New emergency contraception option

Ulipristal (EllaOne) is a new oral hormonal emergency contraceptive which can be used within 120 hours (five days) of unprotected sexual intercourse or contraceptive failure.

In comparison, the existing oral hormonal emergency contraceptive levonorgestrel (Levonelle 1500) is licensed for use up to 72 hours (three days) after unprotected intercourse.

Insertion of a copper intra-uterine contraceptive device (IUD) is more effective than oral hormonal methods of emergency contraception and should be offered but, because it is an invasive procedure, uptake is poor.

New guidance in the Highland Formulary on oral emergency hormonal contraception recommends that, due to its cost and black triangle status, ulipristal should only be prescribed on days 4 to 5 after unprotected intercourse and if a copper IUD is unacceptable to the patient. On days 1 to 3 after unprotected intercourse, Levonelle 1500 should be prescribed (again, if a copper IUD is unacceptable to the patient). If emergency contraception is to be provided in accordance with a Patient Group Direction, then the PGD for Levonelle 1500 should be followed.

What do expiry dates mean?

Usually, expiry dates refer to the end of the month. Therefore “expires 7/2010”, “expiry 7/2010” or “use by 7/2010” mean use by the end of July 2010. The difference is when the term “use before” is used: it refers to the start of the month. “Use before 7/2010” means use by the end of June 2010.

Quantity confusion leading to over-pricing of prescriptions

How do you prescribe quantities for blood glucose testing strips and sip feeds? Incorrect prescribing could add thousands of pounds to your prescribing costs because of potential processing errors caused by pack size confusion when prescriptions are priced at the Practitioner Services Division (PSD).

For blood glucose testing strips, a prescription for two boxes of 50 strips could be written as “2”, “2x50” or “100”. If the prescription is written as “2x50” or “100”, the prescription may be incorrectly priced as 80 outer packs of eight strips each containing 10 strips rather than 100 strips. Therefore, always prescribe the number of boxes rather than the number of strips. In this example, write “2” or “2 boxes” in the quantity line.

To confuse matters, because sip feeds come in multiple packs, the opposite action is required. The error relates to those sip feeds that come in multiple packs. If a prescription for eight outer packs each containing 10 cartons is written as “8x10”, this may be incorrectly priced as 80 outer packs (ie, 800 cartons) rather than 8 packs. Therefore, for sip feeds, always prescribe the number of cartons rather than the number of outer packs, and state “cartons”. In this example, write “80 cartons” in the quantity line.

Although the quantity intended on these prescriptions is obvious, the patient receives the correct quantity and the pharmacy has correctly endorsed the prescription to show the actual quantity supplied, these pricing errors are still occurring at PSD.

With thanks to Keith Maclure, Prescribing Support Pharmacist, NHS Borders, for highlighting this issue.
Safer use of lithium: advice for prescribers and pharmacists

Updated guidance on the prescribing of lithium has been highlighted by the Medicines Safety Subgroup of ADTC.

The National Patient Safety Agency (NPSA) published a patient safety alert in December 2009 titled “Safer lithium therapy”. This alert was triggered by a number of findings, including: deaths, severe harm and a substantial number of incident reports relating to lithium use, with the most common error being a “wrong or unclear dose or strength”. Furthermore, an audit found less than optimal monitoring of lithium and a failure to adequately prepare patients to recognise the side effects and/or toxic symptoms of lithium.

Lithium has a narrow therapeutic range (0.4–1.0mmol/L) necessitating the monitoring of blood levels to avoid toxicity and harm. Lithium is cleared predominately by the kidneys and lithium levels are affected by changes in renal function, fluid balance (eg, dehydration) and any medications that affect these processes.

To use lithium safely, prescribers and pharmacists should:

- Always prescribe lithium by brand name and form, because of differences in bioavailability between preparations.
- Check that blood levels, renal function and thyroid function tests are monitored regularly before supplying lithium.
- Ensure patients prescribed lithium receive appropriate verbal and written information, and a record book to track the required tests.
- Be able to identify and deal with medicines that may interact with lithium therapy, eg, NSAIDs, ACE inhibitors and diuretics.

