Targeting your MURs more effectively

A CPPE guide
Acknowledgements

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In compiling this guide, we used the Pharmaceutical Services Negotiating Committee (PSNC) services database to identify areas where targeted MURs have been commissioned as local enhanced MUR or MUR-plus services and then contacted those involved for further information. Please note that some of these projects attracted fees over and above the nationally agreed MUR fee or permitted a second MUR within a 12-month period.

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Where we think it will be helpful we have provided web links to take you directly to an article or specific part of a website. However, we are aware that web links can change. If you have difficulty accessing any web links we provide, please go to the organisation’s home page or your preferred internet search engine and use appropriate key words to search for the relevant item.

Production
Cover artwork by Pansophix Ltd.
Published in September 2017 (originally published in August 2011) by the Centre for Pharmacy Postgraduate Education, Manchester Pharmacy School, The University of Manchester, Oxford Road, Manchester M13 9PT. www.cppe.ac.uk
Welcome to this guide to targeting your MURs more effectively

The Centre for Pharmacy Postgraduate Education (CPPE) has developed this guide as part of a series of learning and support resources for pharmacists and pharmacy technicians.

Learning with CPPE

About CPPE

The Centre for Pharmacy Postgraduate Education (CPPE) offers a wide range of learning opportunities in a variety of formats for pharmacy professionals from all sectors of practice. We are funded by Health Education England to offer continuing professional development for all pharmacists and pharmacy technicians providing NHS services in England. For further information about our learning portfolio, visit: www.cppe.ac.uk

CPPE guides

We have developed a series of guides within our learning portfolio to advise you and support your learning in many different areas. Each guide covers a range of approaches to help you develop and apply key skills and techniques to your own practice.

Many of the guides provide toolkits to help you to document and plan your development, while others demonstrate pharmacy-specific situations to help you put your learning into context. Some of them recommend that you work with a mentor to support you in your development.

Our full portfolio of guides is online at: www.cppe.ac.uk/guides

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CPPE has a quality assurance process called programme guardians. A programme guardian is a recognised expert in an area relevant to the content of a learning programme who reviews the programme every six to eight months. Following the regular programme guardian review we update this programme with any necessary corrections, additions, deletions or further supporting materials. We recommend that you check you have the most up-to-date version of this programme if you are using it more than six months after its initial publication date.
About this guide to targeting your MURs more effectively

The purpose of this guide is to help pharmacy teams work together to undertake effective, high-quality medicines use reviews (MURs). It will help you explore ways of targeting those patients who will benefit most from MURs and to identify key medicines usage issues and use these to improve the quality of the MURs you undertake for patients in the national target groups. The guide will signpost you to the most appropriate places for your learning and to other key resources.

This guide does not cover how to become accredited to undertake MURs. Further information on accreditation can be found in the CPPE guide, MUR services, a guide, available online at: www.cppe.ac.uk/guides

Throughout the guide we use case studies to pass on examples of good practice from areas where targeted MUR services have been commissioned. We used the PSNC services database to identify these areas and, where possible, have given specific references for you to find out more. The aim of these case studies is to illustrate how pharmacy teams in these areas made the service work for them and their patients, and to help you consider how you can make the service work for you.

What this guide covers

This guide is divided into the following sections:

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www.cppe.ac.uk/guides
Targeting MURs – what’s it all about?
This guide focuses on what you can do during MURs with patients in the national target groups and includes examples of what other people have done.

What is the targeted MUR service?
At least 70 percent of the MURs that you deliver each year (from 1 April to 31 March) must be with patients from one of the national target groups. These are:

- patients with respiratory disease
- patients taking a high-risk medicine (anticoagulants, antiplatelets, non-steroidal anti-inflammatory drugs (NSAIDs) and diuretics)
- patients recently discharged from hospital who have had changes made to their medicines while in hospital
- patients at risk of or diagnosed with cardiovascular disease and regularly prescribed at least four medicines.

This means that if you undertake 400 MURs each year, at least 280 must be for patients who fall into one of these groups. You will still be able to undertake MURs with other patients who do not fall into one of these groups but you believe would benefit from the service.

Full details about the MUR service can be found by visiting the advanced services page of the PSNC website: [http://psnc.org.uk/services-commissioning/advanced-services/murs](http://psnc.org.uk/services-commissioning/advanced-services/murs)

Why were national target groups introduced?
The purpose of the MUR service is to improve patients’ knowledge and use of their medicines by supporting appropriate medicines use, thereby reducing unnecessary hospital admissions, identifying side effects and reducing waste. The service makes the most of the skills of the pharmacist to help patients to achieve better outcomes. National target groups for MURs were introduced to ensure that MURs are provided to those who will benefit most. It is also intended to provide commissioners with assurance that the MUR service is a high-quality, value for money service that benefits patients and, in the longer term, will provide an evidence base to demonstrate the value of pharmacy services.
How has targeting MURs contributed to medicines optimization?

In its white paper, *Equity and excellence: Liberating the NHS*, the government stated that pharmacists have an important role in optimising the use of medicines.¹ Put simply, medicines optimisation is about supporting patients to get the best from their medicines. The NHS invests £9.27 billion per year in medicines in primary and community care in England.² A 2010 study commissioned by the Department of Health (DH) found that the annual cost of prescription medicines wastage in England is around £300 million and that around £150 million of this is avoidable, and it is believed that this figure is still relevant today.³,⁴ Optimising the use of medicines by improving adherence is likely to contribute to reducing medicines wastage as well as delivering improved patient outcomes and reduced costs for the NHS.

