

# 2009

**NHS**  
Greater Glasgow  
and Clyde

## **The Greater Glasgow and Clyde Formulary**

**Third edition  
August 2009**



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## Introduction

### Background

The British National Formulary (BNF) contains a comprehensive list of medicines. The NHS Greater Glasgow and Clyde (NHSGGC) Formulary is a limited list of medicines approved for local use in hospitals and primary care. The choice of Formulary medicines has been made on the basis of clinical effectiveness, cost-effectiveness, comparative safety and patient acceptability. The NHSGGC Formulary covers all prescribers.

### Structure of the NHSGGC Formulary

Many of the medicines in the Formulary are more suitable for use by and on the recommendation of specialists, so in order to help the generalist prescriber choose the appropriate medicine, a two-tier Formulary system has been adopted, where the Preferred List is a subset of the Total Formulary:

**Preferred List:** This is defined as: A Preferred List of cost-effective Formulary medicines covering most common conditions and which are appropriate for initiation in general practice and by those prescribing outwith their specialty areas. The Preferred List consists of approximately 350 medicines, and in many cases where there are several drugs in a class, the favoured first line agent is highlighted. The Preferred List is printed on an annual basis.

**Total Formulary:** All other Formulary medicines, including those that are not included in the Preferred List are included in the Total Formulary. (Printed annually as an appendix to the Preferred List.)

All other medicines including new medicines not yet considered by the SMC and Area Drug and Therapeutics Committee (ADTC) are non-Formulary.

### Using the Formulary

Preferred List medicines are generally presented according to the BNF classification. The vast majority of entries are based on generic name, which should be used in most cases of prescribing, with exceptions noted in the prescribing notes of the Formulary entry. For most medicines, formulations and strengths of preparations have been omitted to allow flexibility in prescribing, except when a particular formulation is not approved or when a particular preparation is considered the most cost-effective.

Each entry contains relevant Formulary information about the medicine, such as restrictions on use, place in therapy or prescribing guidance notes. In most cases, adult doses are included in the Formulary entry. The BNF should be consulted for further product information, with reference to the Summary of Product Characteristics if required ([www.medicines.org.uk](http://www.medicines.org.uk)).

Some brief prescribing notes have been retained. In some cases, symbols may prefix the Formulary entry referring to the place in therapy:

- 1** represents the first choice within a class where there is more than one similar medicine
- S** denotes that the medicine should be initiated by, or on the advice of, a specialist.

Within the Total Formulary, symbols are used in a similar manner:

- S** denotes that medicine is for specialist use only
- S** denotes that the medicine should be initiated by, or on the advice of, a specialist but may be continued by a GP.

It should be noted that there are several sections and chapters of the BNF that are omitted from the Preferred List. The reason being that in most cases, these medicines will be initiated under the care of a specialist in hospital e.g. oncology. Medicines in these sections and chapters may be found in the Total Formulary, which is included as an appendix.

Throughout the Formulary, reference may be made to NHSGGC guidelines. Many of these can be found on the ADTC website ([www.ggcformulary.scot.nhs.uk](http://www.ggcformulary.scot.nhs.uk)) and within the Clinical Information section on StaffNet ([www.staffnet.ggc.scot.nhs.uk/Clinical+Info/default.htm](http://www.staffnet.ggc.scot.nhs.uk/Clinical+Info/default.htm)). On occasion, other national guidelines, such as those from the National Institute for Health and Clinical Excellence (NICE) or Scottish Intercollegiate Guidelines Network (SIGN), are referred to. These can be found via the relevant websites, [www.nice.org.uk](http://www.nice.org.uk) and [www.sign.ac.uk](http://www.sign.ac.uk).

## Formulary status

The Scottish Medicines Consortium (SMC) reviews all new medicines, formulations and major new indications. It considers how effective the medicine is; which patients would benefit; whether it is better than existing therapy; what it costs and whether it represents good value for money for NHS Scotland. The SMC publishes its recommendations monthly; full details can be accessed at [www.scottishmedicines.org.uk](http://www.scottishmedicines.org.uk).

Following the publication of SMC advice, the ADTC makes a decision on local implementation and inclusion in the Formulary. Some new medicines are designated 'unique' by the SMC. When this occurs, Health Boards are requested to ensure that the medicine will be made available locally to meet clinical need within three months of the SMC advice. For other medicines accepted by SMC, the advice is subject to local Health Board decision. Local Formulary exclusion of such a medicine is a decision taken by ADTC and will be based on consideration of the new medicine in relation to existing Formulary choices.

NHSGGC policy is that only new medicines with SMC approval that have been added to the Formulary should be prescribed routinely. In some cases

the ADTC may place additional restrictions on use of specific medicines to those that SMC advises. Medicines awaiting SMC review are considered to be non-Formulary, and those not accepted by SMC will remain excluded.

### Non-Formulary policy

Healthcare professionals are expected to take cognisance of Formulary status when exercising their clinical judgement, however this does not override the health professional's responsibility to make appropriate prescribing decisions to meet the needs of the individual patient, in consultation with the patient and/or guardian or carer. The NHSGGC non-Formulary policy highlights the following points:

Prescribing from the Formulary is consistent with good clinical practice. The need for prescription of medicines from outwith the Formulary (NF prescribing) is recognised, but it is expected that:

- ▶ formal treatment guidelines/protocols will exclude NF drugs.
- ▶ NF status will apply to new medicines until accepted by the SMC and the ADTC.
- ▶ NF prescribing will be necessary and approved in exceptional circumstances only.

Systems to monitor and approve the exceptional use of non-Formulary prescribing are in place both in the Acute Division and in Primary Care.

In the Acute Division: These include the completion of non-Formulary forms for targeted medicines on the Highlighted NF Medicines List, with approval processes at directorate level for particular medicines.

In Primary Care: GPs initiating targeted NF medicines themselves have the opportunity to complete NF request forms. GPs are also encouraged to complete documentation when another clinician (e.g. within acute or tertiary care) requests that the GP initiates a non-Formulary medicine on their behalf. General Practitioners should complete a single form each time a drug on the Highlighted NF Medicines list is initiated and forward it to the relevant CH(C)P Prescribing Leads.

An overview of the NHSGGC non-Formulary procedures can be found on the Formulary pages within StaffNet ([www.staffnet.ggc.scot.nhs.uk/Info+Centre/GGC+Formulary/default.htm](http://www.staffnet.ggc.scot.nhs.uk/Info+Centre/GGC+Formulary/default.htm)).

### Formulary appeal process

If a drug has not been added to the Formulary and there is an opinion that such an omission could compromise patient care, the case for Formulary inclusion can be reconsidered. The appeals process applies to medicines that have been accepted by the SMC but not added to the NHSGGC Formulary and those considered for the NHSGGC Formulary but not added before the SMC was established.

Any consultant, GP, senior hospital pharmacist or senior nurse may submit an appeal providing full supporting evidence to the Formulary and New Drug sub-committee (FND). If supported, FND will take the appeal to the ADTC where the final decision will be taken. Appeal documentation is available from the Formulary Development Pharmacist (see Suggestions section below).

For medicines not recommended by SMC, the ADTC is not involved, SMC processes are followed ([www.scottishmedicines.org.uk](http://www.scottishmedicines.org.uk)) and local appeal is not permitted

## Updates to the NHSGGC Formulary

The Preferred List and Total Formulary are printed annually each August. New medicines, preparations or indications are considered for inclusion between printed editions. The Formulary status of these decisions is communicated to prescribers via the ADTC website ([www.ggcformulary.scot.nhs.uk](http://www.ggcformulary.scot.nhs.uk)) and StaffNet where the most up-to-date versions are always available. The decisions are also included in PostScript, the ADTC's two-monthly newsletter.

## Electronic Formulary

An electronic version of the Formulary for the GPASS clinical system is available. A PDF version of this edition of the Formulary can be found on the ADTC website at [www.ggcformulary.scot.nhs.uk](http://www.ggcformulary.scot.nhs.uk) along with other ADTC information and publications.

## Unlicensed medicines

Unlicensed medicines (i.e. medicines with no UK marketing authorisation) are generally not included in the Formulary, but unlicensed preparations are occasionally referred to. For specific medicines where the BNF, national guidelines or other specific references mentions an off-label use and this is in keeping with the recommendations of local specialists, details have been included in the prescribing notes. A short-life working group is currently reviewing processes for prescribing and supplying unlicensed and off-label medicines.

## Suggestions

The success of the Formulary depends on feedback from users and this is most welcome. Please direct any comment to:

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Glasgow Royal Infirmary  
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## Committee membership

The Area Drug and Therapeutics Committee is supported by six sub-committees:

- ▶ Formulary and New Drugs Sub-committee
- ▶ Medicines Utilisation and Prescribing Education Sub-committee
- ▶ Non-medical Prescribing Sub-committee
- ▶ Safer Use of Medicines Sub-committee
- ▶ Communications Sub-committee
- ▶ Antimicrobial Sub-committee

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# 1 Gastro-intestinal system

## 1.1 Dyspepsia and gastro-oesophageal reflux disease

SIGN 68 and NICE CG17 provides guidance on the management of dyspepsia in adults in the community.

### 1.1.1 Antacids

A mixture of aluminium hydroxide and magnesium hydroxide balances the tendency of aluminium to constipate against that of magnesium to cause diarrhoea.

#### **Co-magaldrox**

**Dose:** 10-20ml after meals and at bedtime, or when required.

### 1.1.2 Compound alginates and compound indigestion preparations

FOR ADULTS:

#### **Peptac®**

Peptac® has the same active ingredient as Gaviscon® Liquid, which has been discontinued. It is high in sodium and should be used with care when salt restriction is important (heart disease, hepatic or renal impairment, pregnancy).

**Dose:** 10-20ml after meals and at bedtime.

FOR INFANTS:

#### **Gaviscon® Infant Sachets**

One dose is equivalent to half a dual-sachet.

**Dose:** (infant >4.5 kg – 2 years) 2 doses mixed with feeds when required (max six times in 24 hours).

## 1.2 Antispasmodics and other drugs altering gut motility

Other than in the early phase of irritable bowel disease, the place in therapy of antispasmodics is questionable. Reassurance, diet, fluids, exercise, bulking agents and lifestyle modifications achieve best results.

#### **Mebeverine**

**RESTRICTIONS:** Excludes MR preparations.

**Dose:** 135mg three times a day 20-30 minutes before meals.

#### **Domperidone**

See section 4.6 for details.

## 1.3 Ulcer-healing drugs

### *Helicobacter pylori* infection

One week triple therapy regimens containing a proton pump inhibitor and two antibiotics are recommended for the eradication of *H pylori*. Recommended regimens for NHSGGC are shown below.

#### **Triple therapy regimen 1: Continue for one week (14 days in relapse)**

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##### **Omeprazole capsules**

Dose: 20mg twice daily

OR **Lansoprazole capsules**

Dose: 30mg twice daily

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##### **Clarithromycin**

Dose: 500mg twice daily

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##### **Amoxicillin**

Dose: 1000mg twice daily

OR for penicillin allergic patients:

##### **Tetracycline**

Dose: 500mg twice daily

---

#### **Triple therapy regimen 2: Continue for one week (14 days in relapse)**

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##### **Omeprazole capsules**

Dose: 20mg twice daily

OR **Lansoprazole capsules**

Dose: 30mg twice daily

---

##### **Metronidazole**

Dose: 400mg twice daily

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##### **Amoxicillin**

Dose: 1000mg twice daily

OR for penicillin allergic patients:

##### **Tetracycline**

Dose: 500mg twice daily

---

**PRACTICE POINT:** In patients with active ulcers, continue the proton pump inhibitor alone for one further week in duodenal ulcer or three weeks in gastric ulcer. Patient education is vital to maximise the likelihood of success. Prescribers and pharmacists should ensure that patients are counselled appropriately.

### 1.3.1 H2-receptor antagonists

#### **Ranitidine**

Dose: Orally, 150mg twice a day or 300mg at night. See BNF for further prescribing information.

### 1.3.5 Proton pump inhibitors

Patients should be maintained on the lowest dose possible. Those with GORD without oesophagitis are encouraged to use PPIs 'on demand'.

#### **Omeprazole capsules**

Dose: 10-20mg daily. See BNF for further dosing information.

#### **Lansoprazole capsules**

Dose: 15-30mg daily. See BNF for further dosing information.

### 1.4 Acute diarrhoea

Rehydration sachets (section 9.2) should be considered as first line treatment for acute diarrhoea.

#### 1.4.2 Antimotility drugs

##### **Loperamide capsules**

Second line treatment to rehydration sachets (see section 9.2).

Dose: 4mg initially, then 2mg after each loose stool for up to five days (max 16mg/day).

### 1.5 Chronic bowel disorders

#### **Aminosalicylates**

##### **Mesalazine**

Prescribe by brand name.

Dose: See BNF for products and dosing information.

#### **Corticosteroids**

##### **Hydrocortisone foam (Colifoam®)**

Rectal foam preparations are generally easier to retain than retention enemas.

Dose: See BNF for dosing information.

### 1.6 Laxatives

Laxatives should generally be avoided, except when straining will exacerbate a medical condition, or increase the risk of bleeding, as in haemorrhoids or following abdominal surgery. They are important for prophylaxis of opioid-induced constipation.

#### 1.6.1 Bulk-forming laxatives

Bulk-forming laxatives are not the most appropriate choice for opioid-induced constipation.

##### **Ispaghula husk**

Dose: 1 sachet twice a day, ensuring adequate fluid intake (avoid taking at bedtime).

## 1.6.2 Stimulant laxatives

### Senna

DOSE: 2-4 tablets (10-20ml liquid) at night.

### Docosate sodium

DOSE: 100-500mg daily, with larger doses being given in two to three divided doses.

### Co-danthramer

RESTRICTIONS: Terminally ill patients only

DOSE: 1-2 capsules (5-10ml suspension) at night.

## 1.6.4 Osmotic laxatives

### Lactulose

Lactulose has a slow onset of action and may cause wind/flatulence.

DOSE: 15ml twice a day.

## 1.6.5 Bowel cleansing agents

### ⊕ Sodium picosulfate (Picolax®)

DOSE: 1 sachet (reconstitute in 150ml water) in the morning and 1 sachet in the afternoon of the day before the procedure.

## 1.7 Local preparations for anal and rectal disorders

There is little evidence to support the use of local anaesthetics to relieve pain associated with haemorrhoids and pruritus ani.

### 1.7.1 Soothing haemorrhoidal preparations

#### Anusol®

DOSE: Cream/ointment, apply morning and night and after each bowel movement until condition is controlled.

