

Asthma Better for Less



Overview

Asthma is one of the most common long term conditions in the UK, affecting 5.4 million people, of which 1.1 million are children. Asthma is the most common long-term medical condition for children.

Asthma causes an estimated 140 deaths in our region per year, up to 90% of which are preventable. We have over 6000 admissions due to asthma in our region every year, emergency admissions due to asthma are higher than the national average, an estimated 75% of which, (costing £4.6m in our region per year) are avoidable.

Caring for people who experience an asthma attack costs 3.5 times more than caring for those whose asthma is well managed.

Most patients can achieve effective control of their asthma in partnership with primary care. This briefing identifies actions to help patients manage their condition better, improving their experience and outcomes, whilst significantly reducing activity and costs to the NHS.

Why Asthma?

All people with asthma should be able to expect high quality treatment, care and information. They should all receive the services needed to optimise their asthma control. Yet there are wide disparities in asthma control, as shown by the variation in hospital admissions for asthma.

The prevalence of asthma in England is among the highest in the world. The Quality and Outcomes Framework prevalence figures suggest that approximately 6% of the region's population suffer from asthma, over 330,000 people.

Nationally deaths from asthma are between 1000 and 1200 deaths a year since 2000, yet it is estimated that 90% of deaths are associated with preventable factors. Asthma is responsible for large numbers of attendances to Emergency Departments, and admissions, the majority of which are emergency admissions. According to Asthma UK, as much as 75% of asthma admissions are thought to be preventable, small improvements could significantly reduce admissions.

1.1m 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 rate of emergency bed days for asthma across Yorkshire & the Humber is greater than the national average, and there is more than two-fold variation across PCTs.

The concept of measuring years of life lost is to estimate the length of time a person would have lived had they not died prematurely. In Yorkshire & the Humber on average there are around 2.5 years of life lost as a result of asthma mortality. This is around 25% higher than the national average. There is also significant variation across the region, Bradford and Airedale has just over 1 year of life lost, Kirklees has over 3.5.

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 the condition. The goal of treatment is for patients to be free of symptoms, and able to lead a normal, active life.

Key Facts

- 1.1 million children (1 in 11) and 4.3 million adults (1 in 12) in the UK are currently receiving treatment for asthma;
- There were 1,131 deaths from asthma in the UK in 2009;
- On average 3 people per day or 1 person every 8 hours dies from asthma in the UK;
- There were 80,000 emergency hospital admissions for asthma in the UK in 2008-09. Of these, 30,000 were children under 14; and
- An estimated 75% of hospital admissions for asthma and as many as 90% of the deaths from asthma are preventable.

What Is The Challenge?

National guidelines for the management of asthma state that:

- People with asthma should expect their condition to be adequately controlled by their medicine;
- They should expect to be free from symptoms and restrictions on their lives; and
- They should not need emergency treatment if appropriate routine care is given.

