years

#### ASSESS ASTHMA SEVERITY

<b>Moderate asthma</b> <ul style="list-style-type: none"> <li>SpO<sub>2</sub> ≥ 92%</li> <li>Able to talk</li> <li>Heart rate ≤ 140/min</li> <li>Respiratory rate ≤ 40/min</li> </ul>	<b>Severe asthma</b> <ul style="list-style-type: none"> <li>SpO<sub>2</sub> &lt; 92%</li> <li>Too breathless to talk</li> <li>Heart rate &gt; 140/min</li> <li>Respiratory rate &gt; 40/min</li> <li>Use of accessory neck muscles</li> </ul>	<b>Life threatening asthma</b> <ul style="list-style-type: none"> <li>SpO<sub>2</sub> &lt; 92% plus any of: <ul style="list-style-type: none"> <li>Silent chest</li> <li>Poor respiratory effort</li> <li>Agitation</li> <li>Altered consciousness</li> <li>Cyanosis</li> </ul> </li> </ul>
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<ul style="list-style-type: none"> <li>β<sub>2</sub> agonist 2-10 puffs via spacer ± facemask</li> <li>Consider soluble prednisolone 20 mg</li> </ul>	<ul style="list-style-type: none"> <li>Oxygen via face mask</li> <li>2-10 puffs of β<sub>2</sub> agonist [give 2 puffs, every 2 minutes according to response up to maximum of 10 puffs] or nebulised salbutamol 2.5 mg or terbutaline 5 mg</li> <li>Soluble prednisolone 20 mg</li> </ul>	<ul style="list-style-type: none"> <li>Oxygen via face mask</li> <li>Nebulise: <ul style="list-style-type: none"> <li>- salbutamol 2.5 mg or terbutaline 5 mg +</li> <li>- ipratropium 0.25 mg</li> </ul> </li> <li>Soluble prednisolone 20 mg or IV hydrocortisone 50 mg</li> </ul>
<ul style="list-style-type: none"> <li>Increase β<sub>2</sub> agonist dose by 2 puffs every 2 minutes according to response up to 10 puffs</li> </ul>	<ul style="list-style-type: none"> <li>Assess response to treatment 15 mins after β<sub>2</sub> agonist</li> </ul>	

<b>IF POOR RESPONSE ARRANGE ADMISSION</b>	<b>IF POOR RESPONSE REPEAT β<sub>2</sub> AGONIST AND ARRANGE ADMISSION</b>	<b>REPEAT β<sub>2</sub> AGONIST VIA OXYGEN-DRIVEN NEBULISER WHILST ARRANGING IMMEDIATE HOSPITAL ADMISSION</b>
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<b>GOOD RESPONSE</b> <ul style="list-style-type: none"> <li>Continue β<sub>2</sub> agonist via spacer or nebuliser, as needed but not exceeding 4-hourly</li> <li>If symptoms are not controlled repeat β<sub>2</sub> agonist and refer to hospital</li> <li>Continue prednisolone for up to 3 days</li> <li>Arrange follow-up clinic visit</li> </ul>	<b>POOR RESPONSE</b> <ul style="list-style-type: none"> <li>Stay with patient until ambulance arrives</li> <li>Send written assessment and referral details</li> <li>Repeat β<sub>2</sub> agonist via oxygen-driven nebuliser in ambulance</li> </ul>
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<b>LOWER THRESHOLD FOR ADMISSION IF:</b> <ul style="list-style-type: none"> <li>Attack in late afternoon or at night</li> <li>Recent hospital admission or previous severe attack</li> <li>Concern over social circumstances or ability to cope at home</li> </ul>	<b>NB: If a patient has signs and symptoms across categories, always treat according to their most severe features</b>
--	--