### 1.7.2 Compound haemorrhoidal preparations with corticosteroids

#### Anusol HC®

Contains hydrocortisone. Use should be restricted to 7 days as may cause sensitisation of anal skin.

DOSE: Cream/ointment, apply sparingly morning and night and after each bowel movement (max four times daily) for up to 7 days.

## 1.8 Stoma care

See BNF

Refer to local specialist stoma care nurse for advice.

## 1.9 Drugs affecting intestinal secretions

### 1.9.1 Drugs affecting biliary composition and flow

#### Ⓢ **Ursodeoxycholic acid**

Dose: Dissolution of gallstones, 8-12mg/kg daily as a single dose at bedtime (see BNF for further details). Primary biliary cirrhosis, 10-15mg/kg daily in two to four divided doses.

### 1.9.2 Bile acid sequestrants

#### **Colestyramine sachets (Cholestyramine)**

Dose: Pruritis 4-8g daily (see BNF for other indications).

### 1.9.4 Pancreatin

There is great variation in patient response to these products. Fat mal-absorption has the most bearing on the clinical picture. Theoretically, 60,000 BPU of lipase should enable a completely achylic patient to digest the fat in a normal meal; the quantity of protease and amylase that comes from this dose of lipase is more than sufficient to digest the protein and carbohydrate.

For details of the CSM warning for use in children, refer to the BNF or BNF for Children.

#### **Creon®**

All strengths.

Dose: See BNF for dosing information.



## 2 Cardiovascular system

### 2.1 Positive inotropic drugs

#### 2.1.1 Cardiac glycosides

The management of persistent atrial fibrillation is the subject of a NHSGGC guideline (available on the ADTC home page [www.ggcformulary.scot.nhs.uk](http://www.ggcformulary.scot.nhs.uk) or on the Clinical Info section of StaffNet [www.staffnet.ggc.scot.nhs.uk/Clinical+Info/default.htm](http://www.staffnet.ggc.scot.nhs.uk/Clinical+Info/default.htm)).

##### **Digoxin**

**Dose:** Maintenance dose 62.5 - 500 micrograms depending on renal function and response.

### 2.2 Diuretics

#### 2.2.1 Thiazide and related diuretics

The choice of therapeutic class for the management of hypertension is dependent on individual patient parameters. See the NHSGGC guidelines for the Management of Hypertension for details (available on the ADTC home page [www.ggcformulary.scot.nhs.uk](http://www.ggcformulary.scot.nhs.uk) or on the Clinical Info section of StaffNet [www.staffnet.ggc.scot.nhs.uk/Clinical+Info/default.htm](http://www.staffnet.ggc.scot.nhs.uk/Clinical+Info/default.htm)).

##### **Bendroflumethiazide (Bendrofluazide)**

**Dose:** Hypertension, 2.5mg daily.

#### 2.2.2 Loop diuretics

##### **Furosemide (Frusemide)**

**Dose:** (Oral) Initially 40mg once daily. See BNF for further dosing information.

#### 2.2.3 Potassium-sparing diuretics and aldosterone antagonists

##### **Potassium-sparing diuretics**

##### **Amiloride**

**Dose:** 5-10mg daily (usually morning).

##### **Aldosterone antagonists**

##### **Spirolactone**

Used in heart failure and in Conn's syndrome or decompensated liver diseases (ascites). Combination with ACE inhibitors, angiotensin-II receptor antagonists (AIIRAs) or potassium supplements may result in hyperkalaemia (monitor).

**Dose:** Symptomatic heart failure despite optimal treatment with an ACE inhibitor or AIIRA and a beta-blocker, 25mg daily. See NHSGGC guidelines on the management of left ventricular systolic dysfunction for further details. For doses for other indications, please refer to BNF.

## 2.4 **Beta-adrenoceptor blocking drugs**

The CSM has advised that beta-blockers, including those considered to be cardioselective, should not be given to patients with a history of asthma or bronchospasm. However, in rare situations where there is no alternative a cardioselective beta-blocker may be given to these patients with extreme caution and under specialist supervision.

Combination products containing a beta-blocker and a diuretic are not recommended as fixed dose preparations lack flexibility and may not be available in dose combinations appropriate for individual patients.

### **Beta-blockers used for angina and hypertension**

#### **Atenolol**

**Dose:** Hypertension, 25-50mg daily. Angina, 100mg daily (1 or 2 divided doses).

### **Beta-blockers used for heart failure**

#### **1 Bisoprolol**

First line beta-blocker for patients with heart failure.

**RESTRICTIONS:** The initiation and initial supervision of bisoprolol in confirmed cases of chronic cardiac failure is restricted to prescribers working with specialised heart failure teams in line with agreed protocols.

**Dose:** Stable moderate to severe heart failure, titrated from 1.25mg daily up to 10mg daily (See BNF or local protocols for titration details).

#### **Carvedilol**

**RESTRICTIONS:** The initiation and initial supervision of carvedilol in confirmed cases of chronic cardiac failure is restricted to prescribers working with specialised heart failure teams in line with agreed protocols. Not approved for hypertension or angina.

**Dose:** See BNF for full dosing information.

### **Beta-blockers used primarily for other indications**

#### **Propranolol**

Only beta-blocker licensed for anxiety with symptoms such as palpitation, sweating and tremor. It is not included in the Preferred List for hypertension, angina and heart failure.

**Dose:** See BNF for full dosing information.

## 2.5 **Hypertension and heart failure**

The choice of therapeutic class for the management of hypertension is dependent on individual patient parameters. See the *NHSGGC Guidelines for the Management of Hypertension* for details (available on the ADTC home page [www.ggcformulary.scot.nhs.uk](http://www.ggcformulary.scot.nhs.uk)). A NHSGGC guideline for the management of left ventricular systolic dysfunction (LVSD) also exists (available on the ADTC home page [www.ggcformulary.scot.nhs.uk](http://www.ggcformulary.scot.nhs.uk))

or on the Clinical Info section of StaffNet [www.staffnet.ggc.scot.nhs.uk/Clinical+Info/default.htm](http://www.staffnet.ggc.scot.nhs.uk/Clinical+Info/default.htm)).

#### 2.5.4 **Alpha-adrenoceptor blocking drugs**

##### **Doxazosin**

RESTRICTIONS: Excluding MR preparations.

Dose: Hypertension, 1mg daily, increased after 1-2 weeks to 2mg daily, and then 4mg daily if necessary. See BNF for further dosing information.

#### 2.5.5 **Drugs affecting the renin-angiotensin system**

The choice of therapeutic class for the management of hypertension is dependent on individual patient parameters. See the *NHSGGC Guidelines for the Management of Hypertension* for details (available on the ADTC home page [www.ggcformulary.scot.nhs.uk](http://www.ggcformulary.scot.nhs.uk) or on the Clinical Info section of StaffNet [www.staffnet.ggc.scot.nhs.uk/Clinical+Info/default.htm](http://www.staffnet.ggc.scot.nhs.uk/Clinical+Info/default.htm)).

Any ACE inhibitor or Angiotensin-II receptor antagonist may cause deterioration in renal function. Urea and electrolytes should be checked before initiation and within 7 days of commencing therapy or a change in dose.

##### 2.5.5.1 **Angiotensin-converting enzyme inhibitors**

###### **Ramipril**

RESTRICTIONS: Excluding combination products.

Dose: Hypertension, 1.25mg daily increased every 1-2 weeks to a usual maintenance dose of 2.5-5mg daily.

Heart failure, initially 1.25mg daily (under supervision), increased incrementally every 1-2 weeks if tolerated up to 5mg BD (see NHSGGC guidelines on the management of left ventricular systolic dysfunction (LVSD) for further details).

###### **Lisinopril**

RESTRICTIONS: Excluding combination products.

Dose: Hypertension, initially 10mg daily (see BNF for details) with a usual maintenance dose of 20mg daily.

Heart failure, initially 2.5mg daily (under supervision), increase incrementally up to 30-35mg daily or maximum tolerated dose (see NHSGG LVSD guidelines for further information).

##### 2.5.5.2 **Angiotensin-II receptor antagonists**

There are no indications where angiotensin-II receptor antagonists (often referred to as AIIAs or ARBs) should be used as first line therapy and they should only be used as second line agents in patients who develop a significant cough with ACE inhibitors. Angiotensin-II receptor antagonists are generally more expensive than ACE inhibitors.

### Candesartan

RESTRICTIONS: Candesartan should only be used as a second line agent in patients who develop a significant cough with ACE inhibitors. Use as add-on therapy with ACE inhibitors for heart failure and left ventricular systolic dysfunction is restricted to initiation by specialists.

**DOSE:** 4-16mg daily (see BNF for details). For use in heart failure, refer to the NHSGGC guidelines on left ventricular systolic dysfunction.

### Losartan

RESTRICTIONS: Losartan should only be used as a second line agent in patients who develop a significant cough with ACE inhibitors.

**DOSE:** 50-100mg daily (see BNF for details).

For use in heart failure, refer to the NHSGGC guidelines on left ventricular systolic dysfunction.

## 2.6 Nitrates, calcium-channel blockers, and other antianginal drugs

### 2.6.1 Nitrates

#### Long acting nitrates

##### Isosorbide mononitrate (standard-release tablets)

RESTRICTIONS: Modified-release preparations, which are restricted to patients who fail to comply with standard-release tablets, can be found in the Total Formulary.

Isosorbide mononitrate should be prescribed as asymmetric doses of standard-release products (e.g. 20mg at 8am and 20mg at 2pm). Nitrate-free periods (usually at night) are recommended to avoid the development of tolerance.

**DOSE:** 10-40mg twice daily.

#### Short acting nitrates

##### Glyceryl trinitrate

The patient should be fully aware of how to use a GTN spray prophylactically before angina-inducing activities. If symptoms persist following two uses of the spray within a 15 minute period, the patient should seek medical help.

**DOSE:** Sublingual spray, 1-2 doses under the tongue when required for chest pain.

### 2.6.2 Calcium-channel blockers

The choice of therapeutic class for the management of hypertension is dependent on individual patient parameters. See the *NHSGGC Guidelines for the Management of Hypertension* for details (available on the ADTC home page [www.ggcformulary.scot.nhs.uk](http://www.ggcformulary.scot.nhs.uk) or on the Clinical Info section of StaffNet [www.staffnet.ggc.scot.nhs.uk/Clinical+Info/default.htm](http://www.staffnet.ggc.scot.nhs.uk/Clinical+Info/default.htm)). Calcium-channel blockers differ in their possible sites of action; therefore their therapeutic effects are disparate, with much greater variation than

those of beta-blockers. There are important differences between verapamil/diltiazem and the dihydropyridine group of nifedipine/amlodipine. Within the dihydropyridine group, the efficacy and side effect profiles are similar, except that amlodipine has a much longer half-life.

### **Non-rate limiting calcium-channel blockers**

#### **Amlodipine**

RESTRICTIONS: Excludes combination products

Dose: 5-10mg daily.

#### **Nifedipine**

Prescribe by brand name.

RESTRICTIONS: Short-acting formulations are not recommended for angina and hypertension.

Dose: 30-60mg daily (based on Adalat LA®). For further dosing information, see BNF.

### **Rate limiting calcium-channel blockers**

#### **Diltiazem**

Prescribe by brand name. Diltiazem should not be prescribed in conjunction with beta-blockers because of the risk of severe bradycardia.

Dose: See BNF for dosing information of products.

## **2.8 Anticoagulants**

### **2.8.2 Oral anticoagulants**

#### **Warfarin**

Dose: Dosing should be adjusted to maintain INR within target based on reason for anticoagulation.

## **2.9 Antiplatelet drugs**

See the *NHSGGC Antiplatelet Guidelines* for appropriate use of the following medicines (available on the ADTC website: [www.ggcformulary.scot.nhs.uk](http://www.ggcformulary.scot.nhs.uk) or on the Clinical Info section of StaffNet [www.staffnet.ggc.scot.nhs.uk/Clinical+Info/default.htm](http://www.staffnet.ggc.scot.nhs.uk/Clinical+Info/default.htm)).

#### **⚠ Aspirin dispersible**

Aspirin enteric coated (EC) is not included in the Formulary and should not be used as the formulation does not reduce GI symptoms.

If the patient experiences new gastro-intestinal symptoms, consider other contributory factors (e.g. alcohol intake or NSAID use) and then consider gastro-protection (e.g. omeprazole or lansoprazole).

Dose: 75-150mg daily (See *NHSGGC Antiplatelet Guidelines*).

### Clopidogrel

RESTRICTIONS: Restricted to patients contraindicated to aspirin or intolerant of aspirin despite the addition of a PPI.

Use in combination with aspirin post ST segment elevation acute myocardial infarction (STEMI) is restricted to specialist initiation for duration of 4 weeks.

For prevention of atherothrombotic events in acute coronary syndrome, clopidogrel, in combination with aspirin, should be used in accordance with the current *NHSGGC Antiplatelet Guideline* for the appropriate duration.

**DOSE:** 75mg daily. See BNF for full dosing information.

### Dipyridamole MR

RESTRICTIONS: Dipyridamole retard is restricted to patients requiring stroke/TIA secondary prevention where an event has occurred despite treatment with aspirin.

The addition of dipyridamole to aspirin reduces recurrent stroke and TIA but not the risk of other vascular events. Refer to *NHSGGC Guideline for Secondary Prevention for Stroke and TIA patients*.

**DOSE:** 200mg twice daily (retard preparations).

## 2.11 Antifibrinolytic drugs and haemostatics

### Tranexamic acid

**DOSE:** Menorrhagia, 1g three times a day for up to four days. See BNF for full dosing information.

## 2.12 Lipid-regulating drugs

See *NHSGGC Guidelines for the Secondary Prevention of Coronary Heart Disease and Stroke*. They are available in the guideline store on the ADTC website: [www.ggcformulary.scot.nhs.uk](http://www.ggcformulary.scot.nhs.uk).

### Statins

#### Simvastatin

**DOSE:** Recommended guideline starting dose, 40mg at night. Caution in renal impairment (see BNF for details).

#### Atorvastatin

RESTRICTIONS: Atorvastatin 80mg is only to be initiated by consultants in patients who have definite coronary artery disease and present with an acute coronary syndrome (confirmed by elevated troponin concentration). In patients who fail to meet goals for cholesterol reduction on simvastatin 40mg, the dose of atorvastatin may be up-titrated up to 80mg (see below).

In preference to increasing the dose of simvastatin, patients should be switched to an appropriate dose of atorvastatin, 20mg followed by up-titration if required, through 40mg to 80mg.

Use in children aged over 10 years is restricted to initiation by paediatricians or physicians specialising in the management of lipid disorders.

