



This module is also online at pharmacymagazine.co.uk

CPD MODULE

module **285**

Making a difference in asthma care

Contributing author: Darush Attar-Zadeh, respiratory lead pharmacist, Barnet CCG, and executive committee member, Primary Care Respiratory Society



the
**continuing
professional
development**
programme



pharmacymagazine.co.uk

This module is suitable for use by community pharmacists as part of their continuing professional development, a key component of the revalidation process for pharmacy professionals.

After reading this module in the magazine or online, complete the post-test at pharmacymagazine.co.uk and include in your personal online revalidation record.

**FREE
& EASY**

REVALIDATION

Be revalidation ready.

Record your CPD on our **free, easy-to-use and accessible** revalidation record, powered by The Pharmacy Network.

REGISTER AT: PHARMACYMAGAZINE.CO.UK

THIS CPD MODULE PLUS PRE-TEST AND POST-TEST IS ONLINE AT PHARMACYMAGAZINE.CO.UK

PHARMACY MAGAZINE JULY 2019 CPD I

module 285

Welcome to the latest module in the Pharmacy Magazine Continuing Professional Development Programme. Journal-based learning programmes are an important means of keeping up to date with your clinical and professional knowledge. Completion of this module can contribute to one of the four CPD entries that must be recorded each year as part of the revalidation process for pharmacists.

Before reading this module, test your existing understanding of the subject by completing the pre-test at pharmacymagazine.co.uk. Then, after studying the module in the magazine or online, work through the post-test on the website to check your answers. Then record your learning using your personal revalidation log.

Making a difference in asthma care

GOALS AND LEARNING OBJECTIVES

This module updates community pharmacists on best practice in asthma care. After reading this module you will understand the latest thinking in monitoring asthma treatment, be able to spot and take action over the warning signs of worsening asthma, including when referral to the GP practice team is needed. You will also be able to make MURs and the NMS more effective by using the Asthma Control Test and targeted 2WHAM questions.

KEY FACTS

The role of community pharmacy in asthma care is sometimes overlooked in the healthcare system

Opportunities are being missed to spot worsening asthma

Respiratory care is a key priority in the NHS Long Term Plan

Asthma is a variable condition, which can sometimes lead to complacency

The main pharmacological treatments for managing asthma aim to reduce inflammation and increase bronchodilation

Before any new drug treatment is initiated, adherence to existing therapies and inhaler technique should be checked

The first priority for pharmacy teams is to identify frequent users of SABAs

Inappropriate prescriptions for LABAs alone in asthma should always raise an alarm

If asthma is not managed well, underlying inflammation can cause tissue scarring, airway remodelling and even COPD

Introduction & module overview

The UK has one of the highest mortality rates in Europe for asthma. According to the National Review of Asthma Deaths (NRAD), 78 per cent of asthma deaths could have been prevented, highlighting the urgent need for a multidisciplinary approach to tackle the problem. According to the most recent Asthma UK survey of the disease, two-thirds of patients with asthma don't receive even basic asthma care, which should include an inhaler technique check, an up-to-date personal asthma action plan (PAAP) and an annual asthma review.

Patients living with asthma can lead normal productive lives but, in many instances, if their asthma is not well managed, it can lead to day and night-time symptoms, interference with school or work activities, and an increased reliance on short acting beta-2 agonist (SABA) medication (sometimes referred to as the 'blue', 'reliever', 'rescue' or 'emergency' treatment).

The role of pharmacy in asthma care is sometimes overlooked in the healthcare system and even community pharmacists can sometimes think they have little to add to the clinics and reviews provided locally by practice and specialist asthma nurses, practice-based pharmacists and GPs. This needs to change as a matter of priority to prevent further disease and disability.



You can complete this module online at pharmacymagazine.co.uk and record your learning outcomes and the impact on your practice in your own **personal and confidential revalidation record**

Remember...

As care for patients becomes more localised in communities, the new primary care networks (PCNs) need to know how skilled and knowledgeable pharmacists and their teams are in managing respiratory conditions like asthma.

Sometimes pharmacy team members are the only healthcare personnel a person with asthma will see – so it is important that any contact is used to spot worsening of the condition. Respiratory care is a key priority area in the NHS Long Term Plan and pharmacy has a big part to play in keeping people with respiratory conditions out of secondary care. This module looks at some of the recommendations from NRAD and how an Asthma Right Care (ARC) approach can be implemented.