Further information

(1) www.nrls.npsa.nhs.uk/alerts
(2) www.cks.nhs.uk/bipolar_disorder
(3) www.nice.org.uk/nicemediapdf/CG38niceguideline.pdf

Top tips

Did you know that each dispersible (soluble) tablet of co-codamol or paracetamol contains 1g of salt?

Why does this matter? Well, the recommended daily intake of salt is 6g. Patients taking the full dose of co-codamol or paracetamol (two tablets four times a day) will have a daily salt intake of 8g: 2g more than the the recommended daily intake, and that's before they have eaten anything.

So please try to always prescribe standard, not dispersible, tablets.

New IV vancomycin policy for NHS Highland

A new policy for prescribing intravenous vancomycin in adults has been introduced, bringing NHS Highland in line with other health boards in Scotland.

The new policy requires an initial loading dose, followed by a maintenance dose every 12, 24 or 48 hours.

An online vancomycin calculator is now available under “clinical applications” on the NHS Highland intranet to help calculate the dose. This enables the prescriber to enter height, weight, age, gender and serum creatinine.

The calculator will provide the loading dose, the time to give the first maintenance dose, the maintenance dose and dosing interval.

A flow chart with the details of the dosing recommendations is available on the Formulary web page on the NHS Highland intranet.

For questions about the policy or online calculator, please contact Alison MacDonald or Kirsten McCulloch, antimicrobial pharmacists, on Raigmore ext. 5886 (external: 01463 705886).

Restricted use of cefalexin now recommended

The use of cefalexin is now being targeted in the drive to reduce cefalosporin use in NHS Highland.

Its use should be restricted to treatment of simple urinary tract infections in pregnancy or in children where no safer alternatives exist, eg, amoxicillin, trimethoprim, nitrofurantoin.

If cefalexin has been prescribed, it must be stated specifically on the request form to ensure sensitivity data for cefalexin is reported.

Prescribers are reminded that cefalexin should not be prescribed to treat respiratory tract infections or skin and soft tissue infections.

Systemic infections update

The NHS Highland Formulary section on the treatment of systemic and other infections has been updated. Changes include:

- In septic arthritis and osteomyelitis, it is recommended to seek advice from an orthopaedic surgeon early to aid diagnosis and treatment.
- For patients with severe sepsis of unknown origin with a cutaneous component, clinical teams are reminded to consider the possibility of necrotising fasciitis.

Empiric prescribing project finds improvements

In the first six months of the empiric prescribing project at Raigmore, improvements have been made in both clinical areas where data are collected.

In AMAU (medical admissions), overall compliance with both markers (guideline compliance and indication recorded in notes) has improved from 75% to 89% at the end of March. In ward 4A (surgical admissions), compliance with both markers improved from a baseline of 67% to a peak of 88% in December, falling to 77% in March.

Data collection was suspended in March with the end of identified funding, but an interim solution has allowed data collection to recommence in May 2010. The ultimate aim is to achieve 95% compliance with both prescribing indicators by March 2011.

Pink One mailing list

Want to receive the Pink One by e-mail only? Need to update your contact details? Please e-mail nhshighland.pinkone@nhs.net.
**Should NICE guidance be ignored in NHS Scotland?**

What is the position of advice of NICE advice in Scotland? Should it be implemented or ignored? This is a question that is regularly asked by prescribers in NHS Highland, most recently in response to the NICE guidelines on the management of neuropathic pain. This article clarifies the position of NICE advice in NHS Scotland.

**NICE – the National Institute for Health and Clinical Excellence** – is an English organisation that provides guidance, sets quality standards and manages a national database to improve people’s health and prevent and treat ill health. NICE issues the following four types of guidance:

- Clinical guidelines
- Technology appraisals (single and multiple)
- Interventional procedures
- Public health guidance

Of these, only two types of guidance apply in Scotland: some multiple technology appraisals and interventional procedures. All the multiple technology appraisals are reviewed by NHS Quality Improvement Scotland (NHS QIS) and it determines which should apply in Scotland. The Scottish Medicines Consortium (SMC) is the main source of advice in Scotland on newly licensed medicines.

**NICE technology appraisals**

NICE produces two types of technology appraisal:

- **NICE Single Technology Appraisal (STA)**: STAs examine a single drug. The SMC is the source of advice for Scotland on new drug therapies and the NICE STA process therefore has no status in Scotland. If a NICE STA endorses a drug that was not recommended by the SMC, it is up to the manufacturers to resubmit the drug to SMC with new evidence. NHS QIS reminds NHSScotland of the SMC advice on the day of a NICE STA release.