To learn more about how pharmacy can contribute to reducing medicines waste, watch this video blog by the former DH national clinical director for primary care and community pharmacy, Jonathon Mason:  
www.chemistanddruggist.co.uk/news-content/-/article_display_list/4554456/video-blogjonathon-mason-on-medicines-waste

CPPE has a number of programmes to help you deliver medicines optimisation, including the e-learning programme, *Medicines optimisation: helping people get the most from their medicines.*

The Royal Pharmaceutical Society's document, *Medicines optimisation: helping patients to make the most of medicines*, sets out four guiding principles for medicines optimisation.
What records do I need to keep for MURs?
You need to keep a written record of each MUR consultation. Previously you were required to complete the approved MUR record form but now you need to capture an MUR dataset for every MUR and keep this for two years. You may also need to send information to the area team at the end of each quarter. Further information can be found in the MUR service specification, available on the PSNC website: [http://psnc.org.uk/services-commissioning/advanced-services/murs](http://psnc.org.uk/services-commissioning/advanced-services/murs)

How many medicines do patients need to be taking to have an MUR?
MURs may only be undertaken with patients taking multiple medicines except for patients taking one of the high-risk medicines only. Patients in the target group at risk of or diagnosed with cardiovascular disease must be prescribed at least four medicines regularly. With the exception of prescription intervention MURs, you must have provided pharmaceutical services to the patient for the previous three months before you undertake an MUR.

If I undertake an MUR with a patient in one of the national target groups, do I need to review all their medicines?
Yes you should review the patient’s use of all their medicines, not just the medicine related to the target area. For example, if a patient is taking medicines for hypertension and atrial fibrillation, including warfarin, you should review their use of all the medicines they are taking, not just the medicine which is in the high-risk medicines target group, ie, warfarin.

If a patient is eligible for a post-discharge MUR but has also been started on a new medicine, should I undertake an MUR or recruit the patient to the new medicine service?
Patients may not access both services at the same time. If you have a patient who is eligible for both services you will need to use the information that you have about their medicines and make a professional judgement about which service would benefit the patient most.

Do patients need to give written consent?
Patients who wish to have an MUR must give signed consent for their information to be shared with the GP, NHS England, NHS Business Services Authority and the Secretary of State for Health. If patients do not consent to having their information shared, they may not access the service.

The Secretary of State has approved wording that must be used on MUR patient consent forms. Sample consent forms are available from the PSNC website.
Communicating about targeted MURs

It is vital that you promote the service in your pharmacy and that you use the skills of your pharmacy team to promote the service locally to eligible patients. Engaging the whole pharmacy team is key. The pharmacy team often has local knowledge about patients and their social circumstances. They may know which patients are likely to benefit from an MUR and can use their selling skills to explain the advantages of this free service to patients. Pharmacists who undertake regular MURs acknowledge the vital role that the whole team has in targeting and recruiting suitable patients.

The quality criteria for Healthy Living Pharmacies require the whole team to be proactive in engaging the public and in recruiting patients to health and wellbeing services such as MURs.

Make sure your team is well briefed about the service and that they understand the crucial role they have in making it a success. You can learn how to make sure you have the right mix of skills and the right person for the job by undertaking the CPPE e-learning programme, **Skill mix**.

Teamwork in the pharmacy is critical to ensuring that patients are appropriately identified. Targeting MURs can provide a focus for the pharmacy team and can encourage service uptake. The National Pharmacy Association (NPA) and Primary Care Pharmacists’ Association’s MUR support programme looked at ways of improving the quality of MURs. In one area, pharmacy technicians developed triggers to identify patients for an MUR, for example, patients ordering irregular quantities of medicines.

In 2014, PSNC and NHS employers undertook work to help pharmacies provide MURs. They brought together pharmacy teams, owners and others to share best practice, tips and experiences. The group recommended that pharmacies use their entire team to promote the service, identify and recruit eligible patients, get consent and book appointments.

**Why do I need to engage with GP practices?**

Some of the initial lack of GP engagement with the MUR service was due to poor communication with local pharmacists. Effective partnership working between GP practices and pharmacists is essential in order to make sure that MURs deliver better outcomes for patients. For example, GP practices may find it beneficial to know that a patient’s inhaler technique has been checked before stepping up treatment.

You are not required to notify the GP that the patient has received an MUR where you have not made any recommendations. You need only notify the patient’s GP if you have identified any issues for consideration and feedback must be made on the approved MUR feedback form.
If the service is to gain the support of local GPs, it is important to meet face to face with members of the practice team to discuss how it works locally. GPs and practice nurses can refer appropriate patients to the pharmacy for an MUR so it is important that you work with your local practices. It is also important to agree methods of communication about the patient and get effective feedback about your recommendations from the practice.

Communication with your local GP practice is crucial but, where there are several pharmacies near a surgery, it is important to work collaboratively with your community pharmacy colleagues to engage the practice rather than attempting to do this individually. It is also worth finding out whether your local pharmaceutical committee (LPC) and local medical committee (LMC) are working together to support local engagement between the professions.

Some pharmacists have successfully engaged GP practices by linking their MURs with clinical indicators from the GP Quality and Outcomes Framework (QOF). The QOF is a voluntary scheme that rewards practices for delivering high-quality care to patients. The scheme measures individual practice achievement against a range of indicators, and practices receive payment rewards based on the points they achieve. There are clinical indicators for chronic obstructive pulmonary disease (COPD) and asthma as well as other long-term conditions, such as heart failure and hypertension, where patients may be taking high-risk medicines or may be admitted to and discharged from hospital.

You may find that GP practices are more willing to engage with MURs if you can point out how they link to the QOF. For example, if you ask about a patient’s smoking status or influenza vaccination during an MUR, the GP practice may be able to use this to help them achieve the ‘smoking 2’ or ‘COPD 7’ clinical indicators. You can find out whether your local practice is meeting the QOF targets online (www.gpcontract.co.uk). The clinical commissioning group (CCG) may also have incentives for management of long-term conditions or for prescribing so find out what these are and see whether you can link MURs to them.