Exacerbations of asthma are unpleasant, frightening and dangerous experiences that can lead to acute hospital attendance, admission and, occasionally, death. Asthma attacks can occur with little warning, even in patients whose symptoms are usually mild and well controlled. Asthma is a variable condition, which can sometimes lead to complacency in treatment. If not managed well, the underlying inflammation can cause tissue scarring, airway remodelling and even COPD.

Treatment priorities

The main drug treatments for managing asthma aim to reduce inflammation and increase bronchodilation. Inhalation remains the preferred route of administration due to the reduced side-effect profile compared to systemic absorption.

Bronchodilators – short acting beta-2 agonists (SABAs) and long acting beta-2 agonists (LABAs) – have a much faster onset of action when administered via inhalation. Inhaled corticosteroids (ICS), if administered regularly to their site of action, will keep inflammation down. ICS are still a key part of treatment in all steps of the national guidelines for asthma management, unless the person has infrequent, intermittent wheeze and is experiencing symptoms fewer than three times a week, where SABA treatment alone may be considered.

Before any new drug treatment is initiated, adherence with existing therapies and inhaler technique should be checked and any identified triggers eliminated (e.g. exposure to tobacco smoke). If using a preventer/controller medication, patients should be maintained at the lowest dose that controls their symptoms.

The first priority for pharmacy teams is to identify frequent users of SABAs in asthma – a risk factor that can sometimes only be spotted by community pharmacy professionals. SABA over-reliance in asthma is sometimes referred to as a type of dependency. Community pharmacists are also well-placed to spot other risk factors of poorly managed asthma, such as:

- Prescribed course(s) of oral steroids
- Poor adherence to preventer treatment, as seen in the PMR.
- Poor inhaler technique as seen during a NMS/MUR consultation

What is Asthma Right Care?

Asthma Right Care (ARC) is a global initiative led by the International Primary Care Respiratory Group (IPCRG), which uses “social movement” approaches to create a sense of discomfort with current asthma management, so that people will make changes in what they do.¹ Social movements create change through ‘followers’ – examples include campaigns such as ‘Hello my name is...’ and antibiotic guardians that are prominent in pharmacy and elsewhere.

ARC wants to create a sense of discomfort around SABAs (like antibiotics) and create ‘SABA guardians’. The IPCRG believes that there must be a relatively high degree of comfort with current asthma management because there is not much noise about the need for change, despite changes in national and international asthma management guidelines.

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.

Q1	During the past 4 weeks , how often did your asthma prevent you from getting as much done at work, school or home?	Score:
	All of the time 1 Most of the time 2 Some of the time 3 A little of the time 4 None of the time 5	
Q2	During the past 4 weeks , how often have you had shortness of breath?	Score:
	More than once a day 1 Once a day 2 3-6 times a week 3 1-2 times a week 4 Not at all 5	
Q3	During the past 4 weeks , 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:
	4 or more times a week 1 2-3 nights a week 2 Once a week 3 Once or twice 4 Not at all 5	
Q4	During the past 4 weeks , how often have you used your reliever inhaler (usually blue)?	Score:
	3 or more times a day 1 1-2 times a day 2 2-3 times a week 3 Once a week or less 4 Not at all 5	
Q5	How would you rate your asthma control during the past 4 weeks ?	Score:
	Not controlled 1 Poorly controlled 2 Somewhat controlled 3 Well controlled 4 Completely controlled 5	

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.

©2002, by QualityMetric Incorporated. Asthma Control Test is a trademark of QualityMetric Incorporated.

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

Registered charity number 802364

The Asthma Control Test provides a snapshot of the effectiveness of asthma control

- Prescribing unfamiliar inhaler devices (it is important to prescribe inhalers by brand so the same device is issued every time)
 - A spacer not prescribed/used (if applicable)
 - No sign of a PAAP or the PAAP has not been updated
 - Patient presenting with symptoms despite receiving treatment
 - Patient not seen by GP soon after an asthma attack or hospital discharge
 - Spotting signs of potential differential diagnosis or multi-morbidity.
- All these can be corrected by the pharmacist with effective education, coaching and appropriate referral whenever appropriate. Community pharmacists and their teams see asthma patients frequently, which makes them ideally placed to help improve these patients' understanding of the role of different inhalers and reduce any over-reliance on SABAs.