**Dose:** 20-80mg at night (depending on indication and cholesterol levels).

### **Other lipid-regulating drugs**

#### **Ezetimibe**

**RESTRICTIONS:** Excluding combination preparations.

Restricted to initiation by specialists when cholesterol targets are not reached on the maximum tolerated and optimised statin therapy.

**Dose:** 10mg daily.



## 3 Respiratory system

The British Thoracic Society and the Scottish Intercollegiate Guidelines Network jointly produced a *British Guideline on the Management of Asthma* in May 2004, with an update in November 2005 (SIGN 63). The guideline is due for revision.

CFC-free containing medicines will be phased out in the near future with inhaled medicines being reformulated in hydrofluoroalkane. Where possible, CFC-free formulations should be prescribed for new patients.

The choice of device should be based on patient ability and lifestyle.

Metered dose inhalers (MDIs) are the most popular devices and are considered the most cost-effective. Patients who experience problems using their MDI should either try using it in conjunction with a spacer device or changing to a breath activated MDI or dry powder device. When changing devices, differences in recommended doses and inhaler technique make it advisable to adjust the dose on an individual basis to control symptoms.

### 3.1 Bronchodilators

#### 3.1.1 Adrenoceptor agonists

##### 3.1.1.1 Selective Beta<sub>2</sub> agonists

#### Short-acting beta<sub>2</sub> agonists

##### Salbutamol

Salbutamol inhalers generally should not be prescribed to be used regularly, but should be used on a when required basis.

**Dose:** Inhaled, 200 micrograms (2 doses based on 100 micrograms MDI) when required. See BNF for full dosing information.

##### Terbutaline

**Dose:** Inhaled, 500 micrograms (1 dose) up to four times daily (based on Turbohaler®). See BNF for full dosing information.

#### Long-acting beta<sub>2</sub> agonists

##### Salmeterol

**Dose:** Inhaled, 50 micrograms twice daily.

##### Formoterol

At step 3 in the BTS/SIGN guidelines inhaled long-acting beta<sub>2</sub> agonists are recommended as first line add-on therapy.

**Dose:** Dependent on device. See BNF for full dosing information.

### 3.1.2 Anticholinergic bronchodilators

#### Ipratropium bromide

**DOSE:** MDI inhaler, 20-40 micrograms three or four times daily.

#### Tiotropium

Used in the maintenance treatment of chronic obstructive pulmonary disease (COPD).

**RESTRICTIONS:** Spiriva-Respimat® is restricted to patients with poor manual dexterity who have difficulty using the Handihaler® device.

**DOSE:** Handihaler® device, 18 micrograms daily. Respimat® device, 5 micrograms daily.

### 3.1.3 Theophylline

#### Theophylline

Prescribe by brand name.

**DOSE:** See BNF for dosing information.

#### Aminophylline

Prescribe by brand name.

**DOSE:** Oral, 225-450mg twice daily. See BNF for further dosing information.

## 3.2 Corticosteroids

Patients receiving  $\geq 1000$  micrograms of beclometasone daily (or equivalent e.g. fluticasone 500 micrograms or budesonide 800 micrograms) should be issued with a steroid card.

### Beclometasone (beclomethasone)

Clenil Modulite® is the preferred CFC-free aerosol device.

Different brands of beclometasone CFC-free inhalers are not equipotent and should be prescribed by brand name for safety reasons.

**DOSE:** See BNF for full dosing information.

#### Budesonide

**RESTRICTIONS:** Budesonide Respules® are restricted to hospital inpatient treatment of croup only.

**DOSE:** See BNF for dosing information.

#### Fluticasone

Fluticasone provides equal clinical activity to regular beclometasone and budesonide at half the dosage. Nebuliser solution remains non-Formulary.

**DOSE:** See BNF for dosing information.

### Combination preparations

Patients on combination inhalers or high dose inhaled steroids, should be reviewed regularly and stepped down if appropriate. Patients receiving  $\geq 1000$  micrograms of beclometasone daily (or equivalent e.g. fluticasone 500 micrograms or budesonide 800 micrograms) should be issued with a steroid card.

**Budesonide and formoterol**

RESTRICTIONS: restricted for use in patients on step 3 or above of the BTS/SIGN asthma guidelines or for patients with COPD in accordance to current NHSGGC COPD Guidelines.

Dose: See BNF or product literature for dosing information.

**Fluticasone and salmeterol**

RESTRICTIONS: Restricted for use in patients on step 3 or above of the BTS/SIGN asthma guidelines or for patients with COPD in accordance to current NHSGGC COPD Guidelines.

Dose: See BNF for dosing information.

**Beclometasone and formoterol**

RESTRICTIONS: restricted for use in patients on step 3 or above of the BTS/SIGN asthma guidelines.

Dose: See BNF or product literature for dosing information. Beclometasone dose may not be equipotent to other beclometasone containing inhalers.

### 3.3 Cromoglicic acid and related therapy and leukotriene receptor antagonists

#### 3.3.2 Leukotriene receptor antagonists

**Montelukast**

RESTRICTIONS: Restricted to clinicians experienced in treating asthma. Use for seasonal allergic rhinitis is non-Formulary. Use in asthma in children aged 2 to 14 years is restricted to initiation by specialists in paediatric asthma care.

Dose: 10mg in the evening.

### 3.4 Antihistamines, hyposensitisation and allergic emergencies

#### 3.4.1 Antihistamines

**Non-sedating antihistamines**** Cetirizine**

Dose: 10mg daily.

**Loratadine**

Dose: 10mg daily.

**Sedating antihistamines****Chlorphenamine**

Dose: 4mg every four to six hours, max 24mg daily.

### 3.4.3 Allergic emergencies

#### **Adrenaline**

Includes autoinjector devices.

Dose: See BNF for dosing information.

### 3.7 Mucolytics

#### **Carbocisteine**

Dose: Initially 750mg three times daily, then 1.5g daily in divided doses as condition improves.

### 3.9 Cough preparations

Sugar-free cough preparations should be prescribed where possible.

#### 3.9.1 Cough suppressants

##### **Pholcodine linctus**

Dose: 5-10ml three to four times daily.

#### 3.9.2 Expectorant and demulcent cough preparations

##### **Simple linctus (Citric acid)**

Dose: 5ml three to four times daily.

## 4 Central nervous system

### 4.1 Hypnotics and anxiolytics

#### 4.1.1 Hypnotics

Before a hypnotic is prescribed, the cause of the insomnia should be established and underlying factors should be addressed and non-drug management, such as sleep hygiene considered. If a hypnotic is essential, it should be prescribed as the lowest effective dose as a short course (preferably one week) and the choice of agent based on the patient's medication and medical history and evaluation of the consequences of supplying a potential drug of abuse.

##### **Temazepam**

Dose: 10-20mg at night.

#### 4.1.2 Anxiolytics

##### **Diazepam**

Dose: Anxiety, 2mg three times daily increased if necessary to 15-30mg daily in divided doses.

##### **Chlordiazepoxide**

Dose: Anxiety, 10mg three times daily.

Alcohol withdrawal, 10-30mg four times daily reduced gradually over 7-14 days.

### 4.2 Drugs used in psychoses and related disorders

#### 4.2.1 Antipsychotic drugs

The initiation of antipsychotics would usually be under the guidance of a specialist who may base selection on a wide range of factors.

##### **For adult patients <65 years of age**

##### **Risperidone tablets**

If risperidone is not considered appropriate, other atypical antipsychotics from the Total Formulary may be considered.

Dose: Dependent on indication, see BNF for full prescribing information.

##### **For adult patients >65 years of age**

##### **Haloperidol**

If haloperidol is not considered appropriate, other antipsychotics from the Total Formulary may be considered.

Dose: Dependent on indication, see BNF for full prescribing information.

## 4.3 Antidepressant drugs

For drug choice in depression, see the *NHSGGC Antidepressant Guideline*, available on the ADTC website ([www.ggcformulary.scot.nhs.uk](http://www.ggcformulary.scot.nhs.uk)).

### 4.3.1 Tricyclic and related antidepressants

#### Lofepamine

DOSE: 140-210mg daily in divided doses.

### 4.3.3 Selective serotonin re-uptake inhibitors

#### **F** Fluoxetine

DOSE: Depression, 20mg once daily increased after 3 weeks if necessary. Usual dose 20-60mg daily (20-40mg in the elderly).

#### **F** Citalopram

DOSE: Depression, 20mg once daily increased if necessary to a maximum of 60mg daily.

### 4.3.4 Other antidepressant drugs

#### Mirtazapine

RESTRICTIONS: Restricted to second line therapy.

DOSE: Depression, initially 15mg at night increased within 2-4 weeks depending on response (maximum 45mg daily).

## 4.5 Drugs used in the treatment of obesity

See NICE guidance on the management of obesity (NICE CG43).

### 4.5.1 Anti-obesity drugs acting on the gastro-intestinal tract

#### Orlistat

RESTRICTIONS: Restricted to use for patients with BMI  $>30$  with relevant co-morbidities and BMI  $>35$  without co-morbidities. Other conditions for prescribing should be in accordance with NICE CG43. It should be prescribed only on the advice of the Glasgow and Clyde Weight Management Service.

DOSE: 120mg directly before, with or just after main meals (maximum 360mg daily).

### 4.5.2 Centrally acting appetite suppressants

#### Sibutramine

RESTRICTIONS: Restricted to use for patients with BMI  $>30$  with relevant co-morbidities and BMI  $>35$  without co-morbidities. Other conditions for prescribing should be in accordance with NICE CG43. It should be prescribed only on the advice of the Glasgow and Clyde Weight Management Service.

DOSE: Initially 10mg in the morning, increased to 15mg daily if weight loss at 4 weeks is less than 2kg. See BNF for further dosing information.

## 4.6 Drugs used in nausea and vertigo

### Antihistamines

#### Cinnarizine

Dose: Vestibular disorders, 30mg three times daily.

Motion sickness, 30mg two hours before travel then 15mg every eight hours during journey if necessary.

### Phenothiazines and related drugs

#### Prochlorperazine

Dose: Nausea and vomiting (acute attack), 20mg initially then 10mg after two hours.

Post-operative nausea and vomiting, oral 5-10mg two to three times daily.

Labyrinthine disorders, 5mg three times daily increased if necessary to 30mg daily in divided doses.

### Domperidone and metoclopramide

#### Domperidone

Dose: Oral, 10-20mg three to four times daily.

#### Metoclopramide

Metoclopramide causes more frequent extra-pyramidal side effects than domperidone and is not indicated in patients less than 20 years of age except for limited indications when the dose should be determined on the basis of body weight.

Dose: Nausea and vomiting, 10mg three times daily. See BNF for full dosing information.

### 5HT<sub>3</sub> antagonists

#### Ⓢ Ondansetron

RESTRICTIONS: In the management of post-operative nausea and vomiting, ondansetron is restricted to use in patients refractory to routine antiemetics or with a substantial history of post-operative nausea and vomiting.

Dose: Dependent of formulation and indication. See BNF for dosing information.

### Other drugs for Ménière's disease

#### Betahistine

Dose: Initially 16mg three times daily. Maintenance dose 24-48mg daily in divided doses.

## 4.7 Analgesics

### 4.7.1 Non-opioid analgesics

Analgesics such as paracetamol are often much more effective at relieving chronic pain when taken regularly rather than 'as required'.

#### Paracetamol

**RESTRICTIONS:** Dispersible and effervescent formulations are considerably more expensive and should be restricted to patients with swallowing difficulties. Their high sodium content (up to 8g daily) exceeds the WHO daily salt intake recommendation of 6g daily and may compromise the treatment of hypertension, heart failure and renal disease

**DOSE:** Oral, **1g every four to six hours when required (up to a maximum of 4g in 24 hours).** See BNF for children for paediatric doses.

#### Ibuprofen

See section 10.1.

#### Co-codamol (8/500 and 30/500 tablets)

There is no evidence that the 8/500 strength is any more effective than paracetamol alone.

**RESTRICTIONS:** Dispersible and effervescent formulations are considerably more expensive and should be restricted to patients with swallowing difficulties. Their high sodium content (up to 8g daily) exceeds the WHO daily salt intake recommendation of 6g daily and may compromise the treatment of hypertension, heart failure and renal disease.

**DOSE:** (8/500 or 30/500 strength) **1-2 tablets every four to six hours when required (maximum of 8 tablets in 24 hours).**

### 4.7.2 Opioid analgesics

#### Codeine phosphate

**DOSE:** 30-60mg every four to six hours when required up to a maximum of 240mg in 24 hours.

#### Dihydrocodeine

**RESTRICTIONS:** Excludes DF118 Forte®, Remedeine®, and Remedeine Forte®.

Dihydrocodeine is generally not an effective analgesic for post-operative pain except in neurosurgical procedures where NSAIDs are contraindicated when it avoids undue sedation and confusion which might interfere with neurological appraisal.

**DOSE:** 30mg every four to six hours when required.

#### Morphine

Modified-release preparations should be prescribed by brand name

**DOSE:** Dependent on indication, route and formulation. See BNF for dosing information.

### **Oxycodone**

Modified-release preparations should be prescribed by brand name  
RESTRICTIONS: Use is restricted to patients in whom morphine is ineffective or not tolerated. The injection is restricted to initiation by specialists in palliative care and oncology for use in patients for whom morphine/diamorphine is ineffective or not tolerated. Oxycodone injection is non-Formulary for post-operative use. Excludes the combination product of oxycodone and naloxone (Targinact®).

**Dose:** Oral (normal release), initially 5mg (sometimes lower) every four to six hours increased if necessary according to severity of pain. See BNF for further dosing information.

### **Diamorphine**

**Dose:** Dependent on indication and route of administration. See BNF for dosing information.

## 4.7.3 **Neuropathic pain**

See NHSGGC Chronic Pain guidelines (available on the ADTC home page [www.ggcformulary.scot.nhs.uk](http://www.ggcformulary.scot.nhs.uk)).

### **Amitriptyline**

Use in the treatment of neuropathic pain is an unlicensed indication of amitriptyline.

**Dose:** Initially 10mg in the evening, increased gradually in accordance to response and tolerance to 100mg daily (see guidelines for further dosing information).

### **Carbamazepine**

See NHSGGC primary care pain guidelines.

**Dose:** Neuropathic pain, initially 100mg at night (see guidelines and BNF for further dosing information).

### **Gabapentin**

See NHSGGC primary care pain guidelines.