### Age > 5 years

#### ASSESS ASTHMA SEVERITY

<b>Moderate asthma</b> <ul style="list-style-type: none"> <li>SpO<sub>2</sub> ≥ 92%</li> <li>PEF ≥ 50% best or predicted</li> <li>Able to talk</li> <li>Heart rate ≤ 125/min</li> <li>Respiratory rate ≤ 30/min</li> </ul>	<b>Severe asthma</b> <ul style="list-style-type: none"> <li>SpO<sub>2</sub> &lt; 92%</li> <li>PEF 33-50% best or predicted</li> <li>Too breathless to talk</li> <li>Heart rate &gt; 125/min</li> <li>Respiratory rate &gt; 30/min</li> <li>Use of accessory neck muscles</li> </ul>	<b>Life threatening asthma</b> <ul style="list-style-type: none"> <li>SpO<sub>2</sub> &lt; 92% plus any of: <ul style="list-style-type: none"> <li>PEF &lt; 33% best or predicted</li> <li>Silent chest</li> <li>Poor respiratory effort</li> <li>Agitation</li> <li>Altered consciousness</li> <li>Cyanosis</li> </ul> </li> </ul>
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<ul style="list-style-type: none"> <li>β<sub>2</sub> agonist 2-10 puffs via spacer</li> <li>Consider soluble prednisolone 30-40 mg</li> </ul>	<ul style="list-style-type: none"> <li>Oxygen via face mask</li> <li>2-10 puffs of β<sub>2</sub> agonist [give 2 puffs, every 2 minutes according to response up to maximum of 10 puffs] or nebulised salbutamol 2.5-5 mg or terbutaline 5-10 mg</li> <li>Soluble prednisolone 30-40 mg</li> </ul>	<ul style="list-style-type: none"> <li>Oxygen via face mask</li> <li>Nebulise: <ul style="list-style-type: none"> <li>- salbutamol 5 mg or terbutaline 10 mg +</li> <li>- ipratropium 0.25 mg</li> </ul> </li> <li>Soluble prednisolone 30-40 mg or IV hydrocortisone 100 mg</li> </ul>
<ul style="list-style-type: none"> <li>Increase β<sub>2</sub> agonist dose by 2 puffs every 2 minutes according to response up to 10 puffs</li> </ul>	<ul style="list-style-type: none"> <li>Assess response to treatment 15 mins after β<sub>2</sub> agonist</li> </ul>	

<b>IF POOR RESPONSE ARRANGE ADMISSION</b>	<b>IF POOR RESPONSE REPEAT β<sub>2</sub> AGONIST AND ARRANGE ADMISSION</b>	<b>REPEAT β<sub>2</sub> AGONIST VIA OXYGEN-DRIVEN NEBULISER WHILST ARRANGING IMMEDIATE HOSPITAL ADMISSION</b>
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<b>GOOD RESPONSE</b> <ul style="list-style-type: none"> <li>Continue β<sub>2</sub> agonist via spacer or nebuliser, as needed but not exceeding 4-hourly</li> <li>If symptoms are not controlled repeat β<sub>2</sub> agonist and refer to hospital</li> <li>Continue prednisolone for up to 3 days</li> <li>Arrange follow-up clinic visit</li> </ul>	<b>POOR RESPONSE</b> <ul style="list-style-type: none"> <li>Stay with patient until ambulance arrives</li> <li>Send written assessment and referral details</li> <li>Repeat β<sub>2</sub> agonist via oxygen-driven nebuliser in ambulance</li> </ul>
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<b>LOWER THRESHOLD FOR ADMISSION IF:</b> <ul style="list-style-type: none"> <li>Attack in late afternoon or at night</li> <li>Recent hospital admission or previous severe attack</li> <li>Concern over social circumstances or ability to cope at home</li> </ul>	<b>NB: If a patient has signs and symptoms across categories, always treat according to their most severe features</b>
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## Appendix 2

### The Components of a Structured Review for Children and Young People.

The components of a structured review are set out in both the BTS/SIGN guideline paragraph 3.63 and NICE Asthma Quality Standard 5

**The review will vary for children and adults.**

Components of a structured review for children to be monitored and recorded:
Review of diagnosis*
Assessment of symptomatic asthma control using a recognised tool e.g. Children's Asthma Control Test
Review of exacerbations, oral corticosteroid use and time off school or nursery as a result of asthma since last assessment
Review of peak flow if appropriate*
Checking inhaler technique
Assessing adherence (which can be done by reviewing prescription refill frequency)
Adjustment of treatment (consider stepping up if poor control or stepping down if good control since the last annual review)
Provision and review of a written personalised action plan. (Monitor usage in self-management)
Assessment of exposure to tobacco smoke/referral to smoking cessation services*
Asthma education including recognising triggers*
Measurement of growth centile (height and weight) at least 6 monthly if on inhaled steroids*
Assessment of comorbidities*
Ensure vaccines up to date including flu vac*