Spotting the warning signs of poor asthma control

SABA over-reliance is a global problem

- “Three or more days a week with required use of a SABA for symptomatic relief” constitutes a pragmatic threshold for uncontrolled asthma (NICE 2017)



Pharmacy Magazine CPD modules

provide you with the knowledge to help develop your practice and keep up to date, and can be recorded in your own personal revalidation record.

Your record mirrors the GPhC's recording requirements. If you haven't already, register at pharmacymagazine.co.uk to set up and access your record.

- Most SABA inhalers contain 200 puffs, so in theory this should mean two SABA inhalers a year should be sufficient for a patient who is well controlled. A patient may need a couple of extra inhalers (e.g. to keep at school or in the car)
- Alarm bells should go off when six SABA prescriptions have been collected by a patient in the past six months without a single ICS prescription being issued. Many respiratory specialists argue this should happen sooner i.e. when two or three canisters are prescribed in a 12-month period.

What do pharmacists need to be aware of when looking at a patient’s PMR history for SABA use in asthma?

- There is a progressive risk of hospital admission when more than three SABA inhalers are prescribed a year
- Think about electronic alerts. There is evidence that they reduce excessive prescribing of SABAs when delivered as part of a multicomponent intervention.

Use of LABAs

Inhaled corticosteroids and LABAs are commonly prescribed in a single combination inhaler for people with asthma. Inappropriate prescribing of LABAs alone in asthma should always raise an alarm because NRAD and national guidelines all recommend **not** prescribing a LABA alone. Just like SABAs, LABAs do not treat underlying inflammation and this is considered a safety issue.

Useful tools in asthma management

The 2WHAM questions can be adapted for asthma patients and used during a MUR and when giving other medicines-related advice:

- **Who** is it for? (Continue if it is for the person you are talking with)
- **What** are you using the SABA for? Asthma or COPD? (If for asthma, continue)
- **How** many inhalers/canisters have you been prescribed in the last 12 months? How many puffs of SABA have you taken during the past seven days? Are any night-time and/or day-time symptoms present?

Use the ‘asthma slide rule’ to indicate the number of SABA puffs per year and the potential number of breathless moments. For example, six SABA canisters = 1,200 puffs per year, which could mean 600-1,200 breathless moments (1 dose = 1-2 puffs of SABA).²

- **Actions:** Monitor the ratio of ICS and SABA usage in the past 12 months (e.g. 2 ICS:12 SABA = urgent referral. A ratio of 12:2 is an indicator of good control. Re-check inhaler technique, ask for a spacer if applicable, consider possible referral for temporary ICS dose step-up and adjust the PAAP if required
- **Medication:** Is the patient on any other medication (e.g. NSAIDs, beta blockers) or exposed to triggers (e.g. tobacco smoke, damp, pollen) that can make the medication less effective?

Practical exercise tips for patients from Asthma UK³

- Warm up and warm down for 10-15 minutes before and after exercising
- If exercising with someone else, make sure they know you have asthma and that you have a reliever inhaler with you
- If you have symptoms when you exercise, stop, take your reliever inhaler and wait until you feel better before starting again
- In colder weather, symptoms are even more likely during exercise because when the air is cold it can irritate the sensitive airways. One way to avoid this problem is to exercise indoors during the winter months or consider doing less vigorous exercise – go for a power walk instead of a run, for example
- Dress appropriately. If it is cold, make sure your chest and throat are covered and keep a scarf around your nose
- If you regularly have asthma symptoms when you exercise, speak to your GP, asthma nurse or pharmacist, who can assess your treatment.

Health promotion and exercise

For most patients, exercise-induced bronchoconstriction (EIB) is an expression of poorly controlled asthma and regular treatment including inhaled corticosteroids should be reviewed. In patients diagnosed with EIB and asthma, the use of an inhaled SABA, typically 15 minutes before exercise, is strongly recommended. However, daily use of SABAs has been shown to lead to tolerance, so they should be used to prevent EIB on an intermittent basis only.

Using Asthma Right Care cards

Asthma ‘playing cards’ have been developed by the IPCRG to help stimulate discussion between patients and pharmacy colleagues. They are of three types:

- Challenge
- Metaphor
- Question.⁴

The following are some examples of the cards that community pharmacy teams can use to improve their dialogue with patients:

Cards to use with patients

Does this work for explaining when to use relievers and controllers for asthma?
“You have a leak in your house. You can do one of two things: use a bucket or call a plumber.”
What metaphors do you use?

