1. Welcome

Asthma is a common, long-term condition that affects the airways causing constriction leading to symptoms of breathlessness, wheeze and cough. It is most common in children and young people (CYP) aged between 5-15 years and has been recognised as a national problem.

WORKING TOGETHER TO IMPROVE THE LIVES OF CHILDREN WITH ASTHMA

A range of guidance has been developed including quality standards from the National Institute of Clinical Effectiveness (NICE, 2014) and further information and publications to help improve the health and care of children with asthma. Please visit our online resource section to download a checklist to help secondary care providers meet these standards and aspirations.

Unfortunately, London continues to have significant variation in outcomes for children and young people with asthma and high morbidity and mortality.

This toolkit has been created to help and support clinicians within hospitals to improve care for children and young people with asthma. The toolkit contains a range of materials, resources and guidance.

BACKGROUND INFORMATION

– A self-evaluation checklist to assess compliance with national asthma standards
– Extensive advice and guidance on developing and sustaining the highest quality of care
– Best practice case studies from specialist and hospital settings
– Tried and tested practical suggestions and top tips for working with parents and children.

If you would like to learn more about the need for improving care you can download the Case for Change.

FURTHER READING AND GUIDANCE

- NICE quality standards for asthma (2013)
- NICE Guidance (2014) Inhaled corticosteroids
- British Thoracic Society/Scottish Intercollegiate Guidelines Network (2014) has published guidelines on its website
- Global Initiative for asthma has a range of resources and information available on its website
2. Diagnosis

We need to improve asthma identification and access to treatment to improve quality of life for patients. However, diagnosis is difficult as there is no single diagnostic test, but it should be in line with BTS/Sign guidelines.

3. Managing care in every setting

MANAGING ASTHMA FOR OUTPATIENTS

WHAT DIAGNOSTIC TESTS SHOULD BE UNDERTAKEN?

- Detailed relevant family and personal medical history recorded in notes. Download the following templates Diagnosis with peak flow and Diagnosis without peak flow Documents
- Two weeks of peak flows
- Record variable airflow obstruction
- Record response to trial of therapy
- Record findings during attacks/flare ups: (Peak flow pre and post treatment with bronchodilators), Oxygen Saturations, features of severity as per the BTS /SIGN Guidelines

MANAGING ASTHMA IN EMERGENCY DEPARTMENTS

Asthma exacerbations can be classified as mild, moderate, severe, or life threatening. In the ambulatory, urgent care and emergency department settings, the treatment goals are correction of severe hypoxemia, rapid reversal of airflow obstruction and preventing relapse. Acute asthma is a relatively common emergency in children and young people and should be treated as severe until proven otherwise.

It is essential to recognise the severity of an acute asthma attack by observing the degree of a child’s breathlessness and whether they are using their accessory muscles, if they have a wheeze, what their pulse and respiratory rate is and their level of distress.

Prompt action to manage asthma exacerbations is required with the right care, in the right place, at the right time by clinicians that are trained in asthma. Rapid access to specialist care when needed is required. Severe exacerbation of asthma in children is the third most common cause of hospital admission and the most common cause of admission to paediatric intensive care units (PICU).

GUIDANCE FOR TREATING CHILDREN ON LONG-TERM GLUCOCORTICOID THERAPY

Children taking high dose inhaled corticosteroids or long-term oral steroids are at risk of adrenal insufficiency. This can cause a life-threatening adrenal crisis during illness or surgery. These children may be identified with the use of a Synacthen test and should be assessed regularly.

Synacthen testing is recommended for children who are taking:

- High dose inhaled steroid therapy of over 1000 micrograms/day beclomethasone equivalent
- Oral glucocorticoids for more than three months

Guidance for adrenal function testing for children on long-term glucocorticoid therapy for respiratory conditions

Whittington Health guidelines: A recommended approach has been developed and implemented by Whittington.
RECOMMENDED APPROACH

– The department should have an identified lead for asthma who helps to develop excellent streamlined processes and best practice for admission and discharge.

– Access to short acting bronchodilators via metered dose inhalers via a spacer will prevent over reliance on hospital care. If nebuliser therapy is required assessment should be by a consultant and it should be administered by an oxygen device not air driven.