The next sections of this guide will look at some of the resources that you may find helpful when carrying out MURs with patients in each of the national target groups and at some examples of good practice in these areas.
MURs for patients with respiratory disease

Why are patients with respiratory disease included in the target groups?

- In the UK, 5.4 million people receive treatment for asthma.\(^9\)
- In 2015 (the most recent data available) 1380 people died from asthma.\(^9\)
- Of the £1.1 billion per year cost of treating asthma in the UK, £666 million is spent on prescription costs.\(^7\)
- COPD is the fourth biggest cause of death in the UK.\(^6\)
- The British Lung Foundation estimate that there are 1.2 million people living with diagnosed COPD – considerably more than the 835,000 estimated by the Department of Health in 2011.\(^6\)
- One in three people admitted to hospital for exacerbation of COPD are readmitted within 28 days of discharge.\(^10\)
- A 2010 study showed that 91 percent of healthcare professionals who teach patients how to use inhalers could not demonstrate all the recognized steps involved in administering a metered-dose inhaler.\(^38\)

Where can I learn more about respiratory disease?

Patients should be prescribed two or more medicines, one of which must be a medicine listed in Chapter 3 of the *BNF*: Respiratory system Section 1: airways disease, obstructive in order to be eligible for a respiratory MUR, this includes:

- Adrenoceptor agonists
- Antimuscarinic bronchodilators
- Theophylline
- Compound bronchodilator preparations
- Corticosteroids
- Cromoglicate and related therapy, leukotriene receptor antagonists, and phosphodiesterase type-4 inhibitors
The CPPE focal point programme Asthma may be running in your area. You can also download PDF versions of the focal point books and work through them individually or with pharmacy colleagues.

You can learn more about smoking cessation in the CPPE guide, Learning about stop smoking support.

If you have an Athens password (see http://psnc.org.uk/contract-it/pharmacy-it/athens-registration-and-map-of-medicines for details on how to obtain one), you can access the Oxford Handbook of Respiratory Medicine through the NHS Evidence website: www.evidence.nhs.uk – choose Journals and Databases, then eBooks and enter ‘respiratory medicine’ in the search box.

**What national guidance do I need to be aware of?**

The British Thoracic Society (BTS) and the Scottish Intercollegiate Guidelines Network’s (SIGN) British guideline on the management of asthma has been updated in 2016.\(^1\)

The National Institute for Health and Clinical Excellence (NICE) clinical guideline 101, Chronic obstructive pulmonary disease (update)\(^2\) and the NICE quality standard for COPD (QS10)\(^3\) can be accessed from the NICE website (www.nice.org.uk).


The Global Initiative for Chronic Obstructive Lung Disease (GOLD) has produced guidelines on the management of COPD and has some useful resources for healthcare professionals at: www.goldcopd.org.
What resources are available for the pharmacy team?
Asthma UK runs a helpline – a telephone service staffed by asthma nurse specialists, providing advice and support to people with asthma, their carers and healthcare professionals. The service is available Monday to Friday, 9:00am to 5:00pm, on 0300 222 5800.

The BNF contains useful information on respiratory conditions, including the latest BTS/SIGN guidelines.

The Chemist+Druggist website has tips for successful MURs on asthma. You can read these at: www.chemistanddruggist.co.uk/mur-zone

The MUR Training website: www.murtraining.co.uk, has been developed by practising pharmacists to help you develop your MUR skills. There are case scenarios and videos on asthma and COPD MURs.

What resources are available for patients?
Useful information, including links to patient resources on asthma and COPD, is available from NHS Evidence. Visit www.evidence.nhs.uk and use the search function to locate information for the condition you’re interested in.

The NHS Choices website has a useful animated video presentation which can help patients understand how asthma affects breathing. There are also videos explaining how pulmonary rehabilitation can benefit patients with COPD. Visit www.nhs.uk and choose Video from the top of the page, then choose Breathing from the left-hand menu bar.

The British Lung Foundation website: www.blf.org.uk/Home, has useful information for patients with COPD, asthma and other respiratory conditions.
As well as the helpline (see above), Asthma UK has useful fact sheets and information for patients with asthma, including frequently asked questions in many other languages. To find these, go to [www.asthma.org.uk](http://www.asthma.org.uk) and choose Health advice then Resources.

Also, copies of the asthma action plan can be downloaded from this website. Click on Health advice then Resources.

**How can the pharmacy team identify and prioritise patients with respiratory disease?**

Perry Melnick, a community pharmacist from Hertfordshire, suggests the following tips for selecting patients with respiratory disease who would benefit most from an MUR.\(^\text{14}\)

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**Tips for targeting patients with respiratory disease**

- Use medicines counter assistants to alert the dispensary team when receiving prescriptions for inhalers.
- Use the patient medication record (PMR) to see whether a patient is prescribed two or more reliever inhalers per month – this may indicate poorly controlled asthma.
- Look for patients who do not want their preventer inhaler dispensed and check the PMR to find those who have reliever inhalers dispensed irregularly.
- Ask those using steroid inhalers whether they ever suffer from hoarseness or a sore throat.
- Check the PMR to find out whether a patient has been prescribed a spacer device and, if so, when it was last renewed.
- Check whether the patient has been prescribed a peak flow meter.
- Check whether the patient knows their diagnosis (asthma or COPD) before giving advice.
What have other people done when undertaking MURs for patients with respiratory disease?
There is good evidence that pharmacists can improve outcomes for patients with respiratory disease. A respiratory MUR project in the south of England has demonstrated significant improvements in patient outcomes, such as better asthma control and COPD symptom management. The project involved improving patients’ inhaler technique and carrying out Asthma Control Tests (ACT) and COPD Assessment Tests as part of the MURs. During the study, 40 percent of people with asthma improved their ACT score and 55 percent of people with COPD reported improved symptom control.37