## Appendix 3

The Childhood Asthma Control Test is a product produced and owned by GSK. It is available for use at:





[http://www.asthmacontroltest.com/childrens\\_questionnaire/english/page\\_two.asp?country=IRELAND](http://www.asthmacontroltest.com/childrens_questionnaire/english/page_two.asp?country=IRELAND)

N.B. The main page shows the world map, if you click England on the world map you will be taken to a map of Europe. Unfortunately at the time this document was produced the link for England was still under construction. The tool can however be accessed by clicking on Ireland instead.





[RETURN TO HOME PAGE](#) **The Childhood Asthma Test**   
Share your results with your doctor

Have your child complete these four questions.





1. How is your asthma today?

				Score <input type="text"/>
Very Bad	Bad	Good	Very Good	





2. How much of a problem is your asthma when you run, exercise or play sports?

				Score <input type="text"/>
It's a big problem, I can't do what I want to do.	It's a problem and I don't like it.	It's a little problem but it's okay.	It's not a problem.	

3. Do you cough because of your asthma?

				Score <input type="text"/>
Yes, all of the time.	Yes, most of the time.	Yes, some of the time.	No, none of the time.	

4. Do you wake up during the night because of your asthma?

				Score <input type="text"/>
Yes, all of the time.	Yes, most of the time.	Yes, some of the time.	No, none of the time.	

Now complete these questions on your own.

5. During the last 4 weeks, how many days did your child have any daytime asthma symptoms?

<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	Score <input type="text"/>
Not at all	1-3 days	4-10 days	11-18 days	19-24 days	Everyday	

6. During the last 4 weeks, how many days did your child wheeze during the day because of asthma?

<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	Score <input type="text"/>
Not at all	1-3 days	4-10 days	11-18 days	19-24 days	Everyday	

7. During the last 4 weeks, how many days did your child wake up during the night because of asthma?

<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	Score <input type="text"/>
Not at all	1-3 days	4-10 days	11-18 days	19-24 days	Everyday	

Is the child a Boy or a Girl?  
Please Choose --

Please select the child's Age Group  
Please Choose --

What prescribed medication is your child currently using for their asthma??  
Please choose --

[SEE YOUR SCORE](#)

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Date of preparation: January 2013

The Questionnaire is a GSK product





## Asthma Control Test

An electronic copy available <http://www.asthmacontroltest.com/>

Asthma UK is the only charity dedicated to the health and well-being of the 5.2 million people in the UK with asthma. By taking control of their asthma, most people's day-to-day lives should be free from disruption such as troubled sleep or not being able to exercise.

**Asthma  
Control  
Test™**



### Why take the Asthma Control Test™?

The Asthma Control Test™ will provide you with a snapshot of how well your asthma has been controlled over the last four weeks, giving you a simple score out of 25. Asthma symptoms can vary from month to month, so it is worth keeping the test handy to see if your score changes. You can also share your results with your doctor or asthma nurse to help explain just how your asthma affects you.

