PSNC Briefing 064/16: Inhaler technique services

This PSNC Briefing provides a summary of inhaler technique services which may be of particular interest to LPCs developing proposals for an inhaler technique service in their area or those who are reviewing their existing service. Inhaler technique services provide education, training, monitoring and support for patients with respiratory conditions.

Introduction

Asthma is a serious problem in the UK. It is estimated that someone in the UK has a potentially life-threatening asthma attack every 10 seconds, and three people die every day. Two thirds of these deaths are preventable.\(^1\)

The UK has among the highest prevalence rates of asthma symptoms in children worldwide. Asthma attacks hospitalise someone every eight minutes and 185 people are admitted to hospital because of asthma attacks every day in the UK (every 20 minutes for children).\(^2\)

For the symptomatic management of asthma, the appropriate use of an inhaler is the key factor. A recent survey carried out by Asthma UK revealed that up to a third of people with asthma are not using their inhaler correctly.\(^3\) Pharmacists are ideally placed to support people with asthma; many pharmacists will have strong relationships with patients and can therefore spot when a patient is unwell. Additionally, pharmacists can identify excessive reliever inhaler use by the number of times a product has been dispensed in any given time period.

The National Review of Asthma Deaths (NRAD)\(^4\) showed that over half (58%) of patients who died were being treated for mild or moderate asthma, suggesting they had poorly controlled undertreated asthma, rather than truly mild or moderate disease. The report also showed that nearly a quarter of patients who died, were receiving less than satisfactory primary care.

The NRAD made a number of recommendations to improve care and reduce the number of deaths from asthma. The recommendations matrix identified pharmacists as people who could help to deliver a number of the recommendations. The NRAD suggests that an assessment of inhaler technique to ensure effectiveness should be routinely performed by a pharmacist when a new device is dispensed.

There are currently 3 million people living with chronic obstructive pulmonary disease (COPD) in England. Only 900,000 have received a clear and accurate diagnosis and are getting appropriate treatment to improve their quality of life and clinical outcomes.

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\(^1\) Asthma UK, [About us](http://www.asthma.org.uk/aboutus) (accessed 10/11/16)

\(^2\) Asthma UK, [Asthma facts and statistics](http://www.asthma.org.uk/aboutus/facts) (accessed on 10/11/16)

\(^3\) Asthma UK, [Using your inhalers](http://www.asthma.org.uk/inhalers) (accessed 10/11/16)

Death rates from COPD are almost double the EU average; 15% of those admitted to hospital with COPD die within three months and around 25% die within a year of admission. One person dies from COPD every 20 minutes in England - around 23,000 deaths a year. If the whole NHS were to deliver services in line with the best, around 7,500 lives could be saved.5

Whenever an inhaler is prescribed, it is recommended that training should be given and the patient’s technique should be checked regularly to ensure that the device is being used correctly.6 Spacer device suitability should also be reviewed at least annually.7

6 Patient, Management of Adult Asthma (accessed on 10/11/2016)
10 Asthma UK, Asthma facts and statistics (accessed on 2/3/2016)

Premature mortality from COPD in the UK was almost twice as high as the European (EU-15) average in 2008 and premature mortality for asthma was over 1.5 times higher.8

A study found that 92% of users have poor inhaler technique; moreover, 94% of healthcare staff teach a poor technique.9

It is estimated that 90% of asthma deaths are associated with preventable factors. Almost 40% of these deaths are in the under 75-age group. Asthma is also responsible for large numbers of hospital admissions, the majority of which are emergency admissions.8

The challenge

5.4 million people in the UK are currently receiving treatment for asthma: 1.1 million children (1 in 11) and 4.3 million adults (1 in 12).10
The NHS spends around 1 billion a year treating and caring for people with asthma.10

How many inhaler technique services are there? *

Some services are commissioned in a Clinical Commissioning Group (CCG) area rather than across the whole LPC area and some services are commissioned across local NHS England teams so more than one LPC is included in the service, for example, the Improving Inhaler Technique Through Community Pharmacy 2014/15 service involved seven LPCs.

There are 16 services that include supporting patients with their inhaler technique on the PSNC services database that have taken place since 2011.

At the time of writing, 10 of these services are still active. Some of these are commissioned services whereas others serve as a targeted Medicines Use Review (MUR) and thus do not get extra payment. There are currently three services like this on the PSNC database.

*Please note, this data was analysed in September 2016.
How is the service structured and what does it involve?

Some commissioners have broken down the service into different intervention stages which require the patient to return to the pharmacy at different time intervals to monitor their progress and disease control.

The service may consist of:
- an asthma control test (ACT) or COPD assessment test (CAT);
- inspiratory flow rate test using the In-Check Dial or spirometry;
- demonstration of correct inhaler technique using placebo training inhalers; and
- an initial consultation (as part of an MUR or NMS) and a follow-up appointment to check on progress.

Many services consist of a combination of one or more of the above. The number of services that encompass each of the components above is summarised below:

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The graph shows that 15 services involved providing an MUR/NMS and eight services involved a measure of CAT/ACT scores.

**Intervention stages**

Services can differ in terms of their structure. Some services consist of one, single intervention, whereas others consist of multiple interventions at different time points, requiring the patient to return for a follow up appointment.
The graph shows that:
- four services consisted of one single intervention;
- seven services consisted of two interventions; and
- three of the services consisted of three interventions.

