LOTHIAN PRESCRIBING BULLETIN

Supporting prescribing excellence - informing colleagues in primary and secondary care

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NHS Lothian

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Formulary changes to improve care: asthma and COPD

The respiratory chapter of the LJF for adults has been further reviewed.

Assessment of a patient's inhaler technique is required before an inhaler is prescribed as this will determine the choice of product. Information on assessing inhaler technique and counselling on the correct method can be found at this link [PrescQIPP]. Forms can be printed out for patient use.

All inhalers have different 'in use' expiries; this can lead to unintended wastage. For example an inhaler with an in use expiry of six weeks: one inhaler lasts one month with regular use. If two inhalers are prescribed and dispensed and both opened at the same time, they will both expire six weeks later, but if opened one at a time they will last eight weeks. Ensure patients are given adequate advice on effective use of the device.

Combination corticosteroids

Asthma

The combination steroid inhalers for asthma have changed and now match the choices for COPD. First choice (MDI or dry powder inhaler) is determined by inhaler technique.

First choice: **Fostair® MDI** (beclometasone + formoterol)

or **Relvar® Ellipta®** (fluticasone furoate + vilanterol)

Fostair® 200/6 should not be used for step-down treatment in asthma; a lower strength of the same inhaler is available for step-down treatment (Fostair® 100/6 micrograms). Fostair® 200/6 is only licensed at a dose of 2 puffs twice daily for asthma.

Seretide® and Symbicort® are no longer included in the formulary.

The fluticasone salt in Relvar® Ellipta® (LJF choice combination ICS) is not the same as that contained in single drug or combination fluticasone inhalers. They are not interchangeable.

Antimuscarinic bronchodilators

The antimuscarinic bronchodilator section 3.1.2 now includes the combination LAMA/LABA inhalers for COPD. The combination inhalers should be prescribed by brand name.

***Asthma* Step 3**

First choice: tiotropium **(Spiriva® Respimat®)**

Mild COPD

First choice: ipratropium bromide

Moderate-severe COPD. Single agent LAMA

First choice: umeclidinium bromide

Second choice: aclidinium bromide

Moderate-severe COPD. Combination LAMA/LABA

First choice: **Anoro® Ellipta®** (umeclidinium + vilanterol)

Second choice: **Duaklir® Genuair®** (aclidinium + formoterol)

The LJF includes information to clarify any potential confusion caused by the differences in how the products are presented on the packaging, in the BNF and in prescribing systems.

For example, for umeclidinium each single inhalation provides a dose of 55 micrograms umeclidinium (equivalent to 65 micrograms of umeclidinium bromide).

All of these updates, and more, are included in eLJF-CLINICAL version 4.5

7 steps for safe and effective polypharmacy review

When patients take five or more medicines[1] it is generally considered to be polypharmacy. Although polypharmacy is often required to manage multiple comorbidities, it can pose an increased risk of adverse drug reactions (ADRs). These risks can be minimised through appropriate review of these medicines by trained healthcare professionals. More recently, pharmacists working in primary care are carrying out polypharmacy reviews for the wider population within NHS Scotland. With an ever-ageing population and more patients on complex regimens, there is a pressing need for reliable guidance on how to manage these patients appropriately.

Polypharmacy guidance was first released for use in Scotland in 2012. The guidance was updated in March 2015[1] in a more concise and user-friendly style, inspired by feedback from healthcare professionals. The case studies included within the guidance are useful templates to demonstrate how to complete a polypharmacy review. The guidance supports standardised management of complex patients, to ensure consistent, positive outcomes, and the adverse drug reaction tables provide simple reference points.

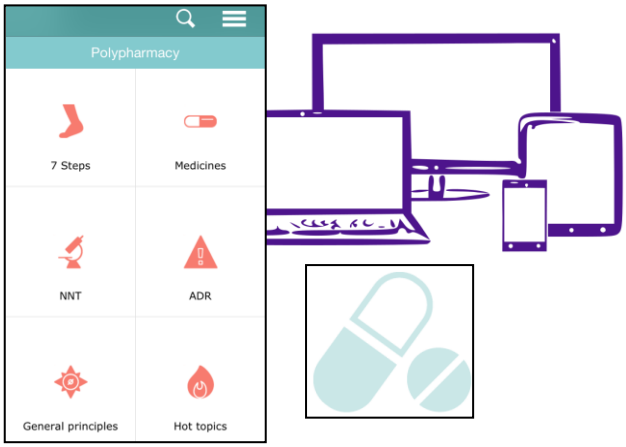
7-step guide for medicine reviews

The most notable change to the recent guidance is the addition of the 7-step method for carrying out polypharmacy reviews. This clear structure allows healthcare professionals to conduct polypharmacy reviews efficiently, thoroughly, and confidently.