### Are you in control of your asthma? Or is your asthma in control of you? Here's how to find out

**Step 1:** Read each question below carefully, circle your score and write it in the box.

**Step 2:** Add up each of your five scores to get your total Asthma Control Test™ score.

**Step 3:** Use the score guide to learn how well you are controlling your asthma.

<b>Q1</b>	During the <b>past 4 weeks</b> , how often did your asthma prevent you from getting as much done at work, school or home?	Score:
	<input type="radio"/> All of the time <b>1</b> <input type="radio"/> Most of the time <b>2</b> <input type="radio"/> Some of the time <b>3</b> <input type="radio"/> A little of the time <b>4</b> <input type="radio"/> None of the time <b>5</b>	
<b>Q2</b>	During the <b>past 4 weeks</b> , how often have you had shortness of breath?	Score:
	<input type="radio"/> More than once a day <b>1</b> <input type="radio"/> Once a day <b>2</b> <input type="radio"/> 3-6 times a week <b>3</b> <input type="radio"/> 1-2 times a week <b>4</b> <input type="radio"/> Not at all <b>5</b>	
<b>Q3</b>	During the <b>past 4 weeks</b> , how often did your asthma symptoms (wheezing, coughing, chest tightness, shortness of breath) wake you up at night or earlier than usual in the morning?	Score:
	<input type="radio"/> 4 or more times a week <b>1</b> <input type="radio"/> 2-3 nights a week <b>2</b> <input type="radio"/> Once a week <b>3</b> <input type="radio"/> Once or twice <b>4</b> <input type="radio"/> Not at all <b>5</b>	
<b>Q4</b>	During the <b>past 4 weeks</b> , how often have you used your reliever inhaler (usually blue)?	Score:
	<input type="radio"/> 3 or more times a day <b>1</b> <input type="radio"/> 1-2 times a day <b>2</b> <input type="radio"/> 2-3 times a week <b>3</b> <input type="radio"/> Once a week or less <b>4</b> <input type="radio"/> Not at all <b>5</b>	
<b>Q5</b>	How would you rate your <b>asthma control</b> during the <b>past 4 weeks</b> ?	Score:
	<input type="radio"/> Not controlled <b>1</b> <input type="radio"/> Poorly controlled <b>2</b> <input type="radio"/> Somewhat controlled <b>3</b> <input type="radio"/> Well controlled <b>4</b> <input type="radio"/> Completely controlled <b>5</b>	

**Total Score**

### What does your score mean?

#### Score: 25 – WELL DONE

- Your asthma appears to have been **UNDER CONTROL** over the last 4 weeks.
- However, if you are experiencing any problems with your asthma, you should see your doctor or nurse.

#### Score: 20 to 24 – ON TARGET

- Your asthma appears to have been **REASONABLY WELL CONTROLLED** during the past 4 weeks.
- However, if you are experiencing symptoms your doctor or nurse may be able to help you.

#### Score: less than 20 – OFF TARGET

- Your asthma may **NOT HAVE BEEN CONTROLLED** during the past 4 weeks.
- Your doctor or nurse can recommend an asthma action plan to help improve your asthma control.

### What can you do now?

Like many other people in the UK, it is possible that your asthma could have less impact on your everyday life. You can get a free pack full of information about how to take control of your asthma, including an action plan to fill in with your doctor or asthma nurse, from Asthma UK.

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\*US English version modified for use in UK\*. The production of this leaflet has been supported by GlaxoSmithKline

Registered charity number 802364





## Appendix 4

### What should a Personalised Asthma Action Plan (PAAP) include?

#### Contact details

- Child's Name
- Date Given
- GP and Asthma Nurse Names and contact details
- Next asthma review date

#### Day to Day self-management

- Medication names, dose, frequency and delivery device (i.e. spacer)
- Brief summary of the benefits and side effects of the medication
- Information regarding the child/young person's individual triggers
- Medication advice for:
  - Pre and post exercise
  - When in contact with triggers

#### Deterioration of asthma and self-management

- Signs and symptoms of deterioration (insert symptoms from asthma uk link)
- Bronchodilator regime to step up and step down to manage above symptoms
- Signpost to appropriate healthcare professional if symptoms do not improve
- Instruction to move to management of an asthma attack

#### Asthma attack self-management

- Signs and symptoms of deterioration (insert symptoms from asthma uk link)
- Bronchodilator regime to manage asthma attack inc. repetition of treatment as required
- Signpost to appropriate healthcare professional if symptoms improving
- Signpost to call 999 if symptoms are not improving

#### Link to self-management resources i.e. Asthma UK website:

<http://www.asthma.org.uk/helpline>

**Formats, such as pictorial, braille, other languages or digital, may be needed for children, young people and families dependent upon their individual needs.**

Remember the Asthma Action Plan should be designed around the needs of the child or young person not around the needs of the health professional/service. Involvement of the child, young person and/or the family is essential in the development of a Personalised Asthma Action Plan.