1. Assessment tests
These tests look at patient oriented outcomes and can be used to assess the effectiveness of MURs and pharmacist interventions. A number of asthma MUR projects have used the ACT to assess whether patients’ asthma is controlled.3,16 This involves asking the patient a series of short questions and scoring each from 1 (poor control) to 5 (good control) to give a final score of up to 25. Please view the following link for an electronic version of the ACT:

The COPD Assessment Test (CAT) is a validated patient reported outcome measure that has been used in some COPD MUR projects. The test measures the impact of COPD on the patient and assesses whether the patient’s disease is controlled, with a lower score indicating low impact of the condition. You can read more about the CAT at: http://catestonline.org

Case studies – assessment of disease control
In a study undertaken in branches of the Co-operative Pharmacy, patients with an ACT score of less than 20 were targeted for MURs. The study found that 74 percent of patients had an improved ACT score following the MUR.16

In City and Hackney, respiratory MURs routinely include an ACT or COPD questionnaire.
2. Inhaler technique
Problems with inhaler technique have been widely documented and most respiratory MURs have focused on educating patients about the correct technique. The GP QOF no longer contains a clinical indicator for checking asthma inhaler technique and so this presents a good opportunity for collaboration.

CPPE is running *Inhaler technique* learning events which will provide you with the clinical skills needed to support respiratory patients to use their inhaler devices. Visit our website to book a place at one of these events:

[www.cppe.ac.uk/events](http://www.cppe.ac.uk/events)

Online demonstrations of inhaler technique are available on the Asthma UK website: [www.asthma.org.uk/advice/inhalers-medicines-treatments/using-inhalers/#small](http://www.asthma.org.uk/advice/inhalers-medicines-treatments/using-inhalers/#small).

CPPE also has an e-learning programme, *Inhaler technique training videos*, which can be useful to refresh and update your knowledge.

The NHS Choices website also has video demonstrations on inhaler technique for different devices. These can be viewed at:

[www.nhs.uk/Video/Pages/Childrensasthmainhaler.aspx](http://www.nhs.uk/Video/Pages/Childrensasthmainhaler.aspx)
The majority of patients breathe in too fast when using an inhaler and a number of MUR projects have used a device such as the In-Check Dial (Clement Clarke International) to assess patients’ inspiratory flow rate. Other projects have used the 2Tone Trainer which provides audible feedback to demonstrate optimal inspiratory flow rate but this device is currently unavailable. The Vitalograph Aerosol Inhalation Monitor (AIM) is a similar device that is more widely available.

A Haleraid device (GSK) may be useful for patients who cannot manipulate a pressurised metered dose inhaler (pMDI).

**Case studies – inhaler technique**

In the Isle of Wight, pharmacists undertaking asthma MURs focused on inhaler use and the provision of a 2Tone Trainer device to ensure patients could use metered dose inhalers. After the introduction of this service there was a reduction in the number of asthma-related emergency hospital admissions and deaths, as well as a reduction in the amount of selective short-acting beta2 agonist prescribing (SABAs).

A study in Hampshire and the Isle of Wight in 2007 found that 44 percent of patients who reported non-adherence had problems using their inhaler.

### 3. Use and care of spacer devices

The BTS/SIGN guideline on the management of asthma recommends the following advice on the use and care of spacer devices:
- the spacer should be compatible with the pMDI used
- the drug should be administered by repeated single actuations of the pMDI into the spacer, each followed by inhalation
- there should be minimal delay between pMDI actuation and inhalation
- tidal breathing, ie, normal resting breathing is as effective as single breaths
- spacers should be cleaned monthly rather than weekly as per manufacturers’ recommendations, otherwise performance is adversely affected. They should be washed in detergent and allowed to dry in air.
- the mouthpiece should be wiped clean of detergent before use
- drug delivery may vary significantly due to static charge, metal and other antistatic spacers are not affected in this way
- plastic spacers should be replaced at least every 12 months but some may need changing at six months.
Case study – use and care of spacer devices
In Richmond and Twickenham, pharmacists undertaking COPD MURs ensured that patients used and cared for their spacer devices in line with BTS guidance as well as providing support for inhaler technique.

4. Adherence
In the 2010 report relating to Portsmouth Healthy Living Pharmacies, 450 respiratory MURs were undertaken and 350 patients were identified as having adherence issues. The 2014 National Review of Asthma Deaths highlighted that in 34 percent of fatal cases of asthma, patients failed to take appropriate medicines and in 28 percent of cases did not adhere to medical advice. These issues may be a result of problems with appropriate use of preventer and reliever inhalers as well as beliefs about corticosteroids.

Case study – checking the patient’s diagnosis before advising
Gary Warner, a community pharmacist from the Isle of Wight, recommends checking whether a patient has been diagnosed as having asthma or COPD before giving advice about the use of SABAs. In COPD, the regular use of SABAs is one of the mainstays of treatment and advising patients with COPD to reduce their use of a SABA would be inappropriate.

The Medicines and Healthcare products Regulatory Agency (MHRA) has warned that the use of prolonged high-dose inhaled corticosteroids can result in systemic adverse effects such as adrenal suppression, osteoporosis, cataracts and glaucoma. The BTS/SIGN guideline on the management of asthma recognises that the ‘step down’ stage is often not implemented, leaving some patients overtreated.

You can find information about safety issues related to LABAs in the MHRA publication Asthma long-acting β2 agonists: use and safety.