Challenging statement:
“I was told to always take my reliever to open my airway before taking an inhaled corticosteroid.”
Do you still hear patients saying that, despite evidence to the contrary?

Is there a general level of knowledge of what a SABA (rescue inhaler) for asthma actually does? Does it help to explain that these work on the bronchoconstriction on the “outside” of the airway but not the inflammation and mucus on the “inside”? (It helps to have 3D models for this)

Positive message:
Does this work? “This SABA inhaler should last you six months. Come back if you still have symptoms or if you run out before the six months because that indicates that something is wrong and your asthma may not be fully controlled”

Cards to use with colleagues in the pharmacy

Challenging question
How safe do you feel dispensing these drugs?

- A SABA inhaler for asthma
- Morphine sulphate tablets
- An antibiotic

Positive message
Does this work?
“If you use more than two or three puffs a week of your blue/reliever inhaler, go and see your doctor”*
 * What number would you use?

What does the term “rescue” or “reliever” asthma treatment mean for the patient? Could another term be more appropriate? For example, “emergency” treatment (where the reliever is blue; emergency services have blue lights... this might be a good analogy to use).



Next month’s CPD module...

Stroke prevention: key actions and recommendations

Learning scenario 1

Joanna was diagnosed with asthma at the age of four years. Now 22, she brings in a prescription for salbutamol and beclometasone but says she only wants the salbutamol. The PMR shows this will be the sixth salbutamol inhaler she has had in six months compared to just two beclometasone inhalers. She received a course of prednisolone tablets three months ago and also Nystan oral suspension.

What would you do next?

- Tell Joanna it is important to take both items on the prescription as the steroid is for prevention and the bronchodilator will relieve her symptoms. Tell her you will request a spacer device from the GP practice that will not only reduce the risk of side-effects (e.g. oral thrush) but also improve the amount of inhaled drug reaching the lungs
- Tell Joanna that the prescription for beclometasone is important and would be better if it was prescribed as a combination inhaler containing a LABA. The script should be prescribed by brand, so you decide to call the GP to request this change
- Invite Joanna to stay for a MUR as you're concerned about her asthma control and inappropriate prescribing from the PMR
- Dispense the salbutamol and refer Joanna to the local asthma nurse

Educational tools to assist patients with asthma

Asthma Right Care – Asthma Slide Rule: pcrs-uk.org/asthma-right-care

This was designed to assist patients who may be over-reliant on SABAs and not fully comprehend the seriousness of keeping inflammation down with regular ICS use. Pharmacies can order hard copies and it is available at pcrs-uk.org/resource/asthma-slide-rule.

RightBreathe App: rightbreathe.com

Already widely used, this app can assist inhaler technique and medicines management during MURs, for example. Also very good at giving an idea of ICS potencies.

Diagrams and videos

A MUR/NMS is a good opportunity to ask patients what they know about asthma. Aids to assist the discussion include diagrams, airway models or videos (for example – see the nhs.uk YouTube channel for a selection of instructional videos and animations).

Conclusion

Asthma continues to cause many preventable deaths in the UK. Community pharmacy teams can make a difference by spotting

Reflection exercise 1

Thinking about what you have read in this CPD module, write down three things you are going to do as a result. These might include:

- Teaching key staff who use PMRs how to check the number of SABAs issued in the last six months
- Signing up to be a 'SABA guardian'
- If you have a team member who helps you prepare for MURs, ask them to calculate the ICS:SABA ratio
- Ordering some Asthma Control Test sheets or printing them off the internet to share with your support staff.

Learning scenario 2

Joanna agrees to stay for a MUR but is in a bit of a hurry so can only spare 10 minutes. You ask Joanna to fill out an Asthma Control Test (ACT) questionnaire. Joanna has an ACT score of 14, showing that her asthma control is poor. Her ACT identifies SABA daily use, night-time awakening and that, worryingly, she thinks her asthma is under control.

What will be the appropriate course of action if you only have 10 minutes?

- Go through her inhaler technique, make a recommendation to prescribe a spacer and ensure her inhaler is prescribed by brand
- Do a peak flow reading and look at triggers including smoking status, BMI and current stress levels
- Run through the ACT questionnaire and ask Joanna a few more questions, possibly using the ARC cards and slide rule
- Perform a full asthma review as nearly 80 per cent of patients with asthma in this age group have poor control

▶ Answers on page vi



You can now create your own revalidation plan using the NEW Revalidation Planner tool on pharmacymagazine.co.uk.