- **NICE Multiple Technology Appraisal (MTA)**: MTAs examine a disease area or a class of drugs and usually contain new evidence gathered after the launch of drugs or new economic modelling. In Scotland, NHS QIS reviews MTAs and decides whether the recommendations should apply in Scotland. Where NHS QIS decides that an MTA should apply in Scotland, the NICE guidance supersedes SMC advice. NHS QIS also highlights any further work being undertaken to provide support for NHS Scotland on the implementation of NICE MTAs.

**NICE Clinical Guidelines**

As stated above, NICE clinical guidelines such as those on the pharmacological treatment of neuropathic pain, do not apply in Scotland. NICE clinical guidelines should be considered as interesting but foreign. They form part of the evidence base and can be used by clinicians but they have no legal or statutory authority in Scotland.

**Further information**

2. NICE website, available at: [http://www.nice.org.uk](http://www.nice.org.uk)

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**NICE, neuropathic pain and pregabalin: not for implementation**

The National Institute for Health and Clinical Excellence (NICE) recently published guidance on the pharmacological treatment of neuropathic pain in adults in non-specialist settings. NICE Clinical Guidelines do not apply in Scotland (see article above). In any case, the guidance was surprising in that it recommended offering oral amitriptyline or pregabalin (Lyrica) as first line treatment (except for people with painful diabetic neuropathy).

**Weak evidence base**

The prominence of pregabalin in NICE’s guidance seems contrary to evidence and cost considerations. Although pregabalin has a licence for the treatment of peripheral and central neuropathic pain, it is a relatively novel medicine (it still has a black triangle against it) and its evidence base is light. The Scottish Medicines Consortium (SMC) noted that the clinical evidence of efficacy in patients with peripheral neuropathic pain who are refractory to treatment was based on open-label, uncontrolled, non-randomised studies, with small patient numbers and different methodologies. The SMC did not recommend pregabalin for use within NHS Scotland for the treatment of central neuropathic pain in adults.

A recent Cochrane review concluded that only a minority of patients with neuropathic pain will have substantial benefit from pregabalin; more will have a moderate benefit. All of the trials reviewed compared pregabalin with placebo, so the review could not give an indication of how pregabalin compared to gabapentin or tricyclic antidepressants.

Other anticonvulsants and tricyclic antidepressants such as amitriptyline do have an evidence and practice base to support their use in neuropathic pain and this is an established (if not licensed) indication: it’s in the BNF. They must be considered as key comparator therapies and should be considered in any discussion of relative clinical merits.

Pregabalin is also relatively expensive. According to the SMC, the annual cost of pregabalin was estimated at £837 to £1,256 (compared with £12 to £37 for amitriptyline). How much extra benefit will patents get for this expenditure? And from where in the health budget will this expenditure come? NHS Highland spent almost £0.75m on 8,060 prescriptions for pregabalin in 2009-10.

Pregabalin is included in the Highland Formulary. Its use in peripheral neuropathic pain should be restricted to specialist initiation in patients who have achieved inadequate pain relief from, or have been intolerant of, conventional first and second line treatments for peripheral neuropathic pain. This is compatible with the restricted use recommended by the SMC. The SMC also recommended that treatment should be stopped if the patient has not shown sufficient benefit within 8 weeks of reaching the maximally tolerated therapeutic dose.

References available on request.
News and updates from the May 2010 Formulary meeting

Changes agreed in May 2010 to the Highland Formulary are shown below. The full updated Highland Formulary is available on the NHS Highland Intranet (at http://intranet.nhsh.scot.nhs.uk/Clinical/Formulary/Pages/Default.aspx) and the website at www.nhshighland.scot.nhs.uk.

To see the updated Highland Formulary chapters, sections and guidelines please go to the electronic version of the Formulary on the NHS Highland Intranet and website at the addresses shown above. The Formulary is updated every two months following each Formulary Subgroup meeting with all the agreed changes.