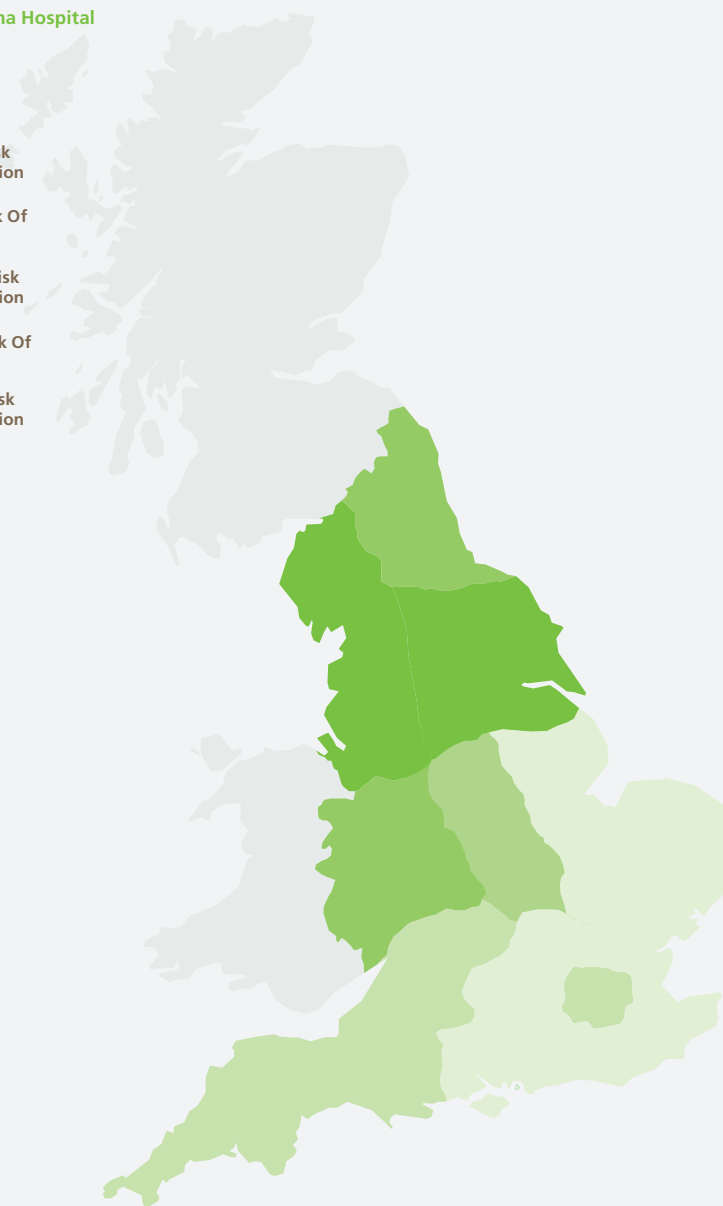
With the appropriate use of medicine, people with asthma should expect their condition to be controlled. Guidelines describe control as a person having no asthma attacks, no emergency visits to doctors or hospitals, minimal or no asthma symptoms and no restrictions on their daily activities. Despite the availability of effective treatments, many people in England still have asthma that is not controlled.

When surveyed 35% of adults with asthma and parents of children with asthma reported that they have not achieved the objective of no emergency visits to a doctor or hospital. Regional figures on hospital admissions back up this view of poor control – there were 6214 emergency admissions for asthma in Yorkshire and the Humber in 2009-10, costing over £6m in tariff payments.

Hospital admissions for asthma are much higher than the national average in Yorkshire and Humberside. People with asthma living in our region are 65% more likely to have asthma that is not controlled requiring emergency hospital care than those living in the East of England.

Figure 1: Rates Of Asthma Hospital Admission By Region.

<85	Lowest Risk Of Admission
86-95	Lower Risk Of Admission
96-105	Average Risk Of Admission
106-115	Higher Risk Of Admission
>115	Highest Risk Of Admission



The difference in hospital admissions across England is unlikely to reflect differences in the number of people with asthma.

It is estimated that asthma cost the NHS at least £889 million a year. Of this, £49 million (5.5%) is spent on hospital admissions for asthma.

It is estimated that 75% of emergency admissions for asthma could be avoided with more appropriate and timely care. That means £4.6million in Yorkshire and the Humber could potentially be freed up for other healthcare needs, if asthma care improved and these unnecessary hospital admissions were avoided.

How Could We Provide Better For Less?

The key opportunities to offer better care for less we are choosing to focus on in this briefing are:

1. Regular asthma updates to primary care professionals, including:
 - The regional guidelines for the clinical management of children with asthma.
2. Importance of structured review and patient education:
 - Recording of asthma control tests;
 - Self management plans; and
 - Inhaler technique checks.
3. Awareness raising amongst parents of school children with asthma.