**Dose:** Neuropathic pain, initially 100mg three times daily (see guidelines and BNF for further dosing information).

## 4.7.4 **Antimigraine drugs**

### 4.7.4.1 **Treatment of acute migraine**

#### **Analgesics**

#### **Migraleve pink®**

Migraleve yellow® is excluded as it is equivalent to co-codamol 8/500, but much more expensive.

**Dose:** 2 pink tablets at onset of attack.

#### **5HT1 agonists**

#### **Sumatriptan tablets**

**Dose:** Acute migraine (oral), 50mg at onset. Dose may be repeated at least two hours later if attack recurs. See BNF for full dosing information.

#### 4.7.4.2 Prophylaxis of migraine

Also consider propranolol (section 2.4).

##### **Pizotifen**

**DOSE:** 1.5mg at night or 500 micrograms three times daily adjusted to response. See BNF for further dosing information.

### 4.8 Antiepileptics

#### 4.8.1 Control of epilepsy

The *SIGN Guideline for the Diagnosis and Management of Epilepsy in Adults* (SIGN 70) and the equivalent guideline for children (SIGN 81) state that the diagnosis of epilepsy should be made by a neurologist or epilepsy specialist and that any decision to start antiepileptic drugs should be made by the patient together with an epilepsy specialist.

#### 4.8.2 Drugs used for prolonged seizures

##### **Diazepam**

Rectal tubes.

**DOSE:** Status epilepticus, adult and child >10kg, 500 micrograms/kg (max 30mg). See BNF for further dosing information .

##### **⊕ Buccal midazolam**

Available as an unlicensed liquid for buccal administration.

**RESTRICTIONS:** Buccal midazolam should only be initiated on the advice of a specialist in accordance with agreed local guidelines and following appropriate training of the parent or carer. It may, however, be continued to be prescribed in primary care.

### 4.9 Drugs used in parkinsonism and related disorders

#### 4.9.1 Dopaminergic drugs used in parkinsonism

##### **Co-careldopa**

**RESTRICTIONS:** Excludes intestinal gel.

The BNF notes that the total daily dose of the carbidopa proportion of these products should be at least 70mg.

**DOSE:** Dependent on preparation, see BNF for information.

##### **Co-beneldopa**

**DOSE:** Dependent on preparation, see BNF for information.

#### 4.9.2 Antimuscarinic drugs used in parkinsonism

##### **Procyclidine**

This medicine commonly causes confusion and is best avoided (especially in the elderly).

**DOSE:** 2.5mg three times daily, increased gradually if necessary. Usual maximum dose, 30mg daily.

## 4.10 Drugs used in substance dependence

### Cigarette smoking

Selected community pharmacies are authorised to prescribe nicotine replacement therapy on the NHS via the Smoke Free programme.

Further information is available from the Smoke Free website ([www.nhs.gov.uk/cphi](http://www.nhs.gov.uk/cphi)).

Nicotine replacement therapy should be prescribed according to local protocol for acute withdrawal from smoking or as part of the overall NHSGGC smoking cessation programme.

### **Nicorette® patch**

Nicorette® patches are the Nicotine replacement formulation of choice.

**DOSE:** See BNF and product literature for dosing information.

### **Nicorette® product range**

If Nicorette® patches are unsuitable, other products from the range should be considered as second line.

### Opioid dependence

#### **Methadone 1mg/ml solution**

RESTRICTIONS: Excludes Eptadone®.

Information on the prescribing of methadone can be found in the *Guidelines for Safe Methadone Prescribing in Glasgow* or from Glasgow Addiction Services.



## 5 Infections

Guidance on antimicrobial prescribing can be found in the NHSGGC Primary Care Adult Infection Management Guidelines and the Infection Management Guidelines for use within the acute sector. Both these can be found on the ADTC homepage ([www.ggcformulary.scot.nhs.uk](http://www.ggcformulary.scot.nhs.uk)) or the Clinical Info section of StaffNet ([www.staffnet.ggc.scot.nhs.uk/Clinical+Info/default.htm](http://www.staffnet.ggc.scot.nhs.uk/Clinical+Info/default.htm)). The use of certain antibiotics e.g. co-amoxiclav, quinolones (such as ciprofloxacin), clindamycin and cephalosporins is inappropriate when standard and less broad spectrum antibiotics remain effective. Use of these antibiotics is associated with an increased risk of *Clostridium difficile*, MRSA and multi-resistant UTIs. Antibiotics not listed in the text may occasionally be prescribed on the advice of a microbiologist or infectious disease physician. For information on converting IV to oral preparations refer to local IVOST protocol or guideline for step down recommendation.

### 5.1 Antibacterial drugs

#### 5.1.1 Penicillins

##### 5.1.1.1 Benzylpenicillin and phenoxymethylpenicillin

###### **Phenoxymethylpenicillin (penicillin V)**

Used widely in bacterial tonsillitis, otitis media and cellulitis.

**Dose:** Usual adult dose, 500-1000mg every six hours before food (four times daily). See BNF for further dosing information.

###### **Benzylpenicillin**

Generally given by slow IV injection and use in primary care will be limited.

**Dose:** Normal adult doses range from 600-1200mg every six hours, but larger doses can be used. See BNF and local guidelines for further dosing information. Bacterial meningitis, 2.4g every four hours by slow IV injection or IV infusion.

##### 5.1.1.2 Penicillinase-resistant penicillins

###### **Flucloxacillin**

Penicillinase-resistant penicillin used widely in cellulitis, otitis externa and impetigo.

**Dose:** Generally, oral adult doses are between 250-500mg every six hours before food (four times daily) dependent on indication. See BNF for further information.

### 5.1.1.3 Broad spectrum penicillins

#### Amoxicillin

Broad spectrum penicillin with a wide range of indications including chest infections, otitis media, urinary tract infections and prophylaxis of endocarditis.

**DOSE:** Generally, adult doses are between 250-1000mg every eight hours (three times daily) dependent on indication. See BNF for details.

#### Co-amoxiclav

**RESTRICTIONS:** Excludes Augmentin Duo®.

Inappropriate use of co-amoxiclav is associated with an increased risk of infections such as *Clostridium difficile* and MRSA. The risk of cholestatic jaundice with co-amoxiclav is six times that seen with amoxicillin and is more common in men and the over 65s. Therefore, co-amoxiclav should be reserved for infections suspected of being due to amoxicillin resistant beta-lactamase producing strains. Duration of therapy should not normally exceed 14 days. See Primary Care and Acute infection guidelines for appropriate uses in adults. Co-amoxiclav is a mixture of amoxicillin and clavulanic acid. Care should be taken as to which product should be used in paediatric patients due to the different amounts of clavulanic acid. Consult the BNF for Children for details.

**DOSE:** Usual adult dose is 1 x 375mg tablet or 1 x 625mg tablet every eight hours (three times daily). See BNF for further dosing information.

### 5.1.2 Cephalosporins and other beta-lactams

Approximately 10% of patients with hypersensitivity to penicillins will also be allergic to cephalosporins. Inappropriate use of cephalosporins is associated with an increased risk of infections such as *Clostridium difficile* and MRSA. See Primary Care and Acute infection guidelines for appropriate uses in adults.

#### Cefalexin

**DOSE:** Oral, 250mg every six hours or 500mg every eight to twelve hours, with higher doses for severe infections. See BNF for further dosing information.

#### Cefuroxime injection

**DOSE:** 750mg by IV injection or infusion every six to eight hours (1.5g in severe infections). See BNF and NMSGC Infection guidance for further dosing information.

#### Cefotaxime

**DOSE:** IV, 1g every 12 hours increased to 2g four times daily in severe infections (e.g. meningitis). See BNF for further dosing information.

#### Ceftriaxone

This can be given by deep IM injection or IV injection/infusion.

**DOSE:** 1g daily with higher doses being used in severe infections. See BNF for further dosing information.

### 5.1.3 Tetracyclines

#### **I** Oxytetracycline

For use in acne and rosacea, see section 13.6.

**Dose:** Usual dose in most infections, 250-500mg every six hours (four times daily). See 13.6 for dose in acne.

#### **Doxycycline**

Doxycycline is no more effective than oxytetracycline and is several times more expensive. Uses include sinusitis and pelvic inflammatory disease.

**Dose:** Most infections, 200mg on first day, then 100mg daily. Pelvic inflammatory disease, 100mg twice daily for 14 days. See local guidelines and BNF for further dosing information.

### 5.1.4 Aminoglycosides

#### **S** Gentamicin

Gentamicin should be prescribed in line with local guidelines and is subject to dose adjustment in line with therapeutic drug monitoring.

**Dose:** Refer to local guidelines.

### 5.1.5 Macrolides

#### **Erythromycin**

Erythromycin has a spectrum of activity similar to penicillin, which makes it a useful alternative for penicillin allergic patients for many infections.

**Dose:** Oral, 250-500mg every six hours (four times daily) with larger doses (up to 4g daily) for severe infections.

#### **Clarithromycin**

**RESTRICTIONS:** Excludes Clarosip®.

**Dose:** Oral 250-500mg twice daily. See BNF for further dosing information.

### 5.1.8 Sulphonamides and trimethoprim

#### **Trimethoprim**

Used primarily for urinary tract infections (see 5.1.13).

**Dose:** Acute infections, 200mg twice daily.

### 5.1.11 Metronidazole

#### **Metronidazole**

A useful antibiotic for anaerobic infections. Patients should be counselled to avoid alcohol whilst taking this medicine because of the potential disulfiram-like reaction.

**Dose:** Usual oral dose 400mg two to three times daily dependent on indication. See BNF for further information.

### 5.1.12 Quinolones

#### Ciprofloxacin

Ciprofloxacin should be prescribed by mouth in preference to IV where possible, as oral dosing gives similar concentrations to IV administration. The exception is when the oral route is compromised (e.g. nil by mouth, reduced absorption, unconsciousness, vomiting or mechanical swallowing disorder). Ciprofloxacin is active against many Gram positive and Gram negative bacteria and is a useful second or third line agent for urinary tract infections and infections of the GI tract, though it should not be used empirically. The NHSGGC Infection Management guidelines can provide advice on when use is appropriate. CSM advice for quinolones has been issued. Refer to BNF for further details.

**DOSE:** See BNF or product literature for further dosing information.

Ciprofloxacin is not the most appropriate quinolone for community-acquired pneumonia (CAP). In cases of CAP where a quinolone is recommended, other Total Formulary alternatives should be considered.

### 5.1.13 Urinary-tract infections

SIGN 88 *Management of Suspected Bacterial Urinary Tract Infections in Adults* suggest uncomplicated lower UTIs should be treated with three days of trimethoprim or nitrofurantoin.

#### Trimethoprim

Trimethoprim should be considered the first line choice for uncomplicated UTIs.

**DOSE:** Uncomplicated UTI, 200mg twice daily for 3 days. Prophylaxis for recurrent UTIs, 100mg at night.

#### Nitrofurantoin

Macrochantin® causes fewer gastro-intestinal side effects than other formulations of nitrofurantoin. Macrobid® offers twice daily dosing.

**DOSE:** Uncomplicated UTI, 50mg every six hours with food for 7 days. For further dosing information, see BNF.

## 5.2 Antifungal drugs

#### Fluconazole

**DOSE:** Dependent on indication. See BNF for further dosing information.

#### Nystatin

For nystatin in oral infection, see section 12.3, for skin infections, see section 13.10.

#### Terbinafine

Terbinafine is particularly useful for systemic treatment of skin and nail fungal infections.

**DOSE:** 250mg daily, with the duration of treatment dependent on indication. See BNF for further dosing information.

## 5.3 Antiviral drugs

### 5.3.2 Herpesvirus infections

#### 5.3.2.1 Herpes simplex and varicella-zoster infection

##### **Aciclovir**

Aciclovir and other antiviral agents are only useful in varicella and herpes zoster if started within 48 hours of the appearance of rash, with the exception of ophthalmic shingles where the use may be justified up to 7 days after the development of rash.

**Dose:** Oral, herpes simplex treatment, 200mg five times daily for 5 days. Immunocompromised patients may need 400mg. Varicella and herpes zoster, 800mg five times daily for 7 days. See BNF for other indications and for further dosing information.



## 6 Endocrine system

### 6.1 Drugs used in diabetes

For guidance on the management of diabetes, refer to SIGN 55.

#### 6.1.1 Insulins

##### 6.1.1.1 Short-acting insulins

**Soluble insulin (brands include: Actrapid®, Humulin S®, Insuman Rapid®)**

Dose: Dose according to requirements.

**Insulin aspart (NovoRapid®)**

Dose: Immediately before meals according to response.

**Insulin lispro (Humalog®)**

Dose: Shortly before meals according to requirements.

##### 6.1.1.2 Intermediate and long-acting insulins

**Isophane insulin (Insulatard®)**

Dose: Dose according to requirements.

**Isophane insulin (Humulin I®)**

Dose: Dose according to requirements.

##### Ⓢ Insulin glargine (Lantus®)

RESTRICTIONS: Restricted to initiation by consultant diabetologists in patients with severe/frequent nocturnal hypoglycaemia. Not for routine use in type 2 diabetes unless patients suffer from recurrent hypoglycaemia or require assistance with their insulin injections.

Dose: Dose according to requirements.

##### Biphasic insulins

**Biphasic isophane insulin (Mixtard® 30)**

Dose: Dose according to requirements.

**Biphasic isophane insulin (Humulin M3®)**

Dose: Dose according to requirements.

**Biphasic insulin aspart (Novomix® 30)**

Dose: Dose according to requirements.

**Biphasic insulin lispro (Humalog® Mix 25, Mix 50)**

Dose: Dose according to requirements.

## 6.1.2 Oral antidiabetic drugs

### 6.1.2.1 Sulphonylureas

#### Gliclazide

**DOSE** for normal release preparations: Initially, 40-80mg daily, adjusted according to response. Up to 160mg as a single dose with breakfast, with higher doses being divided, maximum daily dose 320mg.

### 6.1.2.2 Biguanides

#### Metformin

**RESTRICTIONS:** Excludes Metformin SR, which has not been accepted by the SMC.

Metformin is the antidiabetic drug of choice in both overweight and normal weight patients. It is contraindicated in patients with renal failure or dysfunction (creatinine clearance of <60ml/min).

**DOSE:** Diabetes mellitus, initially 500mg with breakfast for one week, then 500mg twice daily for one week, then 500mg three times daily. Usual maximum, 2g daily in divided doses. See BNF for further dosing information.

### 6.1.2.3 Other antidiabetics

#### Pioglitazone

**RESTRICTIONS:** Initiation is restricted to clinicians experienced in the treatment of diabetes. Monotherapy is restricted to type 2 diabetes mellitus patients in whom consideration is otherwise being given to commencing insulin therapy. It is not recommended as monotherapy in any other group of patients. Triple therapy (in combination with metformin and a sulphonylurea) in type 2 diabetes is restricted to initiation and monitoring only by physicians experienced in the treatment of diabetes mellitus who will be able to identify and manage patients who might benefit. Use in combination with insulin is restricted to specialist initiation.