Examples of commissioned services

**Enabling Patient health Improvements though COPD medicines optimisation (EPIC) (Leeds)**

- The EPIC project targets high risk COPD patients at 14 practices
- This service can be offered alongside an MUR if appropriate. The service can also be provided as a stand-alone service
- Eligible patients receive two consultations, eight weeks apart
- The consultations will include smoking status and cessation advice, assessment and teaching of inhaler technique, explanation of medicines, monitoring of COPD, lifestyle advice and self-care advice and education (including exacerbations)

**Inhaler Technique Improvement Project (Knowsley)**

- Delivery of the commissioned service consists of an initial baseline assessment, education to improve inhaler technique and a follow up assessment
- The service is available for adults and children
- The initial assessment includes establishing patients’ use of medicines, obtaining a CAT or ACT score and taking a reading using InCheck Dial device. Education is also provided.
- 4-6 weeks after the initial consultation, the patient returns for a repeat CAT or ACT test and their condition is assessed and education is provided

**Respiratory MUR+ (Lancashire)**

- This service consists of two stages: First, the MUR consultation, then, a follow up review consultation
- The aim of the follow up review consultation is to determine whether the patient’s symptom control has improved, and whether they are able to use their inhalers effectively
Inhaler technique checks targeted at specific patient groups

### School children

**Greater Manchester**

- This project ran separately but concurrently in 10 primary and 10 secondary schools selected across Greater Manchester to support a group of children and young people prescribed inhalers for asthma, and their parents/carers between mid-April and early July 2015.
- Two workshops, 6-8 weeks apart, were offered in each school for each group of Years 4-5 (primary) or Years 9-10 (secondary) pupils.

### Paediatrics

**Isle of Wight**

- The aim of the service was to optimise the outcomes of treatment of asthma in paediatric patients through the effective delivery of MURs involving the patient’s carer and demonstrating the benefits through audit and evaluation.
- The initiative was delivered through 10 community pharmacies on the Isle of Wight with engagement criteria being based on location, MUR accreditation status and recent history of successful delivery of MURs.

### Care home residents

**Sheffield**

- This service helped patients with COPD and asthma in residential homes to receive safe and effective care that minimises progression, enhances recovery and promotes independence by conducting two visits to the care home.
- The aim of the service is to improve the outcomes for patients in care homes with respiratory needs through the introduction of collaborative working between the care home, dispensing pharmacy, medicines management team and the patient’s general practice.
## What outcomes have been seen?

<table>
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<th>Project Description</th>
<th>Outcomes</th>
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| **Inhaler Check Service** (Doncaster) | • Pharmacists intervened with 400 patients whose inspiration rates were outside the optimum range  
• Over 98% of patients subsequently achieved the optimum inspiration rate  
• Nearly 99% of patients agreed/strongly agreed that they understood more about their medicines after their consultation with the pharmacist |
| **Improving Inhaler Technique Through Community Pharmacy** (Greater Manchester area) | • A series of three consultations over a six month period on 906 patients  
• By the end of the second visit, 77.1% of MDI users and 59% of DPI users had visibly improved their inhaler technique  
• Most users reported increased understanding and confidence about their inhalers |
| **Breathing in Success Project** (Humber) | • 603 patients were reviewed, with 1,035 inhaler checks conducted over 6 months  
• Only 24% of devices assessed were being used correctly initially  
• Following device training, 97.7% of these devices were used successfully  
• 91.6% of patients stated they have a better understanding of their condition after the intervention  
• 57 patents who had not had a GP review in the last year were included |
| **Inhaler Technique Improvement Project** (South Central Region) | • A two MUR intervention service. 4,600 ACT assessments pre- and post- MURs and 448 CAT assessments pre- and post- MURs  
• In relative terms, 40% of asthma patients showed better asthma control over the time period; 55% of COPD patients showed an improvement in symptom management |
| **Respiratory Inhaler Project** (Isle of Wight) | • A total of 965 patients received an asthma MUR from 46 pharmacies  
• Within the first year, costs of selective beta agonists fell by 22.7%  
• Emergency admissions due to asthma had reduced by 50%, and deaths by 75%  
• Hospital inpatient costs for asthma-related admissions fell by 66% |
| **Inhaler Technique Multidisciplinary Project** (Nottingham) | • 44% of 1,037 patients had a reduction in the dose of their inhaler since the intervention  
• 78% now report having no symptoms that restrict their daily activities or sleep  
• Many reported reduced bronchodilator use and felt better symptom control |
| **SIMPLE Asthma Project** (Leicester) | • Evaluation of 125 patients: 32% reduction of asthma-related GP visits and a 40% reduction in hospital admissions  
• 76% said pharmacy was more convenient for a review than their GP  
• 42% of patients had not had an asthma review at their GP practice in the last 12 months. A further 8% stating it was over 2 years ago and 14% reported never having had one |
*This service involved seven LPCs: Ashton, Leigh & Wigan; Bolton; Bury & Rochdale; Manchester; Oldham Tameside & Glossop; Salford & Trafford; and Stockport LPC. Six of these LPCs (not including Bolton LPC) have now merged to form Great Manchester LPC (Community Pharmacy Greater Manchester).

**This service took place in Berkshire East, Berkshire West, Buckinghamshire, Hampshire, Isle of Wight, Milton Keynes, Oxfordshire, Portsmouth City and Southampton City.

**Fees**
Details on the range of fees that community pharmacy contractors are paid for providing inhaler technique services are included in Appendix 1. This can be accessed by LPC members by logging into the members’ section of the PSNC website. A copy of this Briefing, which includes the appendix on fees, can be found in the LPC Resources Centre on the PSNC website.

**Further resources**
More information on the role of community pharmacy teams in the management of asthma can be found on the PSNC website.

If you have queries on this PSNC Briefing or you require more information please contact Zainab Al-Kharsan, Service Development Pharmacist.