Advising patients to rinse their mouth or gargle after using a corticosteroid inhaler can reduce the incidence of hoarseness caused by candidiasis and thus improve adherence.
Case studies – adherence
Pharmacists in Hampshire and the Isle of Wight who took part in an asthma MUR project in 2007 found that 36 percent of patients who reported non-adherence had issues related to belief in their medicines.18

In Devon, pharmacists undertaking asthma MURs checked adherence, provided patient education on how the different inhalers work and reinforced the importance of using inhalers regularly.

Commissioners in Bristol wanted to reduce hospital admissions caused by poorly controlled asthma and to reduce unnecessary medicines wastage. Pharmacists were provided with a series of actions to take if they identified suboptimal asthma management during the review, for example, if a patient had not been using their inhalers due to side effects or health beliefs. Asthma patients now have improved access to support, guidance and information, and are able to self-manage their condition. As a result, asthma admissions in Bristol have reduced dramatically, as has the number of prescriptions for emergency reliever medication. A copy of the checklist is included as Appendix 1 on page 31.

Commissioners in Peterborough asked pharmacists undertaking MURs with patients using high-dose inhaled corticosteroids to check how long they have been using a high dose, whether they are aware of systemic adverse effects and whether they have a steroid card.

In Shropshire, pharmacists undertaking MURs provided advice on inhaler technique and adherence support to patients with COPD.
5. Healthy lifestyle issues
Asthma UK recommends that all patients have a written asthma action plan that has information on how to recognise worsening asthma symptoms and how to act on these signs. It also suggests that patients keep an asthma symptom diary. Copies of the asthma action plan can be downloaded from the Asthma UK website: [www.asthma.org.uk/advice/manage-your-asthma/action-plan](http://www.asthma.org.uk/advice/manage-your-asthma/action-plan)

**Case studies – healthy lifestyle advice**
In Devon, pharmacists used MURs to advise patients with COPD on smoking cessation and flu vaccination.

In Shropshire, pharmacists undertaking MURs with COPD patients found that the number of patients enrolled on the smoking cessation service increased.

In Bristol, pharmacists asked patients whether they had attended an asthma review with their GP/asthma nurse in the last 12 months. This captured information on patients who had previously been unwilling to attend an asthma review at their GP practice and has helped to strengthen working relationships and communications between community pharmacists, GPs and asthma nurses. A copy of the checklist is included as Appendix 1 on page 29.

**Exercise**
Use the case studies from this section to help you create a list of key points to consider during respiratory MURs.

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MURs for patients taking high-risk medicines

Why are patients who take high-risk medicines included in the target groups?

- It has been estimated that the annual cost of hospital admissions related to adverse reactions to medicines is up to £466 million.\textsuperscript{24,25}
- A study of 18,000 patients admitted to two large hospitals showed that 6.5 percent of admissions across all ages were the result of harm from medicines.\textsuperscript{26}
- This study also confirmed the findings from a previous study that four drug groups (antiplatelets, diuretics, NSAIDs and anticoagulants) accounted for over half of all medicines-related hospital admissions.\textsuperscript{26}
- A reduction in avoidable medicines-related hospital admissions is linked to the delivery of the government’s Quality, Innovation, Productivity, Prevention (QIPP) programme.
Where can I learn more about high-risk medicines?

Four categories of high-risk medicines have been included on the nationally agreed list initially, but these will be reviewed. The medicines, along with the corresponding BNF chapters, are:

- NSAIDs – BNF Chapter 10: Musculoskeletal, Section 4: Pain and inflammation in musculoskeletal disorders
- Diuretics – BNF Chapter 2: Cardiovascular, Section 8: Oedema
- Antiplatelet drugs – BNF Chapter 2: Cardiovascular, Section 3: Blood clots
- Anticoagulants (including low molecular weight heparin) – BNF Chapter 2: Cardiovascular, Section 3: Blood clots

Three overarching principles were used to decide whether a medicine should be included in the national list:

- the medicine is associated with preventable harm, for example, avoidable hospital admissions
- the medicine can cause harm to the patient by omission, overuse or incorrect use
- the type of harm caused by the medicine could be prevented by an MUR.

There are lots of other medicines that you may consider to be high risk – for example, those that have been the subject of national safety alerts such as methotrexate, insulin, lithium and opioids. However, the main risks with these medicines are from prescribing or dosage errors and the most effective solutions are the checks that take place during the dispensing process.

CPPE has a range of resources to support your learning on high-risk medicines including an interactive PDF and a series of quick practice guides. There may also be events running locally which can support your learning.

All of these can be accessed at: www.cppe.ac.uk

You can learn more about NSAIDs at thelearningpharmacy.com NSAID floor where you can work your way around the NSAIDs learning topic, taking part in bite-sized interactive challenges that will help you and your team support and give advice to people wanting to purchase over-the-counter NSAIDs. The challenges will also help you support people suffering with adverse effects to NSAIDs, and people with long-term conditions, such as osteoarthritis and rheumatoid arthritis. This can be accessed from: www.thelearningpharmacy.com/content/programme.asp?topic=4
What national guidance do I need to be aware of?
A national safety alert was issued for anticoagulants. This alert contains guidance on the safe use of anticoagulants and can be found on the Patient Safety website at www.nrls.npsa.nhs.uk. Choose Resources, then search for ‘Anticoagulants’ using the search box.

You can find up-to-date information about safety issues relating to medicines in the MHRA publication, Drug Safety Update. Visit: www.mhra.gov.uk and select Drug Safety Update.

NICE technology appraisal 210, Clopidogrel and modified-release dipyridamole for the prevention of occlusive vascular events, can be found on the NICE website: www.nice.org.uk

The RPS support team has produced a quick reference guide for members, Supporting patients on oral anticoagulants, available online at: www.rpharms.com

What resources are available for the pharmacy team?
The Chemist+Druggist website (www.chemistanddruggist.co.uk/mur-zone) has tips for successful MURs relating to anticoagulant therapy and other medicines.