Regular Asthma Updates To Primary Care Professionals

Primary care professionals must ensure they keep abreast of evidence based asthma guidance through regular updates. The British Thoracic Society asthma guidelines are updated annually on line and can be found at:

<http://www.brit-thoracic.org.uk/Portals/0/Clinical%20Information/Asthma/Guidelines/sign101%20June%202011.pdf>

Training For Primary Care Healthcare Professionals

GPs and practice nurses should ensure they maintain up to date asthma skills and knowledge, one way of doing this is through education and awareness sessions. The SHA provides funded places through a number of local and national training providers. For more information about the training and funding available in our region please visit:

http://www.yorksandhumber.nhs.uk/what_we_do/workforce_education_and_training/education_and_training/

For more information about training or support available through the regional respiratory programme please contact:

lisa.chandler@yorksandhumber.nhs.uk

Regional Clinical Management Guidelines For Children's Asthma

Regional Clinical Management Guidelines have been developed covering the entire pathway of children's asthma from diagnosis, through routine care and management, to emergency treatment, to develop a child centred service which provides:

- Rapid access;
- Accurate diagnosis;
- A treatment plan discussed and agreed with child and family;
- Ongoing support to manage their own condition;
- Reduced need for unscheduled care; and
- Delivery of emergency care to the highest standard.

These clinical management guidelines are divided into diagnosis, routine management and emergency care. An integrated approach is adopted, facilitating the majority of care closer to home in the GP surgery, whilst enabling appropriate use of hospital services and experience. The guidelines apply across primary and secondary care and are available from:

http://www.yorksandhumber.nhs.uk/reports_and_publications/ (listed as children's asthma guidelines)

Importance Of Structured Review And Patient Education

Recording Of Asthma Control Tests

The Asthma Control Test¹²³ and Childhood Asthma Control Test⁴ return a numerical value, and are of help in deciding if a child (or adult) with asthma has controlled or uncontrolled asthma. Once the level of control has been assessed, then future management such as stepping-up, stepping-down or maintaining therapy in conjunction with education and a written, individualized self management plan may be offered.

A scheme to develop best practice in primary care of asthma in children has been established in Hull, Wakefield, Kirklees and Leeds. Initial results show a 2-4 point improvement in average asthma control test scores after just 1 asthma review and follow up, there is likely to be a greater improvement as the pilot scheme matures.

¹Schatz M, Sorkness C, Li JT, Marcus P, Murray J, Nathan RA, Kosinski M, Pendergraft TB, Jhingran P Asthma Control Test: Reliability, validity, and responsiveness in patients not previously followed by asthma specialists. *J Allergy Clin Immunol* 2006; 117:549-556

²Thomas M, Kay S, Pike J, Williams A, Rosenzweig JRC, Hillyer EV, Price D The Asthma Control TestTM (ACT) as a predictor of GINA guideline-defined asthma control: analysis of a multinational cross-sectional survey *Prim Care Resp J* 2009; 18 (1), pp. 41-49.

³Nathan RA et al. *J Allergy Clin Immunol.* 2004;113:59-65

⁴Liu AH, Zeiger R, Sorkness C, Mahr T, Ostrom N, Burgess S, Rosenzweig JC, Manjunath R, (*J Allergy Clin Immunol* 2007;119:817-25)

Self Management Plans

A self-management plan is an agreed set of guidelines between a patient and their healthcare professional on 'what to do when'. It allows patients to identify when their asthma is getting better or worse and the plan highlights what to do depending on the change. Actions taken by patients might include, increasing their medication, visiting the GP or calling an ambulance.

Patients should be empowered with advice from health professionals to:

- Manage their condition day to day;
- Understand what can exacerbate their asthma;
- Recognise worsening asthma;
- Be able to self-initiate therapeutic adjustments; and
- Know how and when to access the medical system.

This and any other relevant information should form the basis of an individual written action plan for each patient. The plan should be filled in by the Health Care Professional in discussion with the patient. The plan is not a rigid protocol for asthma management. It should be given to most people with regular symptoms, or who are at risk of attacks. Patients without an asthma self management plan are four times more likely to have an emergency admission than those with a plan.