**DOSE:** Initially 15-30mg once daily, increased to 45mg once daily according to response.

## 6.1.4 Treatment of hypoglycaemia

#### Glucose

See BNF for information.

#### Glucagon (GlucaGen® HypoKit)

Used on the treatment of hypoglycaemia (often when patient is unconscious) when oral glucose isn't possible.

**DOSE:** Insulin induced hypoglycaemia (adult), 1mg by subcutaneous, intramuscular or intravenous injection.

## 6.2 Thyroid and antithyroid drugs

### 6.2.1 Thyroid hormones

#### **Levothyroxine (thyroxine)**

**Dose:** Hypothyroidism, initially 50-100 micrograms (50 micrograms for those >50 years) daily, before breakfast, adjusted in steps of 50 micrograms every three to four weeks until metabolism normalised (usually 100-200 micrograms daily). For patients with cardiac disease, see BNF for dosing information.

### 6.2.2 Antithyroid drugs

#### **Carbimazole**

**Dose:** Usual dose is between 15-40mg daily. See BNF for further dosing information.

## 6.3 Corticosteroids

The CSM has issued a warning that all patients receiving oral or parenteral corticosteroids for purposes other than replacement should be considered at high risk of severe chickenpox (unless they have had chickenpox).

### 6.3.1 Replacement therapy

#### **Fludrocortisone**

Used in adrenocortical insufficiency and occasionally is used for the unlicensed indication of postural hypotension.

**Dose:** 50-300 micrograms daily.

### 6.3.2 Glucocorticoid therapy

#### **Prednisolone**

Used in many inflammatory and allergic disorders.

**Dose:** Dependent on condition and route of administration – see BNF for dosing information.

#### **Hydrocortisone**

Used in adrenocortical insufficiency, shock and hypersensitivity reactions.

**Dose:** Replacement therapy (oral), 20-30mg daily in divided doses.

#### **Dexamethasone**

Uses include suppression of inflammatory and allergic disorders, cerebral oedema associated with malignancy, croup and chemotherapy-induced nausea and vomiting.

**Dose:** Orally, usual range in adults 0.5-10mg daily. See BNF for further dosing information.

## 6.4 Sex hormones

### 6.4.1 Female sex hormones

#### 6.4.1.1 Oestrogens and HRT

The choice of HRT preparation depends on many factors. Patient preference, contributing risk factors for adverse events and the patient's physical condition are just some that may need to be considered.

Women with an intact uterus normally need a preparation with oestrogen and progestogen. Those women who have only recently stopped menstruating (within the last year) should consider a cyclical preparation. They should not receive a combined continuous preparation or tibolone.

Women without a uterus may receive oestrogen alone, though there are some circumstances when the addition of progestogen is required.

Transdermal routes of administration should be considered in those women who are not appropriate, or cannot tolerate oral preparations.

#### Oral oestrogen replacement

##### 1 Elleste-Solo®

Estradiol 1mg.

**Dose:** 1 tablet (1mg) daily continuously. See BNF and product literature for further details.

##### Climaval®

Estradiol valerate 1mg.

**Dose:** 1 tablet (1mg) daily continuously. See BNF and product literature for further details.

#### Topical oestrogen replacement

##### Evorel®

Transdermal patch containing estradiol. Available in 25, 50, 75 and 100 micrograms/24hour strengths.

**Dose:** 1 patch to be applied twice weekly. See BNF and product literature for further dosing information.

#### Local oestrogen therapy

Only for patients with symptoms of vaginal atrophy. See section 7.2.1.

#### Cyclical oral HRT

##### Elleste-Duet®

Available as estradiol 1mg or 2mg with norethisterone 1mg.

**Dose:** See BNF or product literature for further dosing information.

##### Femoston®

Available as 1/10 and 2/10 strengths. Contains estradiol and dydrogesterone,

**Dose:** See BNF or product literature for further dosing information.

### Cyclical topical HRT

#### **Evorel® Sequi**

Combination of Evorel® 50 patches (containing estradiol) and Evorel® Conti patches (estradiol and norethisterone acetate).

**DOSE:** 1 Evorel 50 patch to be applied twice a week for two weeks followed by 1 Evorel Conti patch to be applied twice a week for two weeks. See BNF and product literature for further dosing information.

### Combined continuous oral HRT

#### **Kliovance®**

Estradiol and norethisterone acetate.

**DOSE:** 1 tablet daily. See BNF and product literature for further dosing information.

#### **Elleste-Duet® Conti**

Estradiol and norethisterone acetate.

**DOSE:** 1 tablet daily. See BNF and product literature for further dosing information.

#### **Femoston®-Conti**

Estradiol and dydrogesterone.

**DOSE:** 1 tablet daily. See BNF and product literature for further dosing information.

### Combined continuous topical HRT

#### **Evorel® Conti**

Estradiol and norethisterone acetate.

**DOSE:** 1 patch to be applied twice a week. See BNF and product literature for further dosing information.

### Tibolone

#### **Tibolone**

Used for the short-term treatment of symptoms of oestrogen deficiency, tibolone is not suitable for use in the pre-menopausal stage or within 12 months of the last menstrual period (unless being treated with gonadotrophin releasing hormone analogues).

**DOSE:** 2.5mg daily.

### 6.4.1.2 Progestogens

#### **Norethisterone**

**DOSE:** Dependent on indication. See BNF for dosing information.

#### **Dydrogesterone**

**DOSE:** Dependent on indication. See BNF for dosing information.

## 6.5 Hypothalamic and pituitary hormones and anti-oestrogens

### 6.5.1 Hypothalamic and anterior pituitary hormones and anti-oestrogens

#### **Clomifene citrate**

**DOSE:** 50mg daily for 5 days, starting within about 5 days of onset of menstruation (preferably 2nd day) or at any time if cycles have ceased. See BNF for further dosing information.

### 6.5.2 Posterior pituitary hormones and antagonists

#### **Desmopressin**

Used for treatment of diabetes insipidus, primary nocturnal enuresis and postoperative polyuria or polydipsia. Due to the high level of adverse reactions, desmopressin nasal spray is no longer indicated for primary nocturnal enuresis. Oral formulations should be considered as an alternative.

**RESTRICTIONS:** Desmopressin tablets are restricted to use in patients unable to use intramuscular preparations. Intravenous desmopressin is restricted to use in specialist haemophilia centres.

**DOSE:** Dependent on indication and preparation. See BNF for dosing information.

## 6.6 Drugs affecting bone metabolism

See the Scottish Intercollegiate Guideline Network (SIGN) guideline on the *Management of Osteoporosis* SIGN 71.

### 6.6.2 Bisphosphonates and other drugs affecting bone metabolism

#### **Alendronic acid**

First line bisphosphonate for osteoporosis. The 70mg once a week preparation is the preferred formulation (except in men, where only the daily 10mg preparation is licensed).

**DOSE:** Postmenopausal osteoporosis, 70mg once a week on an empty stomach (at least 30 minutes before breakfast and other medicines whilst sitting or standing). See BNF for further information.

#### **Risedronate sodium**

Risedronate is the second line bisphosphonate for osteoporosis and should only be used in patients who fail to tolerate alendronic acid because of gastrointestinal side effects, despite the addition of a proton pump inhibitor. Treatment of osteoporosis in men at high risk of fractures remains non-Formulary.

**DOSE:** Postmenopausal osteoporosis, 35mg once a week (at least 30 minutes before breakfast and other medicines whilst sitting or standing). See BNF for further information.

## 7 Obstetrics, gynaecology and urinary-tract disorders

### 7.2 Treatment of vaginal and vulval conditions

#### 7.2.1 Preparations for vaginal atrophy

##### Local oestrogen therapy

##### **Estradiol vaginal tablets (Vagifem®)**

Dose: Insert 1 tablet daily for two weeks then reduce to 1 tablet twice weekly. Discontinue after 3 months to assess need for further treatment. See BNF and product literature for further dosing information.

##### **Estriol 0.01% intravaginal cream (Ortho-Gynest®)**

This preparation contains arachis (peanut) oil and is not suitable for patient with peanut allergy. This preparation also damages latex condoms.

Dose: Insert 1 applicatorful daily, preferably in the evening, reduced to 1 applicatorful twice a week. Attempts to reduce or discontinue should be made at 3-6 month intervals with examination. See BNF and product literature for further dosing information.

#### 7.2.2 Vaginal and vulval infections

Fungal infections are treated primarily with pessaries and/or cream.

##### **Clotrimazole**

Clotrimazole 1% cream and 500mg pessary.

Dose: Candidal vulvitis, apply 1% cream to affected area two to three times daily and insert one 500mg pessary at night as a single dose. See BNF for further dosing information.

### 7.3 Contraceptives

Women requiring contraception should be given information about and offered a choice of all methods, including long-acting reversible contraception (LARC) methods. See the NHSGGC *Guideline for Contraceptive Prescribing in Primary Care* for more detail (available on the ADTC website, [www.ggcformulary.scot.nhs.uk](http://www.ggcformulary.scot.nhs.uk)). Also see NICE CG30 which offers further guidance on prescribing long-acting reversible contraception.

#### 7.3.1 Combined hormonal contraceptives

##### Standard strength 2nd generation

##### **Microgynon® 30**

Dose: 1 tablet daily for 21 days, subsequent courses repeated after a 7-day tablet-free interval.

##### **Loestrin® 30**

Dose: 1 tablet daily for 21 days, subsequent courses repeated after a 7-day tablet-free interval.

**Standard strength 3rd generation****Marvelon®**

**DOSE:** 1 tablet daily for 21 days, subsequent courses repeated after a 7-day tablet-free interval.

**Cilest®**

**DOSE:** 1 tablet daily for 21 days, subsequent courses repeated after a 7-day tablet-free interval.

**Low strength 2nd generation****Loestrin® 20**

**DOSE:** 1 tablet daily for 21 days, subsequent courses repeated after a 7-day tablet-free interval.

**Low strength 3rd generation****Mercilon®**

**DOSE:** 1 tablet daily for 21 days, subsequent courses repeated after a 7-day tablet-free interval.

Co-cyprindiol (Dianette®) is licensed for the treatment of severe acne and hirsutism, but not as a contraceptive. It is occasionally used as a contraceptive (unlicensed indication) when acne is present. CSM advice relating to co-cyprindiol and the risk of venous thromboembolism exists (see BNF). Formulary indications for co-cyprindiol can be found in section 13.6. For current advice about interactions between contraceptives and other medicines, refer to BNF.

**Emergency hormonal contraception****Levonorgestrel (Levonelle® 1500)**

**DOSE:** 1.5mg as a single dose as soon as possible following intercourse (preferably within 12 hours, but no later than 72 hours).

**7.3.2 Progestogen-only contraceptives****7.3.2.1 Oral progestogen-only contraceptives****Micronor®**

**DOSE:** 1 tablet daily at the same time each day, starting on day 1 of cycle then continuously.

**Cerazette®**

Cerazette® may have advantages in women with a history of poor compliance with a traditional progestogen-only contraceptive; however, it is significantly more expensive.

**RESTRICTIONS:** Restricted to use in patients in whom oestrogen containing contraceptives are not tolerated or are contra-indicated.

**DOSE:** 1 tablet daily at the same time each day, starting on day 1 of cycle then continuously.

**Femulen®**

**DOSE:** 1 tablet daily at the same time each day, starting on day 1 of cycle then continuously.

### 7.3.2.2 Parenteral progestogen-only contraceptives

#### Injectable preparations

##### **Medroxyprogesterone acetate (Depo-Provera®)**

Dose: 150mg by deep IM injection within the first 5 days of cycle, repeated every 12 weeks. See BNF for further dosing information.

#### Implants

##### **Implanon®**

Dose: See BNF for full dosing information.

### 7.3.2.3 Intra-uterine progestogen-only device

##### **Mirena®**

Dose: See BNF for full dosing information.

### 7.3.4 Contraceptive devices (copper-based IUDs)

#### **TT 380 Slimline®**

First choice device – device can be left in place for up to 10 years.

#### **Nova-T 380®**

Device must be replaced after 5 years.

## 7.4 Drugs used for genito-urinary disorders

### 7.4.1 Drugs for urinary retention

#### Alpha blockers

##### **Tamsulosin MR capsules**

Dose: MR capsules, 400 micrograms daily as a single dose (usually in the morning).

#### 5 $\alpha$ -reductase Inhibitors

##### **Finasteride**

Used for benign prostatic hyperplasia, often in combination with an alpha blocker.

Dose: 5mg daily. Review treatment after 6 months. See BNF for further information.

### 7.4.2 Drugs for urinary frequency, enuresis and incontinence

Refer to SIGN Guideline no. 79 (updated September 2005) for the *Management of Urinary Incontinence in Primary Care* and NICE Clinical Guideline 40: *The Management of Urinary Incontinence in Women* (October 2006).

#### **Oxybutynin (standard release)**

Available as standard release tablets and elixir.

Dose: Initially 2.5-5mg two to three times daily, increased if necessary to a maximum of 5mg four times a day.

If the patient cannot tolerate standard release oxybutynin, further Total Formulary options should be considered as second line alternatives.

Refer to BNF for dosing information.

### Treatment options for stress incontinence

Pelvic floor exercises should be considered first line treatment for stress incontinence in line with NHSGGC protocol.

#### Duloxetine

For moderate to severe stress urinary incontinence in addition to pelvic floor exercises.

RESTRICTIONS: Duloxetine should only be used as part of an overall management strategy for stress urinary incontinence in addition to pelvic floor muscle training and subject to use according to NHSGGC protocol.

**DOSE:** 40mg twice daily, assessed after 2-4 weeks. See BNF for further dosing information.

### 7.4.5 Drugs for erectile dysfunction

#### Sildenafil

RESTRICTIONS: Available for hospital and community prescribing but NHS prescribing by GPs is limited to nationally determined patient groups and schedule 11 restrictions. Prescribing for patients with severe distress must remain with the hospital specialist. Consult product literature for drug interactions prior to prescribing.

**DOSE:** Initially 50mg approximately 1 hour before sexual activity. Subsequent doses adjusted to response (25-100mg as a single dose as needed). Maximum 1 dose in 24 hours.

## 9 Nutrition and blood

### 9.1 Anaemias and some other blood disorders

#### 9.1.1 Iron-deficiency anaemias

##### 9.1.1.1 Oral iron

###### **Ferrous fumarate**

Dose: Prophylactic, 322mg daily or 210mg three times daily. Therapeutic, 322mg twice daily or 210-420mg three times daily. See BNF for further details and other preparations.