The MUR Training website (www.murtraining.co.uk) has been developed by practising pharmacists to help you develop your MUR skills. There are sample MURs for anticoagulants, antiplatelets and diuretics (hypertension and heart failure).

The BNF contains safety advice from the Committee on Human Medicines for various medicines as well as general information on side effects.
What resources are available for patients?
Patients taking anticoagulants should be issued with record books and patient information booklets by the prescriber. Electronic copies of these can be downloaded from the Patient Safety website (www.nrls.npsa.nhs.uk). Choose Resources, Search by patient safety topic, Medication safety.

The NHS Evidence website contains useful information on long-term conditions, including resources to support patients. Visit: www.evidence.nhs.uk and use the search function to locate information for the condition you’re interested in.

How can the pharmacy team identify patients taking high-risk medicines?
Your SOPs may already require the pharmacy team to ask patients taking warfarin for their record books when they present prescriptions, so they may be aware that some medicines are high risk.

Reflective questions
1. Healthtalk’s website: www.healthtalk.org, has useful videos of patients talking about living with long-term conditions such as rheumatoid arthritis. Access the website and choose Bones and joints, then Rheumatoid Arthritis, then Anti-inflammatory drugs and rheumatoid arthritis in the menu on the left hand side. Watch or read the transcripts of interviews with the patients talking about their experiences of taking NSAIDs. Make brief notes about whether you think these patients consider NSAIDs to be high-risk medicines.

2. Think about how you communicate information to patients on the adverse effects of medicines. How can you explain the concept of a high-risk medicine during an MUR without alarming patients?
What have other people done when undertaking MURs for patients on high-risk medicines?

1. Anticoagulants

One of the main types of preventable harm associated with anticoagulant therapy is omitted doses. From 1990 to 2002 there were over 600 reported cases of harm from the use of anticoagulants. As part of the normal dispensing service pharmacists are expected to view the patient’s oral anticoagulation therapy book to check that regular monitoring is taking place and that the international normalised ratio (INR) is within the recommended range for the indication. Good clinical governance procedures should mean that this information is recorded in the PMR. If the PMR indicates that a patient’s INR has changed, this could trigger an intervention MUR to investigate the cause of the change.

Susan Youssef, senior lecturer at De Montfort University and community pharmacist in Derby, has written about what she looks for when carrying out MURs with patients taking warfarin. She checks patients’ understanding of why they are taking warfarin and how long they need to take it for. She also finds out whether patients know the colour of the different strengths of warfarin tablets and understand how many of each to take to make up the daily dose. However, she reports that some of the most useful discussions include the need to keep vitamin K intake fairly constant, interactions with over-the-counter (OTC) medicines, vitamins and food supplements, and the need for adequate contraception for women of childbearing age.

Case study – warfarin

In 2009, pharmacists in Hertfordshire provided targeted MURs to patients taking warfarin. During the review patients were advised about side effects, diet, interactions with medicines, foods and vitamins, and the warning signs for over-coagulation and the most appropriate action to take.

2. NSAIDs

NSAIDs account for around 11 percent of medicines-related hospital admissions. A study found that most admissions related to NSAIDs were because of GI bleeding and renal problems. NICE clinical guideline 177, Osteoarthritis: care and management, recommends co-prescription of proton-pump inhibitors with NSAIDs for gastro-protection. However studies have shown that in patients prescribed NSAIDs up to one-third do not adhere to gastro-protective therapy. Non-adherence increases with duration of therapy, leading to an increased risk of GI complications.
In addition to the risk of GI bleeding, the MHRA has advised that all patients should be considered to be at increased cardiovascular risk when NSAIDs are prescribed.\textsuperscript{30}

**Case study – NSAIDs**
Commissioners in Peterborough asked pharmacists to undertake MURs with patients taking NSAIDs for more than one month. Pharmacists followed a structured questionnaire which focused on the side-effects of NSAIDs, interacting medicines, patient awareness of increased cardiovascular risk and co-prescription of medicines for gastro-protection, as well as asking about concomitant OTC NSAIDs. Note: this service is no longer commissioned.

**3. Diuretics**
Diuretics account for around 16 percent of medicines-related hospital admissions.\textsuperscript{26} The main type of preventable harm associated with diuretic therapy is hospital admission due to non-adherence – for example, from exacerbations of conditions such as congestive heart failure. This is exactly the type of harm that could be prevented by an MUR. A study also found that many admissions associated with diuretics were due to falls relating to hypotension and electrolyte disturbances.\textsuperscript{24}

**4. Antiplatelets**
Antiplatelets account for around 16 percent of medicines-related hospital admissions.\textsuperscript{26} The main type of preventable harm associated with antiplatelet therapy is the increased risk of haemorrhagic complications, particularly GI bleeding.\textsuperscript{31}

**Case study – aspirin**
As part of community pharmacy support for the GP prescribing incentive scheme 2011/2012, commissioners in Walsall asked pharmacists to undertake MURs for patients purchasing low-dose aspirin over the counter for primary prevention of cardiovascular disease and to refer such patients to the GP.
5. Finding patients at risk of medicines-related problems who would benefit from an MUR

The Harrow Integrated Medicines Management Service (HIMMS) developed and evaluated a tool to identify patients at risk from medicines-related hospital admissions. The PREVENT tool assesses patients for evidence of:

- Physical impairment
- Risky medicines
- Adherence issues
- Cognitive impairment
- Exacerbation of or a new diagnosis of a chronic illness causing recurrent admissions
- New request for compliance support
- Social issues

The team suggests that the tool could be used by community pharmacists to identify and prioritise patients who could benefit from an MUR.

Exercise

Use the case studies from this section to help you create a list of key points to consider during MURs with patients taking high-risk medicines.

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MURs for patients recently discharged from hospital who have had changes made to their medicines

Why are patients who have been discharged from hospital included in the target groups?