The British Thoracic Society guidance suggests the following actions for primary care healthcare professionals to help patients self manage their asthma:

- Ask open-ended questions like "If we could make one thing better for your asthma what would it be?" This may help to elicit a more patient-centred agenda;
- Make it clear you are listening and responding to the patient's concerns and goals;
- Reinforce practical information and negotiated treatment plans with written instruction;
- Consider reminder strategies; and
- Recall patients who miss appointments.

The three main advantages of self management plans are:

- Helping to prevent asthma attacks as people understand the signs of worsening asthma and know how to intervene to avoid a bad attack. This reduces trips to A&E, emergency admissions and fatalities due to asthma;
- Patients altering their medication safely to stay well on the minimum medication required without having to consult GPs or nurses; and
- Patients taking control of their asthma, making safe and informed decisions to stay well and prevent a decline in their asthma.

Inhaler Technique

Inhaler technique, both for traditional Metered Dose Inhalers and the newer breath-actuated inhalers, is far from ideal. Surveys have shown 92% of people using a metered dose inhaler inhaled too quickly and that health professionals are no better at demonstrating good technique (94% of health professionals inhaled too quickly when demonstrating a 'good inhaler technique' to patients).

The main aspect of poor technique is too high an inhalation rate. Poor technique leads to most of the inhaled medication being swallowed instead of inhaled and as such is largely wasted. This waste reduces the efficacy of the medication. Low efficacy leads to poorer disease control and higher rates of exacerbation and death.

On the Isle of Wight Medicines Use Reviews (MUR) have been used to improve the health of inhaler users by allowing health care practitioners to assess patient's inhaler technique and teach a good technique. They allow patients to assess their own technique and reinforce a good technique.

Medicines Use Review are conducted in the main by community pharmacists. The MUR enables the Pharmacist to deliver inhaler technique training and can give the patient a teaching aid device.

The key elements of the approach are:

- Patients receive consistent inhaler technique training from GPs, nurses and pharmacists;
- Health care professionals measure patients ability to use inhaler;
- Strategy is employed across primary and secondary care; and
- Directed MURs are undertaken by community pharmacists.

A programme of MURs can develop through a strategic 'train the trainer' approach, with additional benefits from extending the training into schools, care homes and to housebound residents.

New Community Pharmacist Contract

From 1 October 2011 there are some important changes to the NHS Community Pharmacy Contractual Framework. These include the introduction of 2 key service developments:

- A New Medicines Service (NMS);
- The introduction of nationally targeted Medicines Use Reviews (tMURs).

The NMS provides early support for people with long-term conditions newly prescribed a medicine and is an excellent opportunity to help patients get the most out of their medicines. Research shows that an early intervention by a pharmacist can help to improve patients' adherence to their medicines and reduce the use of other NHS resources. The service initially focuses on 4 particular patient groups and conditions which include asthma .

Medicines Use Reviews involve the pharmacist periodically undertaking a structured review with patients to establish a picture of their use of the medicines – prescribed and non-prescribed. MURs aim to help patients use their medicines more effectively by improving the patient's knowledge and understanding of their medicine. Unlike the NMS where patients have been newly prescribed a medicine, patients who have an MUR are likely to have been taking the medicine for a period of time.

The NMS and targeted MURs are designed to lead to improved health outcomes for patients, support better utilisation of community pharmacy expertise and resource, and provide value for money for the NHS, contributing to the Quality, Innovation, Productivity and Prevention (QIPP) programme. The changes should ensure that patients are able to use their medicines more effectively and they should be less likely to present to their GP with medicines-related problems.

These services will be implemented from 1st October 2011 and health care professionals and commissioners are strongly encouraged to engage with all their local pharmacies in order to maximise the benefits to patients.