You decide what you are planning to learn in a selected time frame, what are the objectives of your learning and how you will put these into practice. You can also plan your reflective account and peer discussion. Make sure you register first.

This module is also online at pharmacymagazine.co.uk



over-reliance on short acting beta-agonists (SABAs), continuing to motivate patients to use their inhaled corticosteroids (ICS) correctly, and using Asthma Right Care tools and the RightBreathe app in everyday practice.

REFERENCES

1. theipcr.org/display/TreatP/Asthma+Right+Care++Information+for+clinicians+and+patients;pcrs-uk.org/asthma-right-care
2. pcrs-uk.org/resource/asthma-slide-rule
3. asthma.org.uk/advice/triggers/exercise
4. theipcr.org/display/TreatP/Asthma+Right+Care++Information+for+clinicians+and+patients



This module has been endorsed by the Primary Care Respiratory Society



Spacers help with drug deposition in the airways and reduce side-effects



Reflection exercise 2

The NHS Long Term Plan identifies respiratory disease as a priority, and singles out asthma and SABA over-reliance as a problem area.

- Who are the stakeholders involved in local implementation of policies to address these priorities?
- How could working with these stakeholders help your patients?
- What could your pharmacy do in addition to what you are already doing in the area of asthma care?



Answers: learning scenario 1

- Tell Joanna it is important to take both items on the prescription as the steroid is for prevention and the bronchodilator will relieve her symptoms. Tell her you will request a spacer device from the GP practice that will not only reduce the risk of side-effects (e.g. oral thrush) but also improve the amount of inhaled drug reaching the lungs**
INCORRECT. This may seem like an appropriate thing to do but there is an underlying problem. Even if Joanna decides to collect the ICS, there are obvious warning signs that she has not got good current asthma control from the number of SABA prescriptions on her PMR. Potentially, she is using 46 puffs of SABA a week (2,400 puffs a year), which is far too much.
- Tell Joanna that the prescription for beclometasone is important and would be better if it was prescribed as a combination inhaler containing a LABA. The script should be prescribed by brand, so you decide to call the GP to request this change**
INCORRECT. The intentions here are good but you need to understand more about the patient's current asthma control and if she is at risk of having another attack. Requesting a change of inhaler will also not address the current problem with SABA over-reliance and a potential problem with inhaler technique and future side-effects such as oral thrush.
- Invite Joanna to stay for a MUR as you are concerned about her asthma control and inappropriate prescribing from the PMR**
CORRECT. This is an ideal opportunity to address the long-term management of her asthma to achieve optimal control.
- Dispense the salbutamol on this occasion and refer Joanne to see the asthma nurse in the practice**
INCORRECT. This is not a good course of action as Joanna is at an increased risk of having an asthma attack from SABA over-reliance and the under-use of ICS. Nearly 80 per cent of asthma deaths can be prevented and community pharmacists are sometimes the only clinicians asthma patients see.



Answers: learning scenario 2

- Go through her inhaler technique, make a recommendation to prescribe a spacer and ensure her inhaler is prescribed by brand**
INCORRECT. While these are important things to do and are vital in maximising lung deposition of the medication, there are other safety concerns that need to be addressed first (e.g. under-reliance on preventer treatment and over-reliance on reliever/rescue/emergency treatment).
- Do a peak flow reading and look at triggers including smoking status, BMI and current stress levels**
INCORRECT. While these are important things to do and should be included in an asthma MUR, there are additional safety concerns that need to be addressed here (e.g. under-reliance on preventer treatment and over-reliance on reliever/rescue/emergency treatment).
- Run through the ACT questionnaire and ask Joanna a few more questions, possibly using the ARC cards and slide rule**
CORRECT. Ask Joanna what good asthma control looks like. Explore triggers (e.g. smoking and environmental). Find out what she knows about her prescribed treatments. Address any concerns there may be around ICS. Signpost if further explanation is needed. Use a diagram or model to show how SABAs only work on the outside of the airways and do not help the underlying inflammation; regular ICS use will manage that. Illustrate the safety concerns/danger of using the SABA regularly (more than twice a week). Highlight the ideal ratio of ICS to SABA (6:1) in a six-month period and emphasize that one canister of reliever medication should last around six months. As you only have 10 minutes, revisit inhaler technique the next time you see her.
- Perform a full asthma review as nearly 80 per cent of patients with asthma in this age group have poor control**
INCORRECT. This would be ideal but it can't be done in a 10-minute consultation. It may need multiple consultations carried out by a suitably qualified person. The Fit to Care document developed by the PCRS is a useful tool to help with this (see pcrs-uk.org/resource/fit-care).