Cardiovascular chapter
Recent updating of the cardiovascular chapter has led to a number of changes in advice on drug selection and use. These include:

- **Doxazosin MR tablets 4mg removed from Formulary** since the 4mg immediate release tablets can be given once daily and there is no advantage in using the more expensive modified release preparation.
- **Prescribe ramipril CAPSULES** in preference to the higher cost tablets which are non-Formulary.
- **Be aware that nicorandil** is associated with a risk of gastrointestinal ulceration including perianal ulceration.

- **Clopidogrel, as well as aspirin**, is no longer recommended for the primary prevention of cardiovascular disease.
- **There is no evidence that ezetimibe** improves clinical outcomes.

**Infections chapter**
A number of rarely used drugs have been removed from the infections chapter of the Formulary. For all dosing information on anti-infective drugs please refer to the "Management of infection guidance" at the end of the chapter. This guidance is under constant review; please see the most up-to-date electronic version on the NHS Highland Intranet and website.

**Obstetrics & gynaecology update**
A number of changes have been made to the sections on drugs used in obstetrics and gynaecology. These include:

- **Premique low dose and Premique** are now the recommended HRT oral oestrogen with continuous progestogen.

They have a similar efficacy and safety profile and are lower cost than Kliovance and Kliofem.
- **Triptorelin** is the preferred gonadorelin analogue for endometriosis and reduction in size of uterine fibroids since it is the most cost-effective.
- For recurrent bacterial vaginosis an alternative, non-antimicrobial OTC preparation may be useful such as Balance Activ, an acidic vaginal gel which alters vaginal pH.

**Questionnaire update**
Thank you to everyone who completed and returned the latest Formulary User Survey questionnaire: if you haven't yet done so, please can you send it in as soon as possible.

**Updated Formulary sections to be considered at the July Formulary Subgroup meeting:**
- 3 Respiratory
- 4.1, 4.2, 4.3 Mental health
- 4.5 Obesity
- 6.1, 6.2, 6.3, 6.5 Endocrine
- 11 Eyes

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List of changes to the Highland Formulary agreed in May 2010

**List of UPDATED SECTIONS and GUIDELINES**

**2 Cardiovascular**
- ‘Step up management of essential hypertension’
- ‘Embolism prophylaxis for patients with persistent or permanent atrial fibrillation’
- ‘Drug use in secondary prevention following myocardial infarction’
- ‘Use of lipid-lowering medication in the prevention of atherosclerosis’

**5 Infection**
- ‘Systemic and other infections’
- ‘Flow diagram for initiating intravenous vancomycin pulsed infusion in adult patients’

**6.4 Endocrine**
- ‘Hormone replacement therapy (HRT) guidelines’

**List of ADDITIONS**

**Chapter 2 Cardiovascular system**
- Metoprolol tablets 50mg
- Octocog alfa, recombinant factor VIII (Helixate 250 units, 500 units, 1000 units, 2000 units)

**Chapter 6 Endocrine**
- Premique tablets
- Premique low dose m/r tablets

**Chapter 7 Obstetrics & gynaecology**
- Ulipristal acetate 30mg tablet

**Chapter 9 Nutrition and blood**
- Potassium chloride 0.15% (20mmol/L), sodium chloride 0.9%, glucose 5% infusion 500mL
- Potassium chloride 0.3% (40mmol/L), sodium chloride 0.9%, glucose 5% infusion 500mL

**List of DELETIONS**

**Chapter 2 Cardiology**
- Disopyramide capsules 100mg, 150mg
- Esmolol injection 2.5grams/10mL
- Methyldopa tablets 125mg
- Doxazosin m/r tablets 4mg
- Octocog alfa, recombinant factor VIII injection (Kogenate) 1000 units, 2000 units

**Chapter 5 Infections**
- Neomycin tablets 500mg
- Cefalexin tablets 250mg
- Cefotaxime injection 2 grams

**Chapter 6 Endocrine**
- Kliovance tablets
- Octocog alfa, recombinant factor VIII injection (Kogenate) 1000 units, 2000 units

**Chapter 7 Obstetrics & gynaecology**
- Norgeston (levonorgestrel 30 micrograms) tablets
HIGHLAND FORMULARY

Third edition: cumulative index of changes May 2010

Please keep this cumulative list for reference in the plastic pocket inside the back cover of the Highland Formulary.

Preparations in bold and italics indicate new additions or deletions agreed at the meeting of the Formulary Subgroup on 25.5.10.