Awareness Raising – Pharmacy And Public Awareness Campaigns

Each year, children are three times more likely to be admitted to hospital with respiratory problems at the start of the school term in September than during the rest of the year. This may be because children with asthma do not continue their usual asthma treatment over the school holidays. When children return to school, they come into contact with new viruses and triggers, which can cause an asthma attack. Encouraging continued use of inhalers and medicines over the summer ensures that protection is not lost when the child returns to school.

The campaign aims to reduce the number of children needing hospital admission for asthma-related illness through raising awareness of the importance of maintaining asthma routines over the school holidays and helping to improve children's inhaler technique.

Campaign techniques used by NHS Leeds and NHS Wakefield included mutually reinforcing messages in letters to the parents of school children before the Eschool holidays, posters and literature in pharmacies and NHS premises and placing adverts on local buses (see example below), all highlighting the importance of using preventer inhalers over the summer.

Bespoke communications to local pharmacists asked them to encourage continued use of preventative inhalers, not just acute relief inhalers and explain to children and parents why this is important. Pharmacists were also asked to check inhaler technique and counsel as appropriate. If the child would benefit from a spacer then this should be recommended, and a prescription requested from GP.

Example bus advert and letter to parents:

Does your child have asthma? NHS Leeds
Don't forget about their medication this summer...

...it will help them when they go back to school.

Speak to your local pharmacist for more information or visit www.asthma.org.uk

Did you know, children are three times more likely to be admitted to hospital with asthma related illness in September than at any other time?

NHS
 Yorkshire and the Humber

Dear Parent

Asthma is a common condition in childhood, most children who have asthma can control their symptoms with regular medication, and participate fully in day-to-day activities.

Some children with asthma can occasionally experience increased symptoms that mean they have to go to hospital for treatment.

Our records show that in September, many more children go to hospital with increased asthma symptoms than at any other time of year.

This increase in asthma symptoms may be due to the fact that some children experience fewer symptoms during the summer holidays, and sometimes forget to take their asthma medication regularly.

Ensuring your child takes their "preventer" asthma medication regularly during the summer holidays and throughout the year will help your child to control their asthma condition in the best possible way, and will also help us to reduce hospital admissions linked to asthma.

If you have any questions about this letter please discuss it with your local doctor or paediatrician.

Yours sincerely

Yorkshire and Humber Regional Asthma Impact Project Steering Group Members.

Patient Benefits

Better care for asthma patients can significantly improve their quality of life. Better management of the disease means less impact on daily living, fewer exacerbations as a result of the disease and fewer trips to the doctors or hospital. Asthma causes approximately 140 deaths in our region per year, up to 90% of which are preventable. Poor knowledge of how drugs and inhalers work are contributory factors in up to half of the fatal cases of asthma in the UK each year according to Asthma UK.

As part of self-management education, action plans improve health outcomes in adults with asthma. Outcomes examined include hospital admissions, emergency medical contacts, days missed from work, nocturnal asthma symptoms and quality of life. A meta-analysis of self-management in children and adolescents (2-18 years) also showed improved lung function, reduced morbidity and utilization of healthcare resources.

The interventions outlined in this briefing lead to patients having more confidence in managing their condition and more control over their lives.

Financial Benefits

Emergency hospital admissions due to asthma in Yorkshire and the Humber are amongst the highest in the country at over 6000, an estimated 75% of which are avoidable. This equates to £4.6m of tariff payments for avoidable emergency admissions in the region every year.

Better care can yield fewer attendances at A&E departments, fewer emergency admissions and evidence suggests that average length of stay following asthma exacerbations can be reduced by 25%.

The costs of emergency admissions for asthma are listed by PCT below. The potential savings from removing all avoidable emergency admissions vary by PCT from £100,000 to £695,000. These are commissioner savings from reduced emergency admissions. The whole system saving is likely to be higher as any intervention is likely to incur additional costs as an elective admission and for use of primary, outpatient or A&E services which are not modelled as part of these savings.