## Appendix 4

### Greater Manchester, Lancashire and South Cumbria Strategic Clinical Networks

Asthma UK Personalised Asthma Action Plan for children is available at: <https://www.asthma.org.uk/Shop/my-asthma-plans>

**asthma UK** **My Asthma Plan**

Your asthma plan tells you when to take your asthma medicines.

Name: \_\_\_\_\_

And what to do when your asthma gets worse.

### 1. My asthma medicines

- My best peak flow is \_\_\_\_\_
- My preventer inhaler is called \_\_\_\_\_ and its colour is \_\_\_\_\_
- I take \_\_\_\_\_ puffs/s of my preventer inhaler in the morning and \_\_\_\_\_ puffs/s at night. I do this every day even if I feel well.

Other asthma medicines I take every day:

\_\_\_\_\_

- My reliever inhaler is called \_\_\_\_\_ and its colour is \_\_\_\_\_. I take \_\_\_\_\_ puffs/s of my \_\_\_\_\_ (colour) reliever inhaler when I wheeze or cough, my chest hurts or it's hard to breathe.

Does playing, running or doing PE normally make it hard to breathe?

→ If yes I take \_\_\_\_\_ puffs/s of my \_\_\_\_\_ (colour) reliever inhaler beforehand.

### 2. When my asthma gets worse

I will know my asthma is getting worse if:

- I have a cough, wheeze, it is hard to breathe or my chest hurts, or
- I am waking up at night because of my asthma, or
- I am taking my reliever inhaler every day, or
- My peak flow is less than \_\_\_\_\_

When this happens: I keep taking my preventer medicines as normal.

And also take \_\_\_\_\_ puffs/s of my \_\_\_\_\_ (colour) reliever inhaler every four hours.

If I am not getting any better I should see my doctor or asthma nurse today.

What asthma medicines do you take every day?

What should you do when your asthma gets worse?

**Remember to take your inhaler with a spacer if you have one**

### 3. What to do when I have an asthma attack

I am having an asthma attack if:

- My \_\_\_\_\_ (colour) reliever inhaler is not helping, or
- I can't talk or walk easily, or
- I am breathing hard and fast, or
- I am coughing or wheezing a lot, or
- My peak flow is below \_\_\_\_\_

When this happens: I should take \_\_\_\_\_ puffs of my \_\_\_\_\_ (colour) reliever inhaler every two minutes (up to ten puffs) until I feel better.

I am feeling better, but I don't want this to happen again so I need to see my doctor or asthma nurse today.

I still don't feel better and I have taken ten puffs. Now I need to call 999 straight away. If I am waiting longer than 15 minutes for an ambulance I should take another \_\_\_\_\_ puffs of my \_\_\_\_\_ (colour) reliever inhaler every two minutes (up to ten puffs).

My asthma triggers:  
(Write down things that make your asthma worse so you can stay away from them.)

\_\_\_\_\_

I need to see my asthma nurse every six months at least

Date I got my asthma plan: \_\_\_\_\_

My next asthma review: \_\_\_\_\_

Doctor's/asthma nurse contact details: \_\_\_\_\_

Where can I find out more?  
Asthma UK is dedicated to improving the health and well-being of the 5.4 million people in the UK with asthma including 1.1 million children.

**Asthma UK AdviceLine**  
Ask an asthma nurse specialist  
0800 121 62 44  
[asthma.org.uk/advice](http://asthma.org.uk/advice)

**Asthma UK**  
Summit House, 70 Wilson Street,  
London EC2A 2DB  
T 020 7786 4900  
F 020 7256 6075

**Asthma UK Northern Ireland**  
Ground floor, Unit 2 Collage House,  
City Link Business Park, Durham Street,  
Belfast BT12 4HQ  
[ni.asthma.org.uk](http://ni.asthma.org.uk)

**Asthma UK Cymru**  
Eastgate House, 35-43 Newport Road,  
Cardiff CF24 0AB  
[wales@asthma.org.uk](mailto:wales@asthma.org.uk)

**Asthma UK Scotland**  
4 Queen Street,  
Edinburgh EH2 1UE  
[scotland@asthma.org.uk](mailto:scotland@asthma.org.uk)

**The Information Standard**  
Certified member

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Registered charity number in England 802564 and in Scotland SC039323. First published 2010. Next review 2013

Asthma UK also produces a **PAAP** for patients over 12 years old.