###### **Ferrous sulphate**

Dose: Prophylactic, 200mg daily. Therapeutic, 200mg two to three times daily. See BNF for further details.

###### **Sodium ferredetate**

Liquid preparation previously known as sodium ironedetate.

Dose: 5ml increasing gradually to 10ml three times daily. See BNF for further dosing information.

#### 9.1.2 Drugs used in megaloblastic anaemias

##### **Folic acid**

Used for folate deficiency and prophylaxis for the prevention of neural tube defects in pregnancy. To prevent first occurrence of neural tube defects, women planning a pregnancy should take folic acid 400 micrograms daily before conception and during the first 12 weeks of pregnancy. Women, who suspect they are pregnant but have not been taking folic acid, should start at once and continue until the 12th week of pregnancy. Women with a previous pregnancy affected by a neural tube defect should take folic acid 5mg daily. Women taking antiepileptic drugs may also be advised to take higher doses of folic acid.

Dose: Folate deficiency, initially 5mg daily for 4 months. Pregnancy, 400 micrograms daily for the first 12 weeks of pregnancy (but see notes above). See BNF for full dosing information.

##### **Hydroxocobalamin**

Intramuscular injection for vitamin B12 deficiency.

Dose: Dependent on indication. See BNF for information.

## 9.2 Fluids and electrolytes

### 9.2.1 Oral preparations for fluid and electrolyte imbalance

#### Potassium chloride

Available in several formulations:

- ▶ effervescent tablets (Sando-K®), each containing 12mmol of K+.
- ▶ syrup (Kay-Cee-L®) containing 1mmol K+ in 1ml.
- ▶ MR tablets (Slow-K®), each containing 8mmol of K+.

A potassium-sparing diuretic and potassium supplements should not be used concomitantly because of the risk of hyperkalaemia.

RESTRICTIONS: Due to the risk of oesophagitis, Slow K® should only be used in patients unable to tolerate liquid or effervescent preparations.

**DOSE:** Dependent on indication and preparation. See BNF for details.

#### Rapolyte®

Oral rehydration salts.

**DOSE:** According to fluid loss, see BNF for further details.

## 9.4 Oral nutrition

### 9.4.1 Foods for special diets

For prescribable gluten-free, see gluten-free products in the Borderline Substance section (Part XV) of the English Drug Tariff (available at [www.ppa.org.uk](http://www.ppa.org.uk)). A prescribing guideline for gluten-free products can be obtained from the prescriptions link within the Healthcare Professionals section of Coeliac UK's website (available at [www.coeliac.org.uk](http://www.coeliac.org.uk)).

### 9.4.2 Enteral nutrition

These are normally supplementary to food and should be taken between meals evenly spread over the day. An effective dose is 1-2 bottles daily for a maximum of 2-3 months. Patients should be assessed regularly for compliance and continued need. ACBS guidelines apply.

#### Fortisip® Bottle

A milk based supplement (200ml).

#### Fortifresh®

A yoghurt style supplement (200ml).

#### Fortijuice®

A juice based supplement.

May not be suitable for patients with diabetes (200ml).

#### Fortisip® Multi-Fibre

A milk based supplement with added fibre.

Patients prescribed a fibre containing supplement may need their laxative requirement reviewed. See NHSGGC primary care prescribing guidelines (200ml).

## 9.5 Minerals

### 9.5.1 Calcium and magnesium

#### 9.5.1.1 Calcium supplements

Different calcium preparations have different uses. Oral preparations are generally utilised when dietary intake is deficient, calcium chloride injection is often used in emergency situations to temporarily reduce the toxic effects of hyperkalaemia and calcium gluconate injection is often used in hypocalcaemic tetany.

For calcium and vitamin D preparations, see section 9.6.4.

#### **Calcium carbonate**

Used as a dietary calcium supplement.

**Dose:** See BNF for dosing information.

#### **Calcium chloride**

Injectable calcium preparation.

**Dose:** Dependent on use, see BNF for dosing information.

#### **Calcium gluconate**

Injectable calcium preparation.

**Dose:** Dependent on use, see BNF for dosing information.

### 9.5.2 Phosphorus

#### 9.5.2.1 Phosphate supplements

##### **Phosphate -Sandoz®**

Oral phosphate supplement used in vitamin D-resistant rickets and hypercalcaemia.

**Dose:** 4-6 tablets daily. See BNF for full dosing information.

#### 9.5.2.2 Phosphate-binding agents

##### **Calcium acetate**

**RESTRICTIONS:** Initiation should be on the advice of a specialist.

Used as a phosphate binder and taken with meals.

**Dose:** According to patient requirements. See BNF for further information.

## 9.6 Vitamins

### 9.6.2 Vitamin B group

#### **Thiamine**

**Dose:** Mild chronic deficiency, 10-25mg daily. See BNF for further dosing information.

#### **Pabrinex®**

Parenteral vitamins B and C for rapid correction of severe depletion or malabsorption.

**Dose:** See BNF for dosing information.

### 9.6.3 Vitamin C

#### **Ascorbic acid**

Used in the prevention and treatment of scurvy.

**DOSE:** Prophylaxis, 25-75mg daily. Treatment, not less than 250mg daily in divided doses.

### 9.6.4 Vitamin D

#### **Alfacalcidol**

Used for vitamin D therapy in those patients with severe renal impairment.

**DOSE:** Initially 1 microgram daily (500 nanograms in the elderly) adjusted to avoid hypercalcaemia. See BNF for further information.

#### **Calcium and vitamin D preparations**

##### **Adcal D<sub>3</sub>**<sup>®</sup>

Calcium and vitamin D preparation (equivalent to 600mg calcium and 400 units of vitamin D). Adcal D<sub>3</sub><sup>®</sup> Dissolve should only be used in patients who cannot tolerate other calcium and vitamin D preparations.

**DOSE:** 1 tablet once or twice a day. See BNF for further dosing information.

##### **Calcichew D<sub>3</sub> Forte**<sup>®</sup>

Calcium and vitamin D preparation (equivalent to 500mg calcium and 400 units of vitamin D).

**DOSE:** 1 tablet once or twice a day. See BNF for further dosing information.

##### **Calceos**<sup>®</sup>

Calcium and vitamin D preparation (equivalent to 500mg calcium and 400 units of vitamin D).

**DOSE:** 1 tablet once or twice a day. See BNF for further dosing information.

##### **Calcium and ergocalciferol**

Equivalent to 97mg calcium and 400 units of vitamin D. Due to low amounts of calcium, this preparation is only useful in patients who require vitamin D substitution, but do not require additional calcium.

**DOSE:** See BNF for dosing information.

### 9.6.5 Vitamin E

#### **⊕ Alpha tocopheryl acetate**

Available as a 500mg/5ml suspension.

**DOSE:** Malabsorption in cystic fibrosis, 100-200mg daily. See BNF for further dosing information.

### 9.6.6 Vitamin K

#### **Menadiol sodium phosphate**

A water soluble oral preparation to prevent vitamin K deficiency in malabsorption syndromes. Contraindicated in late pregnancy.

**DOSE:** 10mg daily. See BNF for further dosing information.

**Phytomenadione**

Used for the prophylaxis and treatment of vitamin K deficiency bleeding and for the reversal of the anticoagulant effect of warfarin. It is available as tablets and as injection.

**Dose:** See BNF for dosing information.

**9.6.7 Multivitamin preparations****Vitamin capsules BPC**

**Dose:** Usually 1 capsule daily.

**Abidec®**

Contains vitamin groups A, B, C and D.

**Dose:** Dependent on age of child. See BNF for further dosing information.



## 10 Musculoskeletal and joint diseases

### 10.1 Drugs used in rheumatic diseases and gout

#### 10.1.1 Non-steroidal anti-inflammatory drugs

The differences in anti-inflammatory activity between NSAIDs are small, but there is considerable variation in individual patient response. About 60% of patients respond to any NSAID with an analgesic response within a week and an anti-inflammatory response within three weeks. The main difference between NSAIDs is in the incidence and type of side effects. In osteoarthritis, there is only a minor inflammatory component, and paracetamol (4g daily) has been shown to be effective in many patients. NSAIDs should only be used when there is an inflammatory flare up.

##### Traditional NSAIDs

The CSM advise that to minimise the risk to cardiovascular safety associated with some NSAIDs, the lowest effective dose should be prescribed for the shortest necessary duration.

##### **I** Ibuprofen

RESTRICTIONS: Use of MR preparations is restricted (see notes below).

**Dose:** 400mg-600mg three times daily with or after food. See BNF for further dosing information.

##### **I** Diclofenac

RESTRICTIONS: Use of MR preparations is restricted (see notes below).

**Dose:** Orally, 75-150mg daily in 2-3 divided doses. See BNF for further dosing information.

##### **I** Indometacin

RESTRICTIONS: Acute attacks of gout.

**Dose:** Gout, 150-200mg daily in divided doses (with or after food).

##### **N** Naproxen

There is a significant cost difference between the tablets and the enteric coated tablets.

**Dose:** Acute musculoskeletal disorders, 500mg initially then 250mg every six to eight hours as required. Rheumatic disease, 500mg-1g daily in 1-2 divided doses. For further dosing information, see BNF.

Modified-release preparations of any NSAID should be restricted to patients with early morning stiffness or compliance problems as they encourage regular/higher doses of NSAIDs and do not afford flexibility in reducing the dose.

### Selective COX-2 inhibitors

In light of recent concerns regarding cardiovascular safety, selective Cox-2 inhibitors should only be considered for use in patients with a high risk of GI bleeding and perforation after an assessment of the patient's cardiac risk (see BNF for details). The CSM has also advised that selective Cox-2 inhibitors should not be prescribed for patients with existing IHD or cerebrovascular disease (see BNF for details). For patients who require a proton pump inhibitor, a traditional NSAID should be used in preference to a selective Cox-2.

#### Etodolac

**DOSE:** 600mg daily in 1-2 divided doses.

#### Celecoxib

**RESTRICTIONS:** Use in ankylosing spondylitis remains non-Formulary

**DOSE:** Osteoarthritis, 200mg daily in 1-2 divided doses.

### 10.1.2 Corticosteroids

For oral preparations, see section 6.3.

#### Methylprednisolone

**DOSE:** Dependent on site, preparation and indication. See BNF and product literature for dosing information.

### 10.1.3 Drugs which suppress the rheumatic disease process

#### Sulfasalazine

The CSM has advised that patients should be advised to report any unexplained bleeding, bruising, purpura, sore throat, fever or malaise (potential signs of blood dyscrasia).

**DOSE:** On specialist advice as EC tablets, 500mg daily increased by 500mg at intervals of 1 week to a maximum of 2-3g daily in divided doses. See BNF for further dosing information.

#### Ⓢ Hydroxychloroquine

**DOSE:** On specialist advice, initially 400mg daily in divided doses, maintenance 200-400mg daily. See BNF for further dosing information.

#### Ⓢ Methotrexate

Oral methotrexate should only be prescribed as 2.5mg tablets to avoid patient confusion. The dose should be clearly specified on the dispensing label. In view of reports of blood dyscrasias (including fatalities) and liver cirrhosis with low-dose methotrexate, the CSM has advised:

- ▶ full blood count and renal and liver function tests before starting treatment and repeated weekly until therapy stabilised, thereafter patients should be monitored every 2-3 months.
- ▶ that patients should be advised to report all symptoms and signs suggestive of infection, especially sore throat.

**Dose:** Moderate to severe rheumatoid arthritis, orally 7.5mg once a week adjusted according to response (max weekly dose 20mg). See BNF for further dosing information.

#### 10.1.4 Gout and cytotoxic-induced hyperuricaemia

##### Acute attacks of gout

Acute attacks of gout are generally treated with high doses of NSAIDs (see section 10.1.1).

##### Colchicine

**Dose:** Treatment of gout, initially 1mg, then 500 micrograms no more frequently than every 4 hours until pain relieved or vomiting or diarrhoea occur, maximum 6mg per course and courses should not be repeated within 3 days. See BNF for further dosing information.

##### Long-term control of gout

##### Allopurinol

Allopurinol alone should not be initiated during the acute phase as it may precipitate further attacks or make the gout worse.

**Dose:** Initially 100mg daily after food. See BNF for further dosing information.

### 10.2 Drugs used in neuromuscular disorders

#### 10.2.1 Drugs which enhance neuromuscular transmission

##### ⊕ Pyridostigmine bromide

Used for myasthenia gravis.

**Dose:** Orally, 30-120mg at suitable intervals throughout the day, total daily dose 300mg-1.2g. See BNF for full dosing information.

#### 10.2.2 Skeletal muscle relaxants

##### Baclofen

**RESTRICTIONS:** Baclofen injection is restricted to use in specialist units only. Slow withdrawal of baclofen over one to two weeks is recommended.

**Dose:** Orally, 5mg three times a day, with or after food, gradually increased to a maximum of 100mg daily and discontinued if no benefit seen within 6 weeks. See BNF for further information.

##### Quinine

Available as quinine sulphate and quinine bisulphate tablets, oral quinine is used primarily for nocturnal leg cramps. Patients should be reviewed regularly to establish benefit.

**Dose:** 200-300mg at bedtime. See BNF for further dosing information.

## 10.3 **Drugs used for the relief of soft-tissue inflammation**

### 10.3.2 **Rubefacients and other topical antirheumatics**

#### **MoveLat®**

Rubefacients act by counter-irritation, so pain is relieved by producing other irritation to distract away from the pain.

**Dose:** Apply to the affected areas four times daily. See product literature for further information.

## 11 Eye

Many of the preparations listed are available in preservative-free formulations. These formulations should be restricted to patients who have proven sensitivity to preservatives.

### 11.3 Anti-infective eye preparations

#### 11.3.1 Antibacterials

##### **Chloramphenicol**

Available as 0.5% drops (which must be stored in a fridge), and 1% eye ointment.

**Dose:** Eye drops, apply 1 drop every two hours initially then reduce frequency as infection is controlled and continue for 48 hours after healing. Eye ointment, apply either at night (if eye drops used during the day) or three to four times daily (if eye ointment used alone). See BNF for further dosing information.

##### **Fusidic acid**

Available as modified-release 1% viscous eye drops. Fusidic acid should only be used for staphylococcal infections such as blepharitis, not bacterial conjunctivitis.

**Dose:** Apply 1 drop to the affected eye(s) twice daily. See BNF for further dosing information.

##### **Gentamicin**

Available as 0.3% eye drops.