– Systemic steroids should be administered within one hour of presentation according to NICE Quality standards.

TOOLS TO ASSIST WITH ASTHMA MANAGEMENT IN EMERGENCY DEPARTMENTS

The following resources and best practice guidance are available online to help manage asthma in emergency departments:

- How to assess a child aged 2-16 years with acute exacerbation of asthma
- Kings College Hospital pro forma and discharge information in community and secondary care
- Sample emergency department admittance form developed by Whittington NHS Trust

TRANSFERRING PATIENTS

On occasions it may be necessary to transfer the child or young person between hospital sites, because of the severity of the attack and need for a PICU bed in an extreme urgency. This must be undertaken by a dedicated team and in accordance with the London acute standards for children and young people available to view online.

- Read the London acute care standards for children and young people
- Childrens Acute Transport Service (CATS) clinical guideline: Acute severe asthma
- South Thames Retrieval Service

MANAGING ASTHMA IN A HOSPITAL SETTING

We want to reduce asthma-related hospital attendances for children so it is important that commissioners and providers prioritise it and collaborate to bring about the changes needed. Hospital clinicians and staff should focus on managing the acute phase, attacks, follow ups and reviews to help CYP avoid future attacks and the need for hospital admittance.

WORKING TOGETHER TO REDUCE HOSPITAL ADMISSIONS AND IMPROVE CARE

An integrated care pathway between the hospital and all out of hospital care settings and strong communication are crucial.

Checklist to support integrated working including recommended structures and processes

Guidance for commissioners to improve integration

WHAT CAN CLINICIANS DO?

It is important that clinicians have a good understanding of best practice and consider regular audits of practice using British Asthma guideline and NICE Quality Standards. They should be trained in asthma diagnosis and management.

ASTHMA CARE BUNDLE

A care bundle is a structured way of improving the process of care leading to improved patient outcomes. It is a small, straightforward set of evidence-based clinical interventions or actions, which when performed reliably improve patient outcomes.

The British Thoracic Society asthma care bundle for discharge from A&E/emergency departments for an acute asthma attack.
ASTHMA PATHWAYS FOR CHILDREN AND YOUNG PEOPLE

There are a number of pathways available for managing an acutely unwell child.

A range of examples is available to download in the online toolkit

- Management of Acute Exacerbation of Asthma / Wheeze Secondary Care Clinical Assessment Tool for Children Under 2 Years (NHS England)
- Management of Acute Exacerbation of Asthma / Wheeze Secondary Care Clinical Assessment Tool for Children Over 2 Years (NHS England)
- Acute Asthma Attack: Management for Known Asthmatic Children (5 – 18 Years) (Islington CCG)
- Clinical Management of Acute Exacerbations of Asthma and Wheeze Integrated Care Pathway for Children aged 1-16 years Part 1, 2 and 3 (London North West Healthcare)
- Hillingdon pathway

In addition there are a number of useful resources online specifically relating to emergency pathways including;

- NHS Whittington Health Acute Wheeze Guideline in Children
- National Paediatric Asthma Collaborative clinical pathways chart
- Download South East Coast Strategic Clinical Network’s Paediatric high volume conditions care pathways for asthma and bronchiolitis pathway

ASTHMA MANAGEMENT ON THE WARDS

Ward staff should have access to an identified asthma lead or equivalent for the hospital or unit responsible for disseminating learning throughout teams. An easy and recommended way of sharing expertise can be via e-learning on websites such as

https://www.spottingthesickchild.com

During admission, ward staff should make every contact count. An example of a beneficial intervention would be to identify and record those children or family members who smoke, provide brief advice, and refer to the local stop smoking service. For example, a proactive approach was taken at Whittington Health through launching an initiative to target smoking in adolescent patients and the parents of all children admitted. All staff were encouraged to participate for maximum impact. More information about this award winning intervention is available in our online toolkit.

Smoking Example from Whittington

As outlined in NICE quality standards, a structured assessment and review should be undertaken before discharge. A ward round discharge checklist is available to download online to assist with this.