### ! MY ASTHMA TRIGGERS

Taking my asthma medicine each day will help reduce my reaction to these triggers. Avoiding them where possible will also help.

### ! MY ASTHMA REVIEW

I should have at least one routine asthma review every year. I will bring:

- My action plan to see if it needs updating
- My inhaler and spacer to check I'm using them in the best way
- Any questions about my asthma and how to cope with it.

Next asthma review date:

\_\_\_/\_\_\_/\_\_\_

GP/asthma nurse contact

Name:

Phone number:

Out-of-hours contact number

(ask your GP surgery who to call when they are closed)

Name:

Phone number:

### Get more advice & support from Asthma UK:

! Speak to a specialist asthma nurse about managing your asthma on: **0800 121 62 44**

! Get news, advice and download information packs at: **www.asthma.org.uk**



with you every  
breath of the way



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HP2641114: First published 2004; last updated 2014; last reviewed 2014; next review 2016

\*Adams et al; Factors associated with hospital admissions and repeat emergency department visits for adults with asthma; Thorax 2000;55:566-573

# Use it, don't lose it!

Your action plan is a personal guide to help you stay on top of your asthma. Once you have created one with your GP or asthma nurse, it can help you stay as well as possible.

**People who use their action plans are four times less likely to end up in hospital because of their asthma.**

Your action plan will only work at its best to help keep you healthy if you:

- 1 Put it somewhere easy for you and your family to find** – you could try your fridge door, the back of your front door, or your bedside table.
- 2 Check in with it regularly** – put a note on your calendar, or a reminder on your mobile to read it through once a month. How are you getting along with your day-to-day asthma medication? Are you having any asthma symptoms? Are you clear about what to do?
- 3 Keep an extra copy yourself** – so you've got a handy back-up. You could have one at work, in your handbag or in your car glove compartment.
- 4 Give a copy to a key family member or friend** – ask them to read it and talk to them about your usual asthma symptoms so they can help you notice if you start to have them, and know what to do in an emergency.
- 5 Take it to every healthcare appointment – including A&E/consultant.** Ask your GP or asthma nurse to update it if any of their advice for you changes. Ask them for tips if you're finding it hard to take your medicines as prescribed.

THE STEP-BY-STEP GUIDE THAT HELPS  
YOU STAY ON TOP OF YOUR ASTHMA

# Your asthma action plan

FILL THIS IN WITH YOUR  
GP OR ASTHMA NURSE



If you use a written asthma action plan you are **four times less likely** to be admitted to hospital for your asthma.\*

Name and date:



with you every  
breath of the way



## This is what I need to do to stay on top of my asthma:

My personal best peak flow is:

My **preventer** inhaler

(insert name/colour):

I need to take my preventer inhaler every day even when I feel well

I take  puff(s) in the morning and  puff(s) at night.

My **reliever** inhaler

(insert name/colour):

I take my reliever inhaler only if I need to

I take  puff(s) of my reliever inhaler if any of these things happen:

- I'm wheezing
- My chest feels tight
- I'm finding it hard to breathe
- I'm coughing.

Other medicines I take for my asthma every day:

With this daily routine I should expect/aim to have **no symptoms**. If I haven't had any symptoms or needed my reliever inhaler for at least 12 weeks, ask my GP or asthma nurse to review my medicines in case they can reduce the dose.



People with allergies need to be extra careful as attacks can be more severe.



## My asthma is getting worse if I notice any of these:

- My symptoms are coming back (wheeze, tightness in my chest, feeling breathless, cough)
- I am waking up at night
- My symptoms are interfering with my usual day-to-day activities (eg at work, exercising)
- I am using my reliever inhaler  times a week or more
- My peak flow drops to below

## This is what I can do straight away to get on top of my asthma:

- 1 If I haven't been using my preventer inhaler, start using it regularly again or:

Increase my preventer inhaler dose to  puffs  times a day until my symptoms have gone and my peak flow is back to normal

Take my reliever inhaler as needed (up to  puffs every four hours)

If I don't improve within 48 hours make an urgent appointment to see my GP or asthma nurse.