- Medicine errors that occur following discharge from hospital have been well documented.\textsuperscript{25,33}
- Lack of communication of changes to medicines on hospital discharge has been found to contribute to the £150 million avoidable annual cost of medicines wastage.\textsuperscript{3}
- Research has shown that up to 50 percent of medicine errors that occur when patients move from one care setting to another are due to poor communication.\textsuperscript{34}
- The government charges hospitals for patient readmissions that occur within 30 days.
- Medicines contribute to between 5 and 20 percent of all hospital admissions and readmissions.\textsuperscript{26}
- A reduction in unnecessary readmissions is linked to the delivery of the government’s injury prevention programme.

Where can I learn more about long-term conditions?

CPPE has a number of resources available on various long-term conditions such as COPD, hypertension, neurological disorders and pain. You can find these resources using the search function at www.cppe.ac.uk.

What national guidance do I need to be aware of?

In July 2012, the RPS finalised its guidance on good practice for healthcare professionals, entitled \textit{Keeping patients safe when they transfer between care providers – getting the medicines right}.\textsuperscript{35} This comprises core principles for healthcare professionals, key responsibilities for organisations providing care and a minimum data set for records for medicines when patients transfer between care settings. This data set is consistent with the Academy of Medical Royal Colleges anchor heading standards for medical records on discharge.

In December 2014, the RPS published a toolkit to support hospital discharge to community pharmacy. You can download this from: www.rpharms.com/resources/toolkits/referral
What resources are available for the pharmacy team?
The NHS Map of Medicine (www.mapofmedicine.com) is a collection of evidence-based, practice-informed ‘care maps’ that connect all the knowledge and guidelines on clinical conditions. You may need an NHS Smartcard or Athens password to use parts of this website.

The BNF contains useful information on the management of a number of long-term conditions.

It is also worth checking patient group websites for information about specific conditions.

What resources are available for patients?
Age UK has produced a fact sheet, Hospital discharge arrangements. This is aimed at elderly patients and describes how discharge from hospital should be managed. It may be a useful resource to flag up to patients having a planned admission.

How can the pharmacy team identify patients who have recently been discharged from hospital?
Post-discharge MURs are for inpatients who have had a change to their medicines while they were in hospital. Patients discharged from outpatient clinics and intermediate care settings are not eligible for post-discharge MURs.

In many areas, community pharmacists do not routinely receive information about patients’ medicines following discharge and this could be a barrier to post-discharge MURs. Displaying a poster in the pharmacy may help to promote the service to those recently discharged from hospital.
Targeting your MURs more effectively

The standard NHS contract with NHS trusts requires them to share discharge summaries with a patient’s GP within 24 hours of discharge. GPs receive post-discharge information, so communication with GP practices, in particular with the administrative staff who tend to handle discharge paperwork, is vital in helping to identify patients who have been discharged from hospital. Where they are established, area prescribing committees may be helpful forums for discussing how post-discharge information can be communicated locally.

If the service is to gain the support of local GPs, it is important to meet face to face with members of the practice team to discuss how it will work locally. If the practice has concerns about confidentiality of information, explain how the pharmacy meets the NHS information governance requirements.

Your LPC or the chief pharmacist at your local NHS trust may be able to tell you whether there are any local plans to communicate discharge information to community pharmacists to help you target these patients. In some areas, LPCs and LMCs have worked together to produce joint guidance.

What have other people done when undertaking MURs for patients recently discharged from hospital?

In South Staffordshire, commissioners identified the role of medicines in readmissions in the elderly and commissioned community pharmacists to provide domiciliary MURs within seven days of hospital discharge. The service, which won a Pharmaceutical Care Award, resulted in fewer admissions to accident and emergency, fewer readmissions of patients within 28 days of discharge and an 81 percent improvement in measures of functional independence following discharge. In addition, patients found the service a useful resource in the post-discharge period.
Case studies – post-discharge MURs
In Surrey, patients discharged from Frimley Park Hospital NHS Foundation Trust following myocardial infarction were advised to have an MUR that includes healthy lifestyle advice on smoking cessation and exercise.

In Cambridgeshire, patients discharged from the intermediate care ward of the local acute trust were provided with information to take to the community pharmacist about the key area of focus for an MUR.

On the Isle of Wight, electronic discharge summaries for medical patients included signposting to have an MUR. GP practices were also incentivised to refer patients for MUR post-discharge in order to synchronise medicine quantities. The Isle of Wight reablement project involves community pharmacists visiting patients who are identified as being at high risk of readmission following hospital discharge.

In Eastern and Coastal Kent, patients whose medicine changed in hospital or who had repeated admissions due to medicine issues were given information about MURs as part of the discharge procedure.

Exercise
Use the case studies from this section to help you create a list of key points to consider during MURs with patients who have been recently discharged from hospital.

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MURs for patients at risk of or diagnosed with cardiovascular disease

Why are patients at risk of or diagnosed with cardiovascular disease included in the target groups?

- In England, 5.9 million people live with cardiovascular disease (CVD).\(^{36}\)
- In 2015, around 129,000 died from CVD and about 33,000 of these were premature (under 75 years of age).\(^{39}\)
- Cardiovascular disease is estimated to cost the UK around £11 billion per year.\(^{39}\)
- In 2015 cardiovascular disease accounted for 10 percent of all hospital inpatient episodes for men and 6.2 percent for women.\(^{40}\)

Where can I learn more about cardiovascular disease?