**Dose:** 1 or 2 drops up to six times a day, or more frequently if required. See BNF and product literature for further dosing information.

#### 11.3.3 Antivirals

##### **Aciclovir**

Available as 3% eye ointment.

**Dose:** Apply five times daily and continue for at least 3 days after complete healing. See BNF for further dosing information.

### 11.4 Corticosteroids and other anti-inflammatory preparations

#### 11.4.1 Corticosteroids

Used for local short-term treatment of inflammation, corticosteroid eye drops should only usually be initiated under expert supervision.

#### 11.4.2 Other anti-inflammatory preparations

##### **Sodium cromoglicate**

Used primarily for allergic conjunctivitis.

**Dose:** Apply 1 drop to the affected eye(s) four times daily. See BNF for further dosing information.

## 11.5 Mydriatics and cycloplegics

### Antimuscarinics

#### Cyclopentolate

Used to dilate the pupil to facilitate examination.

**DOSE:** For dosing information, see BNF or product literature.

#### Tropicamide

Used to facilitate fundoscopy.

**DOSE:** For dosing information, see BNF or product literature.

## 11.6 Treatment of glaucoma

Medicines for the treatment of glaucoma should only be initiated by, or on the advice of ophthalmologists or similar specialists. It is appropriate though for General Practitioners and other prescribers to continue the repeat prescribing of these medicines under the guidance of a specialist.

## 11.8 Miscellaneous ophthalmic preparations

### 11.8.1 Tear deficiency, ocular lubricants and astringents

#### Hypromellose

Hypromellose 0.3% is considered the first line treatment option for patients complaining of 'dry eyes' or tear deficiency.

**DOSE:** 1 drop into the affected eye(s) when required. See BNF for further dosing information.

#### Viscotears®

**DOSE:** Apply three to four times daily as required.

#### Lacri-Lube®

**DOSE:** See BNF and product literature for dosing information.

## 12 Ear, nose and oropharynx

### 12.1 Drugs acting on the ear

#### 12.1.1 Otitis externa

##### **Betamethasone sodium phosphate**

0.1% drops that can be used in ear, eye or nose.

**Dose:** For otitis externa, apply 2-3 drops every two to three hours, reducing frequency when relief obtained. See BNF for further dosing information.

##### **Betnesol-N®**

A combination of betamethasone and neomycin. Drops can be used in ear, eye or nose.

**Dose:** Apply 2-3 drops into the affected ear(s) three to four times daily. See BNF for further dosing information.

##### **Gentisone HC®**

A combination of hydrocortisone and gentamicin.

**Dose:** 2-3 drops into the affected ear(s) three to four times daily and at night.

##### **Otomize®**

Ear spray containing dexamethasone and neomycin.

**Dose:** 1 spray into affected ear(s) three times a day.

#### 12.1.3 Removal of ear wax

In most cases, simple remedies such as sodium bicarbonate or olive oil are effective and less likely to cause irritation. See the BNF for further advice about the use of these remedies.

##### **Sodium bicarbonate**

Ear drops 5%.

**Dose:** See BNF for dosing information.

##### **Olive oil**

Ear drops (olive oil in a suitable container).

**Dose:** See BNF for dosing information.

##### **Cerumol®**

**Dose:** See BNF or summary of product literature for dosing information.

## 12.2 Drugs acting on the nose

### 12.2.1 Drugs used in nasal allergy

#### **Beclometasone dipropionate**

Nasal spray, 50 micrograms/spray.

**DOSE:** 2 sprays into each nostril twice daily. When symptoms controlled, reduce dose to 1 spray in each nostril twice daily. See BNF for further dosing information.

#### **Budesonide**

Nasal spray, 100 micrograms/spray or 64 micrograms/spray.

**DOSE:** Dependent on preparation, see BNF or product literature for dosing information.

### 12.2.2 Topical nasal decongestants

#### **Xylometazoline hydrochloride**

Available as 0.1% nasal drops and a 0.1% nasal spray. Maximum duration for treatment is 7 days as further use can cause rebound congestion.

**DOSE:** Drops, 2-3 drops into each nostril two to three times daily when required. Spray, 1 spray into each nostril two to three times daily when required.

### 12.2.3 Nasal preparations for infection

#### **Naseptin®**

Cream containing chlorhexidine and neomycin.

**DOSE:** For eradication of nasal staphylococci, apply to nostrils four times a day for 10 days. For prevention, apply twice daily. See BNF for further dosing information.

#### **Mupirocin (Bactroban Nasal®)**

**DOSE:** For eradication of staphylococci (including MRSA), apply two to three times daily to the inner surface of each nostril. See BNF for further dosing information.

## 12.3 Drugs acting on the oropharynx

### 12.3.1 Drugs for oral ulceration and inflammation

#### **Benzydamine hydrochloride**

Used for painful inflammatory conditions of the mouth and throat.

Available as oral rinse and spray.

**DOSE:** Oral rinse: 15ml (diluted with water if stinging occurs) every 1½ to 3 hours as required, usually for not more than 7 days. For other preparations and further dosing information, see BNF.

#### **Adcortyl in Orabase®**

Corticosteroid preparation for oral lesions.

**DOSE:** Apply a thin layer two to four times daily. See BNF for further dosing information.

### 12.3.2 Oropharyngeal anti-infective drugs

#### **Nystatin**

Dose: Suspension, 100,000 units (equivalent to 1ml) four times daily after food, usually for 7 days. See BNF for further dosing information.

#### **Miconazole**

Oral gel. The muco-adhesive buccal tablets are non-Formulary

Dose: Dependent on use. Oral fungal infections, place 5-10ml in mouth after food four times daily, continued for 48 hours after lesions have healed. See BNF for further dosing information.

### 12.3.4 Mouthwashes, gargles and dentifrices

#### **Chlorhexidine gluconate**

Dose: Dependent on preparation. 0.2% mouthwash, for oral hygiene and plaque inhibition, rinse with 10ml for about 1 minute twice daily. See BNF for further dosing information.



## 13 Skin

Non-proprietary products required for extemporaneous preparation for individual patients historically are not included in the Formulary.

### 13.2 Emollient and barrier preparations

#### 13.2.1 Emollients

##### **Diprobase®**

Dose: Apply to affected area when required.

##### **Epaderm®**

Dose: Apply to affected area when required.

##### **Aqueous cream**

Often also used as a soap substitute.

Dose: Apply to affected area when required.

#### 13.2.1.1 Emollient bath additives

##### **Hydromol Emollient®**

Dose: Add to bath as directed. See BNF and product literature for further dosing information.

##### **Oilatum® Plus**

Dose: Add to bath as directed. See BNF and product literature for further dosing information.

#### 13.2.2 Barrier preparations

##### **Sudocrem®**

Useful for nappy rash and pressure sores.

Dose: Apply a thin layer to the affected area as necessary. See BNF and product literature for further dosing information.

### 13.3 Topical local anaesthetics and antipruritics

##### **Crotamiton (Eurax®)**

Dose: For pruritus, apply two to three times daily.

### 13.4 Topical corticosteroids

Topical corticosteroids can be classified according to their potency. For guidance on quantities to prescribe, refer to the BNF. Prolonged use of steroids should generally be avoided, and if long-term use is necessary, regular review of treatment should be carried out. See BNF for further information.

#### **Mildly potent**

##### **Hydrocortisone**

Dose: Apply thinly to the affected area once or twice a day.

**Moderately potent****█ Clobetasone butyrate (Eumovate®)**

**DOSE:** Apply thinly to the affected area once or twice a day.

**Alclometasone dipropionate (Modrasone®)**

**DOSE:** Apply thinly to the affected area once or twice a day.

**Potent****Betamethasone valerate (Betnovate®)**

**DOSE:** Apply thinly to the affected area once or twice a day.

**Very potent**

Very potent topical steroids should only be initiated on the advice of a dermatologist.

**Mildly potent with anti-infective agents****Daktacort®**

Hydrocortisone and miconazole.

**DOSE:** Apply thinly to the affected area once or twice a day. See BNF and product literature for further dosing information.

**Moderately potent with anti-infective agents****Trimovate®**

Clobetasone butyrate, oxytetracycline and nystatin.

**DOSE:** Apply to the affected area up to four times a day. See BNF and product literature for further dosing information.

**Potent with anti-infective agents****Betnovate-C®**

Betamethasone valerate and clioquinol.

**DOSE:** Apply to the affected area two to three times daily until improvement occurs, then reduce frequency. See BNF and product literature for further dosing information.

**13.5 Preparations for eczema and psoriasis****13.5.1 Preparations for eczema****Ichthammol ointment BP**

**DOSE:** Apply one to three times daily.

**Zinc paste and ichthammol bandage BP**

**DOSE:** Use as directed. See BNF for further information.

**13.5.2 Preparations for psoriasis****Alphosyl HC®**

Contains coal tar and hydrocortisone.

**DOSE:** Apply thinly once or twice daily.

**Calcipotriol**

**Dose:** Apply to the affected areas once or twice daily up to a maximum of 100g weekly. See BNF for further dosing information.

**Coal tar, salicylic acid and sulphur**

Brands available: Cocois® or Sebco®

Used for psoriasis of the scalp.

**Dose:** Apply to the scalp once weekly (daily in severe cases) and shampoo off after 1 hour. See BNF and individual product preparations for further information.

**Calcipotriol and betamethasone (Dovobet®)**

**RESTRICTIONS:** Use is restricted to physicians experienced in treating inflammatory skin disease. The duration of treatment should not exceed 4 weeks.

**Dose:** Apply once daily to up to 30% of body surface for 4 weeks maximum. See BNF and product literature for further dosing information.

**13.5.3 Drugs affecting the immune response****Ⓢ Methotrexate**

**RESTRICTIONS:** Restricted to use under specialist dermatological supervision.

**Dose:** Usual dose of methotrexate when used for treatment of psoriasis is 10 to 25mg once weekly by mouth, adjusted to response. See BNF for further dosing information.

**Ⓢ Ciclosporin (Cyclosporin)**

Can be used for severe atopic dermatitis or severe psoriasis when conventional therapy has failed.

**RESTRICTIONS:** Restricted to use under specialist dermatological supervision.

**Dose:** Dependent on indication. See BNF for dosing information.

**13.6 Acne and rosacea**

Inflammatory lesions associated with rosacea may be responsive to oral therapy or topical metronidazole (section 13.10.1.2).

**13.6.1 Topical preparations for acne****Benzoyl peroxide**

Brands include PanOxyl®.

**Dose:** Dependent on product, but generally applied once or twice daily after washing. Lower-strength preparations should be used initially.

**Clindamycin**

Available as a 1% topical solution or lotion (Dalacin T®).

**Dose:** Apply twice daily.

**Zineryt®**

Contains erythromycin and zinc acetate.

**DOSE:** Apply twice daily.

**Erythromycin**

Stiemycin® is a 2% solution.

**DOSE:** Apply twice daily.

**13.6.2 Oral preparations for acne****Lymecycline**

**DOSE:** 408mg daily for at least 8 weeks.

**Erythromycin**

See section 5.1.5.

**DOSE:** Acne, 500mg twice daily. See BNF for further dosing information.

**Co-cyprindiol**

Brands include Dianette®.

Contains a mixture of cyproterone acetate and ethinylestradiol in a 2000:35 part ratio.

CSM advice (see BNF for full advice): Prescribers are reminded that the risk of venous thromboembolism is higher in women taking co-cyprindiol than those taking a low-dose combined oral contraceptive. It is licensed for severe acne and moderately severe hirsutism and should not be used solely for contraception. It is contraindicated in those with a personal or close family history of venous thromboembolism.

**DOSE:** 1 tablet daily for 21 days starting on day 1 of the menstrual cycle and repeated after a 7-day interval. See BNF for further dosing information.

**Oxytetracycline**

**DOSE:** 500mg twice daily. If no improvement after 3 months change to a different antibacterial agent.

**13.7 Preparations for warts and calluses****Occlusal®**

**DOSE:** Apply to the wart/verruca daily.

**13.8 Sunscreens and camouflagers****13.8.1 Sunscreen preparations**

Only sunblocks of factor 15 and over are prescribable on a GP10. ACBS guidelines apply.

**Sunsense® Ultra**

SPF 60. ACBS restrictions apply to prescribing. See BNF for details.

**DOSE:** Apply as a sunscreen as directed. See product literature for further information.

### 13.8.2 Camouflagers

#### **Veil®**

Available as a cover cream and finishing powder.  
ACBS restrictions apply to prescribing. See BNF for details.

### 13.9 Shampoos and other preparations for scalp and hair conditions

#### **Capasal®**

**Dose:** Scaly scalp disorders, including psoriasis, seborrhoeic dermatitis, dandruff and cradle cap, apply daily as necessary.

#### **Coal tar, salicylic acid and sulphur**

Brands available: Cocois® or Sebco®.  
See section 13.5.2.

#### **Polytar®**

**Dose:** Apply one to two times a week. See BNF for further dosing information.

### 13.10 Anti-infective skin preparations

#### 13.10.1 Antibacterial preparations

##### 13.10.1.1 Antibacterial preparations only used topically

#### **Mupirocin (Bactroban®)**

For nasal preparations, see section 12.2.3.  
**Dose:** Apply up to three times daily for up to 3 days.

#### **Silver sulfadiazine (Flamazine®)**

**Dose:** Burns, apply daily or more frequently if very exudative. Leg ulcers and pressure sores, apply daily or on alternate days. Finger tip injuries, apply every two to three days. See BNF and product literature for further dosing information.

##### 13.10.1.2 Antibacterial preparations also used systemically

#### **Fusidic acid (Fucidin®)**

For oral preparations, see section 5.1.7.  
**Dose:** Apply 3-4 times daily.

#### **Metronidazole**

For oral preparations, see section 5.1.11.  
Metronidazole is available in a range of topical preparations, some of which are licensed for acne rosacea. Consult BNF for further information.

**Dose:** Based on 0.75% gel, acute exacerbations of acne rosacea, apply thinly twice daily for 8 weeks (See BNF and individual preparation literature for further dosing information).

### 13.10.2 Antifungal preparations

#### **Clotrimazole 1%**

**Dose:** Apply two to three times daily.

#### **Miconazole 2% (Daktarin®)**

**Restrictions:** Excludes Daktarin® powder

**Dose:** Apply twice daily continuing for 10 days after lesions have healed. Nail infections; Apply one to two times daily.

### 13.10.3 Antiviral preparations

#### **Aciclovir**

For oral preparations, see 5.3.2.1 and for eye ointment, see 11.3.3.