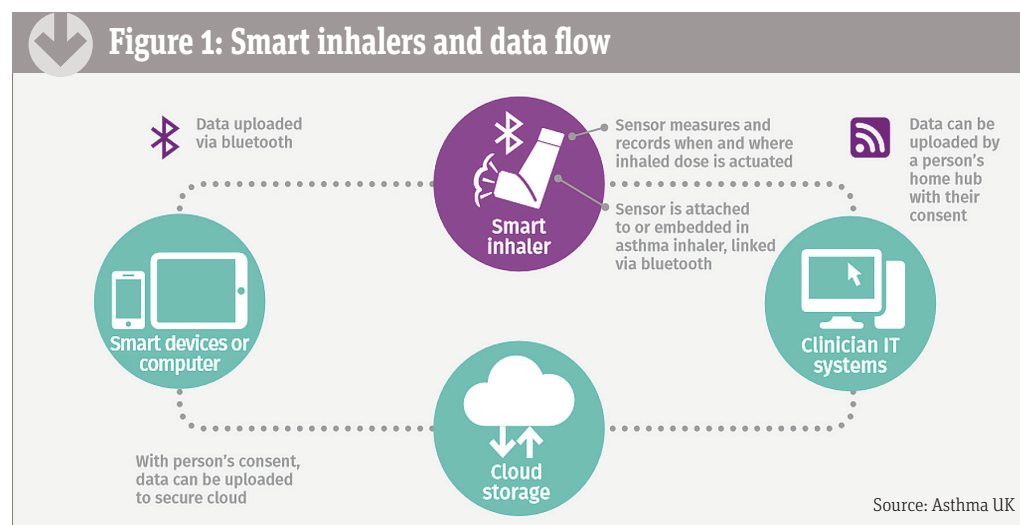
Now test your learning online

Complete the pre- and post-test for this module free of charge at pharmacymagazine.co.uk – you need to register first – and record your learning outcomes in your **personal revalidation record**.

Register at: www.pharmacymagazine.co.uk

Using new technology in asthma

Smart inhalers and an interactive information resource on inhaler and spacer devices are set to transform the treatment of asthma, says **Darush Attar-Zadeh**



THE USE of technology, such as smart inhalers, is encouraged in the NHS Long Term Plan. Products currently in development include smart inhalers with sensors which can work out if the user is in a high pollution or high pollen area, as well as inhalers that can send the user handy reminders and can tell if inhaler technique needs to be checked.

A critical factor for maintaining good asthma control is adherence to inhaled corticosteroid (ICS) treatment, with rates of <50 per cent in children and 30-70 per cent in adults (depending on country, age, sex and ethnicity). There is no point having an inhaler if a patient can't use it.

Many studies suggest that more than half of patients make at least one error when using their device (86.8 per cent with pMDI, 60 per cent with DPI and 52 per cent with pMDI and spacer).

Seven steps to using inhaler devices

The UK Inhaler Group's (UKIG) 'seven steps' are pertinent to all inhalers:

1. Prepare the inhaler device

2. Prepare or load the dose
3. Breathe out, fully and gently, but not into the inhaler
4. Place inhaler mouthpiece in the mouth and seal the lips around the mouthpiece
5. Breathe in:
 - pMDI: slow and steady
 - DPI: quick and deep
6. Remove inhaler from mouth and hold breath for up to 10 seconds
7. Wait for a few seconds then repeat as necessary.

If these areas are covered, then specifics pertinent to each inhaler device can be assessed and technique optimised.

Nearly £1bn is spent on inhaled treatment, so the advent of smart inhalers may help patients and clinicians better understand effective use and help reduce waste. Smart inhalers contain sensors that attach to existing inhalers and record when medication is taken. This would be useful in monitoring ICS adherence and short-acting beta agonist (SABA) over-reliance, and potentially transmit data back if inhaler technique needs improving.

Some trials have suggested that a smart inhaler can make it easier to adhere to treatment and saves the inconvenience of having to manually record dosing. Good adherence to ICS and infrequent use of SABAs can mean the person with asthma gets fewer symptoms.