Ward round discharge checklist
4. Managing psychosocial aspects of care

Psychosocial aspects of care are as important as physical aspects and therefore a full assessment of the child and family should be undertaken.

Build resilience of families by working with local communities and optimising neighbourhood resources for the benefit of raising awareness, education and concordance. Find out more;

5. Referring to tertiary care for difficult to control asthma

Sometimes it is necessary for referral to a specialist centre for more tests and advice. Patients with severe asthma and one or more adverse psychosocial factors are more at risk of death.

Further information on severe or difficult to control asthma

A referral form template is available as part of our toolkit. It has been developed by Whittington NHS Trust and is specifically designed to assist with referrals from hospitals to difficult to control asthma services.

6. Preparing for discharge

ASTHMA REVIEWS

All children should have an asthma review before discharge and at least once a year and more frequently if symptoms are not under control. This review is usually done in primary care by the GP or practice nurse trained in asthma reviews. However on occasions if the child is known to the asthma service it may be done in the hospital. Consideration should be given to flexible clinic timings, especially for adolescent patients as frequent hospital attendance can mean significant time off school in crucial school year. Innovative practice is occurring using skype consultations and clinics in the school setting in some areas. An asthma register and call/recall system should be set up and the service should be audited for outcomes. Training should be provided for staff.

OUTPATIENTS

Some reviews and assessments take place elsewhere on the hospital campus or in other clinical settings. NHS Whittington Trust has shared its pre clinic letter and the clinic pro forma template online.

Pre-clinic letter and pro forma template
WHY IS IT IMPORTANT TO CONDUCT REVIEWS?

A. ASSESS ASTHMA CONTROL

An asthma control score helps to:

– ensure that the correct diagnosis has been made
– ensure the child is on the appropriate prescribing management step and it is clearly documented
– identify potential barriers and reasons for poorly controlled asthma: using the Asthma Control Test available on Asthma UK

We suggest using the ‘Asthma and you’ website.

This will help you understand how well a child’s asthma is controlled. The website takes them through a series of questions about their asthma to give an Asthma Control Score. (ACT/C-ACT). This has been developed for use in the North Thames Collaboration for Leadership in Applied Health Research and Care (CLARHC). The license has been donated to the CLARHC by Glaxo Smith Kline as part of the GSKs industry partnership

Alternatively download an Asthma Control Test, also available in other languages

The review should also:

– identify and record potential triggers and for example offer smoking cessation support for child and family
– assess time off school
– check inhaler techniques
– check prescription history of relievers and preventers
– optimise therapy — see www.ginasthma.org Box 3-2 and chapter 6

B. ADJUST MANAGEMENT STRATEGY

– Adjust medications as per local guidance and check adherence to medication.
– Put in place measures to improve their asthma control (Wheeze plan, inhaler technique etc.). Improve inhaler technique as per NICE Quality Standards

– Point patients to other online support resources such as inhaler demonstrations on youtube

Asthma UK

Inhaler demos

– Refer to specialist services for those who need it.

C. EXPLORE PATIENTS CONCERNS AND EXPECTATIONS

It is helpful to provide as much advice and guidance to parents about what to expect during a review. Asthma UK has published useful guidance on how to prepare for a review.

Read more about ‘Making the most of your asthma review’

D. GUIDE SELF-MANAGEMENT

– Provide a personalised asthma management care plan and supportive education revise and refine plan at each review as per NICE Quality Standards.
– Audit of effective education around quality of asthma management plan and structured asthma reviews.
– Increased use of schools to promote asthma self-care such as the existing Healthy schools London the University College London schools research network or the Schools based asthma interventions in North London CLARHC.
– Improvements in individual’s asthma control
USEFUL TOOLS AND RESOURCES

Whittington Health has produced a leaflet outlining in an annual asthma review.

What to do in an annual asthma review for children aged 5 years and over in primary and secondary care leaflet.

The Nursing Times has produced a series ofvideo articles looking at asthma.

‘How the acronym SIMPLE can help you remember the stages of an asthma review’

7. Discharge arrangements from ward or emergency department

All patients should have their inhaler technique assessed before discharge, their medications reviewed and a written personalised asthma action plan provided.