- 2 If I have been given prednisolone tablets (steroid tablets) to keep at home:

Take  mg of prednisolone tablets (which is  x 5mg) **immediately** and again every morning for  days or until I am fully better.

**URGENT!** Call my GP or asthma nurse today and let them know I have started taking steroids and make an **appointment to be seen within 24 hours**.

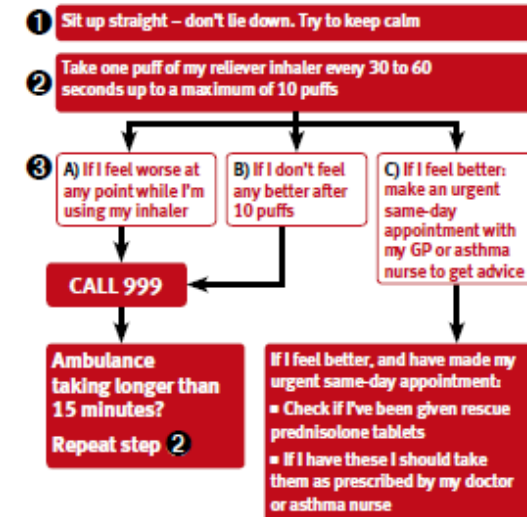


## I'm having an asthma attack if any of these happen:

- My reliever inhaler is not helping or I need it more than every  hours
- I find it difficult to walk or talk
- I find it difficult to breathe
- I'm wheezing a lot or I have a very tight chest or I'm coughing a lot
- My peak flow is below



## THIS IS AN EMERGENCY TAKE ACTION NOW



**IMPORTANT!** This asthma attack information is not designed for people who use the Symbicort® SMART regime OR Fostair® MART regime. If you use one of these speak to your GP or asthma nurse to get the correct asthma attack information.



These Asthma UK resources are currently free for GP Practices to order and editable versions can be downloaded at:

<http://www.asthma.org.uk/Sites/healthcare-professionals/pages/children-and-young-people-my-asthma>



my\_asthma\_plan\_a4  
\_v2.pdf

Children's Personalised Asthma Action Plan (PAAP)

[http://www.asthma.org.uk/Sites/healthcare-professionals/pages/self-management-materials?utm\\_source=internal&utm\\_medium=internal&utm\\_campaign=hcptoolkit](http://www.asthma.org.uk/Sites/healthcare-professionals/pages/self-management-materials?utm_source=internal&utm_medium=internal&utm_campaign=hcptoolkit)



Asthma\_Action\_Plan  
-\_12 years and over

Personalised Asthma Action Plan (PAAP) suitable for young people ages 12 and over.

## Accessibility Materials

**Asthma UK** provide some helpful resources and advice around accessibility

For easy access to Asthma UK's content or information about asthma, you could consider the following options:

- Go to <http://www.asthma.org.uk/languages> 'All about Asthma' Easy Read materials.
- You can Google translate the Asthma UK webpages depending on your internet security connections using this link: <https://translate.google.com/>. You would need to enter the Asthma UK site URL and choose your translation option.
- Go to <http://www.nhs.uk/conditions/asthma/Pages/Introduction.aspx> simply click the '**Translate**' button on the top right-hand corner of the page and pick your language choice.

## Asthma

Overview

Real stories

Medicines info

Asthma

[Symptoms](#)

[Causes](#)

[Diagnosis](#)

### Introduction

Asthma is a common long-term condition that causes coughing, wheezing, chest tightness and breathlessness.

You are here: [NHS Choices](#) / [About NHS Choices](#) / [About us](#) / Health information in other languages

## About us

Introduction

Editorial policy

Governance

External links policy

Linking to us

Other languages

Working for us

Health information in other languages

### Health information in other languages

#### Translate information on this website

You can translate most pages of this website, using Google Translate, into more than 50 languages by clicking the 'translate' link at the top of the page and selecting your language. You will need Javascript enabled for this to work.