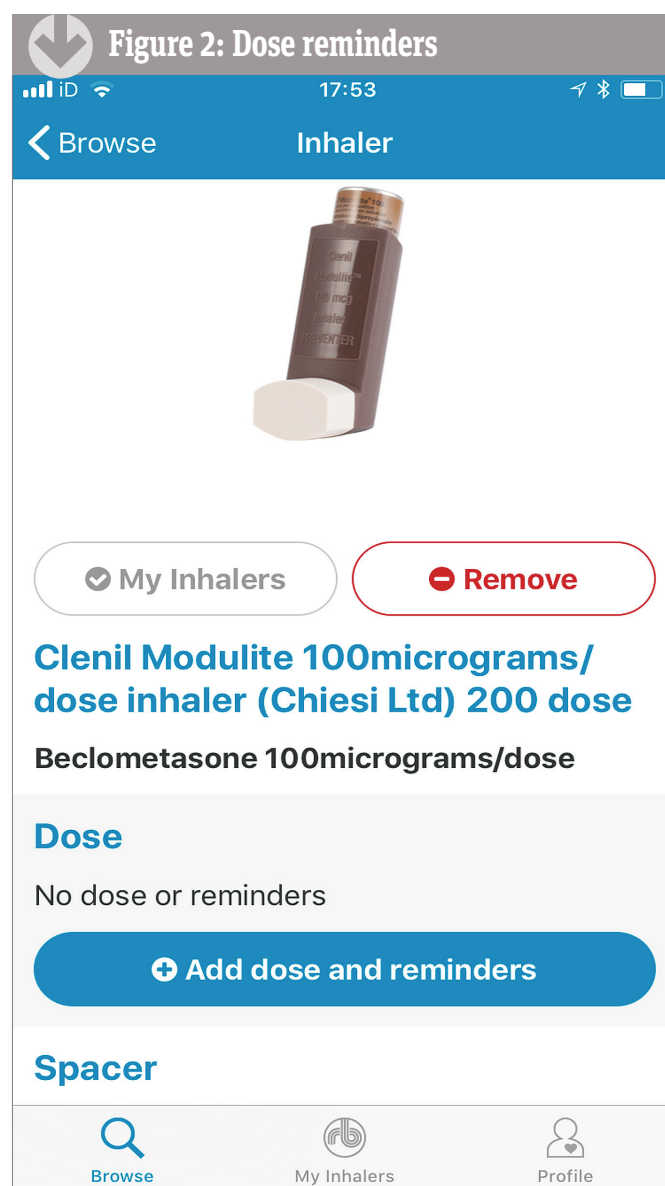
The RightBreathe app and website

While smart inhalers are not yet available, many clinicians are already using a website and

application called RightBreathe. This is an interactive medicines information resource on inhaler and spacer devices that has been developed as a website and iOS/Android app by the NHS London Procurement Partnership (LPP). The site and app is currently freely available to use by clinicians and patients.

RightBreathe has been created to help patients and clinicians select and use the most appropriate inhaled medication for patients with respiratory disease. It also provides the most comprehensive video-based patient and clinician training materials for inhaled devices.

The app has the added feature of dose reminders (Figure 2) to support patients with their ongoing adherence to inhaled therapy.



The pathways section (Figure 3) guides clinicians on appropriateness of treatment, dose, potency (there is a traffic light indicator for ICS medicine), licensing/indications, side-effects, cautions/contraindications, whether for a child, adolescent or adult.

RightBreathe encourages prescribing by brand name to avoid a generic prescription for a combination inhaler resulting in the patient getting different and potentially unfamiliar devices, which can result in poor adherence and sub-optimal treatment.

Product	ICS Status
Qvar 100 Autohaler (Teva UK Ltd) 200 dose Beclometasone 100micrograms / dose	High adult steroid dose ICS
Qvar 100 Easi-Breathe Inhaler (Teva UK Ltd) 200 dose Beclometasone 100micrograms / dose	High adult steroid dose ICS
Clenil Modulite 100 inhaler (Chiesi Ltd) 200 dose Beclometasone 100micrograms / dose	Low adult steroid dose ICS
Kelhale 100 inhaler (Cipla EU Ltd) 200 dose Beclometasone 100micrograms / dose	High adult steroid dose ICS

DID YOU KNOW?

If an asthma patient is adherent to their treatment 40 per cent of the time and inhaler technique is right 30 per cent of the time, it means that the patient is potentially getting valuable ICS treatment to the lungs just 12 per cent of the time...