Figure 2: Costs of emergency asthma admissions by PCT (Source: NHS Comparators 2009-10)

Organisation	Total Emergency Admissions for Asthma	Total PbR Cost of Emergency Admissions for Asthma	Total PbR Cost of Emergency Admissions for Asthma per 100,000 Population	Potential saving from 75% reduction in emergency admissions
National	60456	£58,294,161	£106,219	£43,720,621
Yorkshire & Humber SHA	6214	£6,206,595	£113,840	£4,654,946
North Yorkshire Cluster				
North Yorkshire and York	682	£665,900	£83,280	£499,425
Humber Cluster				
Hull Teaching	307	£285,944	£98,960	£214,458
North East Lincolnshire	124	£134,376	£79,114	£100,782
East Riding of Yorkshire	225	£229,154	£72,822	£171,866
North Lincolnshire	181	£167,682	£100,267	£125,762
South Yorkshire Cluster				
Sheffield	577	£658,889	£116,832	£494,167
Doncaster	326	£326,620	£105,133	£244,965
Barnsley	373	£388,014	£158,748	£291,011
Rotherham	232	£225,241	£88,027	£168,931
Airedale Bradford Leeds Cluster				
Leeds	934	£926,244	£114,695	£694,683
Bradford and Airedale Teaching	800	£733,633	£134,040	£550,225
Calderdale Kirklees Wakefield Cluster				
Calderdale	292	£273,150	£129,981	£204,863
Kirklees	614	£625,389	£148,675	£469,042
Wakefield District	547	£566,359	£161,305	£424,769

Case Studies

Yorkshire And The Humber

For 2011/12 NHS Yorkshire and the Humber submitted a Care Quality Indicator for Asthma to the CQUIN pick list shared with PCTs. The CQUIN is a care bundle for the management of asthma in the emergency department. Positive feedback was received from clinicians and at least 3 PCTs have selected to use locally adapted versions of the CQUIN. The aim of the Asthma in ED CQUIN is to ensure that patients receive prompt treatment in line with national best practice recommendations from the College of Emergency Medicine and that patient discharged from the ED home receive the information and support they need to improve their self management skills, reducing the need for future attendance.

For more information about The CQUIN and plans for development of the respiratory CQUINs for 2011/12 please contact:

lisa.chandler@yorksandhumber.nhs.uk

Isle Of Wight – Medicines Use Reviews

An inhaler technique pilot on the Isle of Wight recorded outcomes (on a small sample population) including:

- Emergency admissions due to asthma fallen (41 vs 20 admissions);
- Deaths due to asthma have fallen (8 vs 2); and
- Reduced cost of prescribing respiratory medications including a significant reduction in bronchodilator prescribing.

These outcomes are achieved on small numbers but do indicate that medicines use reviews have a positive impact in delivering better care for less. As a result of this success the asthma scheme has been expanded to cover the whole South Central region during 2011.

Durham Dales Clinical Commissioning Group – Medicines Use Reviews

Durham Dales CCG aims to use pharmacies with each of their GP practices in the Dales CCG to pick up patients who have a high DNA rate, high steroid inhaler use and high cost medication usage. The objectives of their follow up work with these patients are to reduce emergency acute admissions, reduce medicines costs and improve patient self-management.

References

Regional Commissioning Guidance:

<http://www.yhip.org.uk/silo/files/childrens-asthma-clinical-management-guidelines.pdf>

Asthma Downloadable Self Management Plans:

<http://www1.imperial.ac.uk/medicine/people/m.partridge/>

Self Management Plans, And Training Materials For Health Professionals From Asthma UK:

http://www.asthma.org.uk/health_professionals/index.html

http://www.asthma.org.uk/health_professionals/materials_to_help_you_your_patients/self_management_mate.html

http://www.asthma.org.uk/all_about_asthma/publications/be_in_control_perso.html

Schools asthma awareness, pro-forma school letter:

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

Key Contacts

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