Patients must be taking a medicine for one of the following conditions in order to be eligible for a cardiovascular MUR:

- Coronary heart disease
- Diabetes
- Atrial fibrillation
- Peripheral arterial disease
- Renal/chronic kidney disease
- Hypertension
- Thyroid disorders
- Heart failure
- Stroke/transient ischaemic attack (TIA)
- Lipid disorders

This means that patients must be prescribed at least one medicine from Chapter 2 (Cardiovascular), Chapter 6, Section 3 (Diabetes mellitus) or Chapter 6, Section 9 (Thyroid disorders) of the BNF. To fall into the MUR target group they must also be regularly prescribed four or more medicines in total.

CPPE has a number of resources covering different aspects of cardiovascular disease. You can search for these on the CPPE website at www.cppe.ac.uk.
**What national guidance do I need to be aware of?**

NICE has published guidance on different aspects of cardiovascular disease and diabetes. Examples of guidance relevant to cardiovascular conditions can be accessed from the NICE website at [www.nice.org.uk](http://www.nice.org.uk).

**What resources are available for the pharmacy team?**

CPPE and the RPS support team have published medicines optimisation briefings on cardiovascular disease and diabetes which can be accessed from the medicines optimisation hub of the RPS website [www.rpharms.com/resources/ultimate-guides-and-hubs/medicines-optimisation-hub](http://www.rpharms.com/resources/ultimate-guides-and-hubs/medicines-optimisation-hub).

The British Hypertension Society has information for health professionals, including links to NICE guidance on hypertension. [www.bhsoc.org.uk/uk-professionals-only](http://www.bhsoc.org.uk/uk-professionals-only)

The MUR Training website ([www.murtraining.co.uk](http://www.murtraining.co.uk)) has been developed by practising pharmacists to help you develop your MUR skills. There are case scenarios on hypertension, angina, heart failure, arrhythmias and hyperthyroidism.

The charity, Heart UK, provides information for healthcare professionals via a telephone helpline 0345 450 5988 (Monday to Friday 10am-3pm). [http://heartuk.org.uk/healthcare-professionals](http://heartuk.org.uk/healthcare-professionals)


The Royal Pharmaceutical Society has produced a diabetes toolkit for members. It includes information about the condition and a practical tool to support patients using insulin pens. It can be accessed online at: [www.rpharms.com/resources/toolkits/diabetes-toolkit?Search=diabetes%20toolkit](http://www.rpharms.com/resources/toolkits/diabetes-toolkit?Search=diabetes%20toolkit)
What resources are available for patients?
The British Heart Foundation has a wealth of resources and information for patients with cardiovascular disease. www.bhf.org.uk

Useful information for patients with diabetes is available from Diabetes UK. www.diabetes.org.uk

What have other people done when undertaking MURs for patients with cardiovascular disease?
In Devon, a pharmacist-led diabetes support service significantly improved adherence in patients with previously poor adherence. You can learn more and download the diabetes MUR toolkit from the Devon LPC website. http://devonlpc.org/healthy-living-pharmacies/plymouth-healthy-living-pharmacies/diabetes-risk-assessment-and-diabetes-mur
Appendix 1

Community Pharmacy Directed Asthma Medicines Use Review
2011 Update

1. Ask the patient if they have had an asthma review with their GP/asthma nurse in the last 12 months.
   **Action:** If the patient has not attended the asthma clinic for a review in the last 12 months, ask the patient the reason for this. If the patient has not been invited to one, or has opted not to attend, record this as an ‘Issue’ and recommend that the GP/asthma nurse contacts the patient to organise a review.

2. Ask the 3 Asthma Control questions:
   • Have you had any daytime asthma symptoms (e.g., cough, wheeze, chest tightness, breathlessness)?
   • Have you had difficulty sleeping because of your asthma symptoms (e.g., cough)?
   • Has your asthma interfered with your usual activities (e.g., work, sports)?
   **Action:** If the patient answers ‘Yes’ to any of these questions, they do not have complete asthma control. Record this as an ‘Issue’ and recommend that the GP or asthma nurse reviews their treatment.

3. Ask the patient whether they are adhering to their prescribed therapy, for example, using their preventer regularly and their reliever when required.
   **Action:** If the patient is not adhering to their prescribed therapy, establish the reason for this. The patient may not understand the differences between preventers and relievers or the importance of using them. In this circumstance, advise the patient of the correct regime and discuss the role of each inhaler.
   The patient may be experiencing side-effects from their inhaler(s) which affect their adherence. In this circumstance, advise them to rinse their mouth/gargle with water after using their preventer inhaler.
   • Is exceeding the prescribed dose on their preventer;
   • Is using their reliever on more than 3 days each week;
   • Has not been using their inhaler(s) as they are not symptomatic;
   • Has not been using their inhaler(s) due to side-effects;
   **Record this as an ‘Issue’ and recommend that the GP or asthma nurse reviews their treatment.**

4. Ask the patient to demonstrate how they use their inhaler(s). Ascertain whether their technique is correct or not and whether their device is appropriate for them.
   **Action:** If necessary, demonstrate the correct inhaler technique to the patient. If the patient still has difficulties using their inhaler(s) correctly or would benefit from an inhaler aid e.g., ‘Halemid’, record this as an ‘Issue’ and recommend the GP or asthma nurse reviews the device/inhaler aid.

5. Ask the patient if they possess and use a peak flow meter, and are recording the results in a diary.
   **Action:** If the patient does not possess one and/or is not measuring their peak flow, advise them that peak flow is an important indicator of lung function. Record this as an ‘Issue’ and refer the patient back to the asthma clinic.

6. Ask the patient if they have an asthma self-management/action plan.
   **Action:** If the patient does not have an asthma self-management/action plan, record this as an ‘Issue’.

7. Ask the patient whether they smoke
   **Action:** If the patient smokes, record this as an ‘Issue’. If your pharmacy is signed up to the smoking cessation service, offer treatment. If not, offer advice on available NRT therapies and refer the patient to local smoking cessation services (Bristol Smoking Advice Service - 0117 9595463).
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