For more information please see Formulary webpage on NHS Highland Intranet (http://intranet.nhsh.scot.nhs.uk/Clinical/Formulary/Pages/Default.aspx)

List of updated SECTIONS and GUIDELINES

Introduction

2 Cardiovascular
‘Step up management of essential hypertension’
‘Step up management of essential hypertension in diabetic patients’
‘Heart failure pathway’
‘Stable angina management pathway’
‘Embolism prophylaxis for patients with persistent or permanent atrial fibrillation’
‘Drug use in secondary prevention following myocardial infarction’
‘Use of lipid-lowering medication in the prevention of atherosclerosis’

4 CNS stimulants and drugs used for attention deficit hyperactivity disorder
6 Nausea and vertigo
7 Analgesics (except Antimigraine drugs)
8 Antidepressants
9 Antipsychotics
10 CNS stimulants

4.7 Analgesics (except Antimigraine drugs)

11 CNS stimulants and drugs used for attention deficit hyperactivity disorder

5 Infection
‘Lower respiratory tract infections’
‘Community-acquired’ guidance - advice added on treatment of secondary bacterial infection post-influenza infection’
‘Meningitis’
‘Antibiotic prophylaxis in surgery - self-limiting conditions’
‘Diabetic foot infections’
‘Skin/soft tissue infections’
‘Antibiotic prophylaxis in surgery - general principles’

3.2 Systemic and other infections’
‘Flow diagram for initiating intravenous vancomycin pulsed infusion in adult patients’

6 Endocrine
‘Hormone replacement therapy (HRT) guidelines’
‘NHS Highland cancer centre guidance for use of bisphosphonates’

7 Obstetrics, gynaecology and urinary-tract disorders
‘Combined oral contraceptives’
‘Missed pill advice’
‘Catheter patency solutions for long-term indwelling urinary catheters’

8 Malignant disease and...
Polycal
Procal
Procal Shot
Potassium chloride 0·15% (20mmol/L), sodium chloride 0·9%, glucose 5% infusion 500mL
Potassium chloride 0·3% (40mmol/L), sodium chloride 0·9%, glucose 5% infusion 500mL

Chapter 10 Musculoskeletal and joint disease
Etanercept injection prefilled pen 50mg

Chapter 12 Ear, nose and oropharynx
Fluticasone furoate 27·5 micrograms actuation nasal spray

Chapter 13 Skin
Chlorhexidine 2% in isopropyl alcohol 70% (ChloraPrep) 0·67mL, 1·5mL, 3mL

Chapter 14 Vaccines and antisera
Anti-D (Rh ) immunoglobulin 250 units, 500 units, 1500 units
Normal immunoglobulin solution for intravenous infusion 100mg/mL (Kiovig), 50mg/mL (Flebogamma), 100mg/mL (Privigen); solution for subcutaneous injection 160mg/mL (Vivaglobin, Subgam) Anti-rabies immunoglobulin injection Anti-varicella zoster immunoglobulin injection 250 units
Anti-tetanus immunoglobulin intramuscular injection 250 units
Anti-hepatitis B immunoglobulin intramuscular injection 500 units

Chapter 15 Anaesthesia
Levobupivicaine 0·1% with Fentanyl 2 micrograms/mL infusion

Appendix 3 Emergency treatment of poisoning
Fomepizole injection 5mg/mL

List of DELETIONS

Chapter 1 Gastrointestinal system
Terlipressin injection 1mg

Chapter 2 Cardiovascular system
Isosorbide dinitrate injection 25mg/50mL
Disopyramide capsules 100mg, 150mg
Esmolol injection 2·5grams/10mL
Methyldopa tablets 125mg
Doxazosin m/r tablets 4mg
Octocog alfa, recombinant factor VIII injection Kogenate 1000 units, 2000 units

Chapter 3 Respiratory system
Beclometasone breath actuated aerosol inhalation (Easibreathe) 50 micrograms, 100 micrograms, 250 micrograms

Chapter 4 Central nervous system
Sibutramine capsules 10mg, 15mg
Gabapentin tablets 600mg, 800mg
Bupropion m/r tablets 150mg
Codeine injection 60mg/1mL

Chapter 5 Infections
Doripenem tablets 300mg
Neomycin tablets 500mg