Domain	Step	Process
Aims	**1**	Identify aims and objectives of drug therapy
Need	**2**	Identify essential drug therapy
	3	Does the patient take unnecessary drug therapy?
Effectiveness	**4**	Are therapeutic objectives being achieved?
Safety	**5**	Does the patient have ADR or is at risk of ADRs?
Cost-effectiveness	**6**	Is drug therapy cost-effective?
Adherence/ Patient-centred	**7**	Is the patient willing and able to take drug therapy as intended?

Polypharmacy App

The polypharmacy App is easy to navigate and to use during consultations and reviews. It is available for your Apple or android device via this link. There is also a web version available at: http://www.polypharmacy.scot.nhs.uk/



Reference

1. Polypharmacy guidance for the safe and effective use of multiple medicines to manage long term conditions. DL (2015)004. The Scottish Government. 15 April 2015. www.sehd.scot.nhs.uk/dl/DL(2015)04.pdf and www.sehd.scot.nhs.uk/publications/DC20150415polypharmacy.pdf

Thanks to Ruth Robertson, Lewis Sutherland, Pharmacy Pre-Registration Pharmacist Trainees, Claire Stein, Lead Integrated Care Pharmacist REH, and Melinda Cuthbert, Associate Director of Pharmacy Acute & SCAN, for contributing this article.

Reducing the pressure of prescribing in glaucoma

The prostaglandin eye drops (latanoprost, tafluprost, travoprost and bimatoprost) reduce intraocular pressure in glaucoma and ocular hypertension. Latanoprost, which contains benzalkonium chloride as a preservative, is first choice prostaglandin analogue in the LJF. Latanoprost preservative-free single dose eye drops are expensive and should only be initiated on specialist advice, in patients with proven sensitivity to benzalkonium chloride.

There has been an increase in reports of eye irritation following a change in the formulation of Xalatan® (latanoprost). Consider a trial of generic latanoprost in patients complaining of eye irritation with Xalatan®.

Bimatoprost (Lumigan®) ***multi dose*** eye drops are now only available as 0.01% strength; patients on the original 0.03% should be switched to the new 0.01% drops (these are equally effective). This does not apply to other bimatoprost containing products.
The correct dose of ALL prostaglandin eye drops is ONE drop ONCE daily (preferably evening). More frequent administration can lead to reduced efficacy.

Thanks to Angela James, Ophthalmic Pharmacist, for contributing this article

Desmopressin for diabetes insipidus – do not omit

Cranial diabetes insipidus (DI) is an uncommon condition that occurs in people with pituitary or hypothalamic disease. Most commonly it is seen in patients with a craniopharyngioma or following surgical treatment of a pituitary tumour. Affected individuals have a deficiency of anti-diuretic hormone (ADH) and this means that they cannot concentrate urine. As a consequence, the affected individuals become polyuric and severe dehydration can occur if untreated.

Desmopressin is a synthetic form of ADH, also known as DDAVP, used to treat cranial DI. It can be administered as an intranasal spray, tablets, melts or as an intramuscular injection. The spray and tablets have a very short half-life and so usually have to be administered on several occasions each day. Most affected individuals lead a normal life and their DI is nothing more than an inconvenience.

The danger with DI comes in three forms:

1. if affected individuals do not take their DDAVP
2. if they do not have a reliable sense of thirst, and
3. if they do not have ready access to fluids .

In the community, compliance with DDAVP therapy is usually very good, because if a dose is missed, the individual will quickly become polyuric, which is unpleasant and in turn leads to increased thirst and a need to drink copious amounts of fluids. Most individuals with DI have a normal sensation of thirst, but rarely some individuals do not have adequate thirst sensation. These individuals are at extremely high risk of fluid and electrolyte disorders and are normally under intensive endocrine supervision.

Admission to hospital is an especially risky time for someone with DI and very quickly all three forms of danger can coalesce.

- DDAVP may not be available in the ward drug stock and may be omitted because it is 'not available'
- Delirium or confusion from intercurrent illness, medication, anaesthesia, etc. can dramatically impair an individual's sense of thirst, and
- Individuals may not be physically able to take fluids orally and have inadequate intravenous fluids prescribed or administered.