This management plan should be provided to the child/parent on discharge with clear advice about what to do if their condition exacerbates, methods to manage their care and what the triggers for their asthma might be. Their GP should be informed of the attendance or admission as soon as possible and preferably electronically.

According to the Nice Quality Standards a follow up appointment to be seen by a healthcare professional within 48 hours of discharge should be made, either in a community or hospital setting if the child or young person was admitted with a life threatening attack.

Clinicians might like to consider the treatment of an emergency visit or prescription of prednisolone as a ‘critical incident’.

USEFUL TOOLS AND RESOURCES

To assist with discharging patients following an unscheduled visit we have published brief guidance and a checklist

An example of a helpful discharge pack is also available from The Royal Children’s Hospital Melbourne, Australia.
8. Transition from child to adult services

Transition to adult services should be as seamless as possible for young people.

It may commence from age 12 onwards and last until 25 depending on the individual child and/or condition. It requires careful planning and collaborative working between the young person, parent, adolescent services and adult services and care should remain flexible at all times.

London-wide standards for acute care and asthma for children and young people.

The process of transition is expected to take longer where a child has multiple, complex needs, but the key feature of young people, aged 16 to 19, is they are much more likely to be admitted to hospital with an asthma exacerbation than other age groups and have longer lengths of stay according to recent research.

A good practice guide.

Therefore, transition should start early; young people need to have an opportunity to be seen on their own and to begin to take on more responsibility for their asthma in adolescence. Ideally discussions about greater involvement in their own care should begin around the age of transferring to secondary school. Poor transition can lead to lack of follow up and non-adherence resulting in more acute admissions and higher risk of mortality.

RESOURCES TO HELP IMPROVE TRANSITION

- A range of tools to help young people, parents and clinicians with the transition to adult care are available as part of the Ready steady go initiative on University Hospital Southampton’s website.

- South East Strategic Clinical Networks has also published transition guidance on its website.
9. Audit

The British Thoracic Society (BTS) respiratory clinical audit programme undertakes an annual audit of paediatric care.

Results are available on the BTS website or via the National Child and Maternal Health Intelligence Network (ChiMat) portal.

POTENTIAL AREAS FOR AUDIT OF ASTHMA SERVICE

- Presentations to Emergency Department with wheeze/ difficulty in breathing
- Admissions for asthma/ wheeze/ difficulty in breathing
- Course of Prednisolone
- Repeat prescriptions of Salbutamol and inhaled corticosteroids
- Days missed off school / work
- Asthma Control Test score
- Treatment steps British Thoracic Society (BTS) guidance
- College of Emergency Medicine standards / BTS (acute setting):
  - time to Prednisolone
  - observations on presentation
  - time to nebulised salbutamol
- Number of patients reviewed by GP with in 48hrs
- Diagnosis (viral induced wheeze versus asthma)
- How was diagnosis made (against BTS standard)
- Smoking, child and parent?

GANING A BETTER UNDERSTANDING OF CHILDHOOD ASTHMA IN LONDON

Healthy London Partnership in conjunction with NHS Harrow CCG are undertaking an audit of management of care across London. This audit is intended to highlight potential preventable problems related to the management of attacks and also to stimulate change by health professionals in the treatment of attacks; in particular by assessing all patients within a few days of treatment for an attack and optimising treatment and reducing future risk.
USEFUL AUDITING TOOLS

Download the data-collection pro forma and additional information from My Health London NHS.

A step by step online audit completion tool is available online. It is also possible to insert your audit results.

For more information contact:
Dr Mark L Levy,
Respiratory Lead for Harrow
mlevy1@nhs.net

TOP TIPS

– Ensure assessment of control and review and onward referral to a specialist centre if the patient required more than two courses of corticosteroids in previous 12 months.

– Ensure all children and young people leave hospital with a personalised asthma action plan.

– Ensure assessment of inhaler technique and understanding of condition, triggers (including smoking) and management.

– Ensure follow up in community care or secondary care has been arranged.

– Implement approaches to improve communication across the pathway —

View case study St Georges Hospital

– Use of culturally sensitive material.

– Develop, evaluate and promote innovative methods for example web based portals or apps to help with some of the above.