The translation is done by Google Translate, which is a 'machine translation' engine that uses mathematical algorithms when translating. As a result, the translated text is not of the same quality as if it had been translated by a human translator. This also means that there is a difference in quality of translation between the languages.

However, as the technology behind Google Translate improves, the quality of the translation will improve too. Find out more about how Google Translate works on their support page.

## Appendix 5

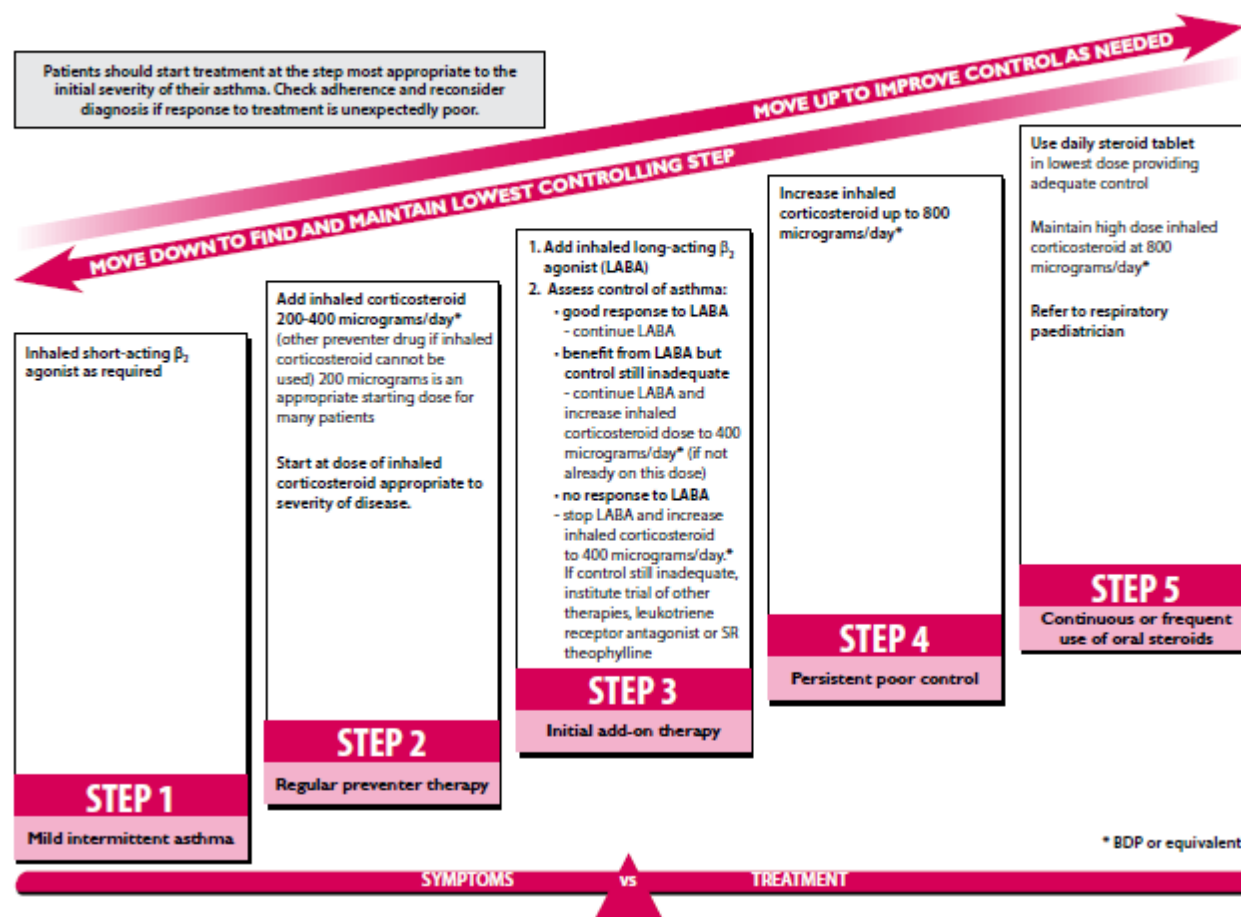


Figure 5: Summary of stepwise management in children aged 5-12 years