In 2009, a 22-year-old man with DI died in St George's Hospital, London with severe dehydration because he did not receive his DDAVP and adequate fluids following an elective hip replacement operation. Newspapers at the time reported that he was so dehydrated that he had actually telephoned the police from his hospital bed to ask for their help in getting a drink. As occurred in this tragic case, omission of DDAVP, without adequate fluid replacement, can result in severe dehydration, with resultant hypernatraemia (serum sodium > 150mmol/L), hypotension, acute kidney injury, circulatory failure and death.

NHS England recently issued a Patient Safety Alert about DDAVP and highlighted that real harm can come from omission of DDAVP in hospital. The Alert highlights that because DDAVP is often administered as a spray, it is often erroneously regarded as a low priority medication. The box below gives key advice on DI and DDAVP for hospital and primary care staff.

Key messages

- **DDAVP should *never* be omitted, unless instructed by a member of the endocrinology team.**
- **Individuals with DI and an intercurrent illness that prevents adequate fluid intake and/or administration of DDAVP therapy should be discussed urgently with the endocrine teams at WGH, RIE or SJH.**
- ***All* individuals with DI who are admitted to hospital for elective or emergency care should be discussed with the endocrine team in that hospital.**
- **If DDAVP is required and is not available in a ward area or emergency drug cupboard, the on-call pharmacist should be contacted out of hours to ensure it can be administered at the correct time.**
- **If the usual preparation of DDAVP is not available (e.g. spray), the endocrine team can suggest an equivalent dose of an alternate preparation (e.g. tablets).**

Thanks to Professor Mark WJ Strachan, Consultant Endocrinologist, WGH, for contributing this article.

Dental patients taking anticoagulants or antiplatelets: new guidance and the role of doctors and pharmacists

New guidance from Scottish Dental Clinical Effectiveness Programme (SDCEP) aims to assist dental practitioners in how to treat patients taking anticoagulants or antiplatelet drugs. There are also important messages for doctors and pharmacists.

Raising patient awareness

Gaining the appropriate medical information about a patient can be problematic for dentists, particularly since they do not have direct access to a patient's medical records. The dentist must rely on the patient to communicate all of the relevant information, including which of the antiplatelets or anticoagulants they are taking, for how long and, importantly, any other medications they are taking and medical conditions that they have. However, patients may be unaware of the importance of this or may believe that the dentist does not require their full medical details in order to provide treatment safely.

Doctors and pharmacists can play a key role by ensuring that the patient is aware of the need for them to inform their dentist.

Key guidance recommendations from SDCEP

SDCEP recommends that neither warfarin nor antiplatelet drugs should be interrupted for dental procedures, as long as warfarinised patients have an INR below 4 that has been checked within 24 hours (or within 72 hours if stable). For the direct oral anticoagulants (apixaban, dabigatran and rivaroxaban) the guidance advises brief interruption of the drugs although only for higher bleeding risk dental procedures. In practice this means missing a single dose of twice a day apixaban or dabigatran or delaying the morning once a day dose of rivaroxaban on the day of treatment.

Communication between healthcare professionals

In some circumstances, such as when a patient's medical details or bleeding risk need clarification, the guidance advises that dental practitioners should seek advice from the patient's GP or specialist. While recognised that this can be challenging for busy practitioners in both professions, effective communication is clearly important for the safe treatment of these patients.

Key messages

- **Patients should be made aware of the implications of the drugs for bleeding and that they need to inform their dentist or other practitioners in advance of treatment.**
- **Healthcare professionals should be aware of the key recommendations made in SDCEP's guidance about the interruption of certain drugs for higher bleeding risk dental procedures.**
- **Medical professionals should be aware that dental practitioners may need to clarify or seek advice about a patient's medical details or medication.**

For the full guidance, a quick reference guide and drug type specific patient information leaflets, go to www.sdcep.org.uk/published-guidance/anticoagulants-and-antiplatelets/, email scottishdental.cep@nes.scot.nhs.uk or telephone 01382 425751.

The LJF Dental Formulary links to the SDCEP website: www.ljf.scot.nhs.uk/LothianJointFormularies/Dental/Pages/default.aspx

Thanks to Dr Michele West, Research and Development Manager, SDCEP, for contributing this article, and to Dr Julia Anderson, Dr Chris Cunningham and Dr Naomi Rahman for reviewing.

Supplements:
Recent SMC and Lothian Formulary Committee Recommendations, and Prescribing Indicators 2016/17 in general practice
The supplements can be accessed via the LJF website www.ljf.scot.nhs.uk in 'Prescribing Bulletins'.

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View the Lothian Joint Formulary at www.ljf.scot.nhs.uk