**Dose:** Apply to lesions every four hours (five times daily) for 5-10 days starting at first sign of attack.

### 13.10.4 Parasiticial preparations

The Greater Glasgow and Clyde Head Lice Project guidance notes were updated in September 2006. The project allows community pharmacists to supply selected medicines for head lice management on the NHS for eligible patients. See [www.nhsggc.org.uk/cphi](http://www.nhsggc.org.uk/cphi) for further information. The current policy recommends the following preparations as first line agents for head lice.

#### **Malathion**

Prioderm® is the preferred malathion preparation except in those with eczema, asthma or young children when Derbac M® should be used.

**Dose:** Dependent on indication. See BNF and product literature for details.

#### **Phenothrin**

Full Marks® liquid is the preferred phenothrin preparation.

**Dose:** Dependent on indication. See BNF and product literature for details.

#### **Dimeticone 4% lotion (Hedrin®)**

Hedrin® does not contain a chemical insecticide, but works by encapsulating the head lice, preventing them from functioning.

**Dose:** Rub into hair and scalp and allow to dry naturally, shampoo after a minimum of 8 hours (or overnight) and repeat application after 7 days. See BNF and product literature for further information.

### 13.10.5 Preparations for minor cuts and abrasions

#### **Magnesium sulphate paste BP**

**Dose:** Apply under dressing.

## 13.11 Skin cleansers and antiseptics

### 13.11.1 Alcohols and saline

#### **Industrial methylated spirit BP**

Used for skin preparation prior to injection.

#### **Sodium chloride**

Sterile sodium chloride 0.9% is often used as an irrigation fluid for wounds and ulcers.

### 13.11.2 Chlorhexidine salts

#### **Chlorhexidine gluconate**

Brands include: Hibiscrub®, Hibisol®, Hydrex® and Unisept®. See individual preparation literature for appropriate uses and directions.

#### **Chlorhexidine/cetrimide (Tisept®)**

Used for general skin disinfection and wound cleansing.

### 13.11.4 Iodine

#### **Povidone-iodine**

Brands include: Savlon Dry Antiseptic®.

See individual preparation literature for appropriate uses and directions.

### 13.11.5 Phenolics

#### **Triclosan**

Available as a hand rub and bath concentrate.

Used for disinfection and pre-operative hand preparation. See individual preparation literature for appropriate uses and directions.

### 13.11.6 Oxidisers and dyes

#### **Hydrogen peroxide BP**

The 6% solution should be used for skin disinfection, particularly cleaning and deodorising of wounds and ulcers.

#### **Potassium permanganate**

Available as 0.1% solution, which should be diluted 1 in 10, and as Permitabs®, where 1 tablet dissolved in 4 litres of water provides a 0.01% solution. See BNF and product literature for further information.

## 13.12 Antiperspirants

### **Aluminium chloride hexahydrate**

Brands include Driclor® and Anhydrol Forte®.

**Dose:** See BNF and product literature for dosing information.



## Total Formulary medicines

Medicines in the following list may be subject to Formulary restrictions or uses for specific indications only (indicated in the restriction column). The full formulary status of the below medicines can be found on the ADTC website: [www.ggcformulary.scot.nhs.uk](http://www.ggcformulary.scot.nhs.uk).

### 1

- 1.1.1 **Aluminium hydroxide**  
**Co-magaldrox**  
**Asilone®**  
**Infacol®**
- 1.1.2 **Gastrocote®**  
**Gaviscon® Infant Dual Sachets**  
**Peptac®**
- 1.2 **Dicycloverine**  
**Propantheline**  
**Mebeverine**  
 Excluding mebeverine MR.  
 Ⓢ **Hyoscine butylbromide**  
**injection**  
**Peppermint oil capsules**  
**Domperidone**  
**Metoclopramide**
- 1.3.1 **Cimetidine**  
**Ranitidine**
- 1.3.3 **Sucralfate**
- 1.3.4 **Misoprostol**
- 1.3.5 **Omeprazole capsules**  
 Ⓢ **Omeprazole orodispersible**  
 Restricted for specialist initiation in patients with narrow-bore feeding tubes.  
**Lansoprazole capsules**  
 Ⓢ **Lansoprazole orodispersible**  
 Restricted for specialist initiation in patients with narrow-bore feeding tubes.
- 1.4.2 **Codeine phosphate**  
**Co-phenotrope**  
**Loperamide**

### 1.5 Mesalazine

Delivery characteristics of EC preparations vary and should not be considered as interchangeable.

#### Olsalazine

#### Sulfasalazine

#### Hydrocortisone foam

#### Ⓢ Mercaptopurine

Oral mercaptopurine for use in inflammatory bowel disease (unlicensed indication) is restricted to specialist initiation for patients unable to tolerate azathoprine. In cases where GPs continue the prescribing, associated monitoring will continue to be the responsibility of the acute sector.

#### Prednisolone

#### Ⓢ Infliximab

Use in Crohn's disease is subject to NHSGGC protocol and does not include the maintenance treatment of severe active, or fistulating active Crohn's, which have not been accepted by SMC. However, use in the treatment of severe, active Crohn's disease in paediatric patients aged 6 to 17 years of age is restricted to specialist use in patients who have not responded to conventional therapy. Use in the treatment of moderate to severe active ulcerative colitis has not been accepted by SMC and is non-Formulary.

### 1.6.1 Ispaghula husk

- 1.6.2 Bisacodyl**  
**Co-danthramer**  
 Restricted to constipation in the terminally ill.  
**Co-danthrusate**  
 Restricted to constipation in the terminally ill.  
**Docusate sodium**  
**Glyceril suppositories**  
**Senna**
- 1.6.3 Arachis oil enema**
- 1.6.4 Phosphate enema**  
**Lactulose**  
**Micalax Micro-enema®**  
**Movicol®**  
 Ⓢ **Magnesium sulfate**
- 1.6.5 Ⓢ Fleet Phospho-Soda®**  
 Restricted to use as alternative to Picolax® and Klean-Prep® when they are unavailable.  
 Ⓢ **Klean -Prep®**  
 Ⓢ **Sodium picosulfate**
- 1.7.1 Anusol®**  
**Lasonil®**  
**Lidocaine**
- 1.7.2 Anusol HC®**  
**Anugesic HC®**  
**Hydrocortisone**  
**Scheriproct®**
- 1.7.3 Ⓢ Oily phenol**
- 1.8 Stoma care**  
 For advice, contact local stoma nurse.
- 1.9.1 Ursodeoxycholic acid**  
 For primary biliary cirrhosis, ursodeoxycholic acid is restricted to use on the advice of consultant gastroenterologists.
- 1.9.2 Colestyramine**
- 1.9.4 Creon Micro®**  
 Restricted to use in young cystic fibrosis sufferers who are unable to swallow capsules.  
**Creon®**  
**Nutrizym®**  
**Pancrease®**  
**Pancrex®**  
 Ⓢ **Nutrizym 22®**  
 Ⓢ **Pancrease HL®**

**2****2.1.1 Digoxin**

Ⓢ **Digibind®**

**2.1.2 Ⓢ Enoximone**

Ⓢ **Milrinone**

**2.2.1 Bendroflumethiazide**

Ⓢ **Metolazone**

**2.2.2 Furosemide**

**Bumetanide**

**2.2.3 Amiloride**

**Spironolactone**

Ⓢ **Eplerenone**

Only to be initiated in patients with left ventricular systolic dysfunction accompanied by evidence of heart failure, both manifesting within 3-14 days of myocardial infarction. Consultant signature required.

**2.2.4 Co-amilofruse****2.2.5 Ⓢ Mannitol****2.3.2 Verapamil**

Ⓢ **Adenosine**

Ⓢ **Amiodarone**

Ⓢ **Disopyramide**

Ⓢ **Flecainide**

Ⓢ **Propafenone**

Ⓢ **Sotalol**

Ⓢ **Lidocaine**

**2.4 Atenolol**

**Bisoprolol**

The initiation and initial supervision of bisoprolol in confirmed cases of chronic cardiac failure is restricted to prescribers experienced in the treatment of heart failure in line with agreed protocols.

**Carvedilol**

The initiation and initial supervision of carvedilol in confirmed cases of chronic cardiac failure is restricted to prescribers experienced in the

treatment of heart failure in line with agreed protocols.

**Propranolol**

Sustained-release formulations offer no advantage for the majority of patients.

Ⓢ **Esmolol**

Ⓢ **Labetolol**

**Metoprolol**

Ⓢ **Nebivolol**

Restricted to initiation in patients over the age of 70 years with confirmed chronic cardiac failure who fail to tolerate bisoprolol and carvedilol.

**2.5.1 Ⓢ Ambrisentan**

Restricted to initiation and prescribing by specialists in the Scottish Pulmonary Vascular Unit and the Scottish Adult Congenital Cardiac Service.

**Hydralazine**

Ⓢ **Bosentan**

Restricted to initiation and prescribing by specialists in the Scottish Pulmonary Vascular Unit and the Scottish Adult Congenital Cardiac Service. Use in the reduction of the number of digital ulcers in patients with systemic sclerosis and ongoing digital ulcer disease and for pulmonary arterial hypertension WHO class II is non-Formulary.

Ⓢ **Iloprost**

Iloprost nebulas are restricted to use as an alternative in patients receiving other forms of prostacyclin treatment and to use by specialists in the Scottish Pulmonary Vascular Unit.

Ⓢ **Minoxidil**

Ⓢ **Sildenafil citrate**

Restricted to specialists working in the Scottish Pulmonary Vascular Unit

and by physicians experienced in the management of pulmonary vascular disease.

Ⓢ **Sodium nitroprusside**

Ⓢ **Sitaxentan**

Restricted to initiation and prescribing by specialists in the Scottish Pulmonary Vascular Unit.

2.5.2 Ⓢ **Methyldopa**

Ⓢ **Moxonidine**

Restricted to clinicians experienced in treating hypertension.

2.5.4 **Doxazosin**

Excluding MR preparation

2.5.5 **Captopril**

Excludes combination products.

**Enalapril**

Excludes combination products.

**Lisinopril**

Excludes combination products.

**Perindopril erbumine (tert-butylamine)**

Excludes combination products.

**Ramipril**

Excludes combination products.

**Candesartan**

Restricted to second line use in patients with a significant cough on an ACE inhibitor. Use as add-on therapy with ACE inhibitors for heart failure and left ventricular systolic dysfunction is restricted to specialist initiation.

**Irbesartan**

Excludes combination products. Restricted to second line use in patients with a significant cough on an ACE inhibitor.

**Losartan**

Excludes combination products. Restricted to second line use in patients with a significant cough on an ACE inhibitor.

**Telmisartan**

Restricted to second line use in patients with a significant cough on an ACE inhibitor. Excludes combination products.

**Valsartan**

Excludes combination products. Restricted to second line use in patients with a significant cough on an ACE inhibitor. Restricted to second line alternative in patients following myocardial infarction with evidence of left ventricular systolic dysfunction who cannot tolerate ACE inhibitors.

2.6.1 **Isosorbide mononitrate**

Standard-release tablets are preferred formulation. Sustained-release preparations should only be considered in patients for whom compliance is a problem.

**Glyceryl trinitrate**

Transdermal nitrate preparations are significantly more expensive than oral formulations.

2.6.2 **Amlodipine**

**Nifedipine**

Prescribe by brand name. Short acting capsules are no longer recommended for angina and hypertension; their use may be associated with variations in blood pressure and reflex tachycardia.

**Diltiazem**

Prescribe by brand name.

**Verapamil**

Prescribe by brand name.

**S Nimodipine**

Only licensed for the prevention and treatment of ischaemic neurological deficits following aneurysmal subarachnoid haemorrhage.

2.6.3 **S Ivabradine**

Restricted to symptomatic treatment of chronic stable angina pectoris in patients with normal sinus rhythm for whom heart rate control is desirable and who have a contra-indication or intolerance for beta-blockers and rate-limiting calcium-channel blockers

**Nicorandil**

**Nifedipine**

**Naftidofuryl oxalate**

Refer to SIGN 89 for the diagnosis and management of PVD. Treatment should be reassessed after three months and discontinued if of no benefit. There is poor evidence supporting vasodilator treatment and it is important that contributory risk factor treatments (such as antiplatelet and cholesterol-lowering therapies) are considered.

2.7.1 **S Dobutamine**

**S Dopamine**

**S Dopexamine**

**S Isoprenaline**

2.7.2 **S Ephedrine**

**S Noradrenaline**

2.7.3 **Adrenaline**

2.8.1 **Heparin**

**S Epoprostenol**

**S Fondaparinux**

Restricted to use for the treatment of unstable angina or non-ST segment elevation myocardial infarction (NSTEMI) or ST segment elevation myocardial infarction (STEMI) in accordance with agreed local protocols.

**S Lepirudin**

**Danaparoid sodium**

Restricted to use in accordance with local protocols

**S Dalteparin**

**S Enoxaparin**

**S Tinzaparin**

2.8.2 **Warfarin**

**S Rivaroxaban**

Restricted to use in VTE prophylaxis in orthopaedic surgery in accordance with local protocol

2.8.3 **S Protamine**

2.9 **Aspirin dispersible**

Excluding EC formulations.

**Clopidogrel**

Restricted to patients contraindicated to aspirin or intolerant of aspirin despite the addition of a PPI. For prevention of atherothrombotic events in acute coronary syndrome, clopidogrel, in combination with aspirin should be used in accordance with the current NHSGGC Antiplatelet Guideline.

**Dipyridamole**

Excluding Asasantin Retard®.

Dipyridamole retard is restricted to patients requiring stroke/TIA secondary prevention where an event has occurred despite treatment with aspirin.

**S Abciximab**

Restricted to use by consultant cardiologists in high risk and unstable patients undergoing a variety of percutaneous coronary interventions.

**S Tirofiban**

Restricted to use by consultant cardiologists.

**2.10.2 Ⓢ Alteplase**

For fibrinolytic treatment of acute ischaemic stroke alteplase is restricted to specialist centres with adequate resources and appropriate expertise and in accordance with detailed protocols.

**Ⓢ Reteplase****Ⓢ Streptokinase****Ⓢ Tenecteplase****2.11 Tranexamic acid****Ⓢ Drotrecogin alfa**

Restricted to specialist use only for patients in Intensive Care Units with severe sepsis that has resulted in multiple organ failure in line with NICE Guidance no. 84.

**2.12 Simvastatin**

Recommended starting dose is 40mg daily.

**Atorvastatin**

Atorvastatin 80mg is only to be initiated by consultants in patients who have definite coronary artery disease and present with an acute coronary syndrome (confirmed by elevated troponin concentration). In patients who fail to meet goals for cholesterol reduction on simvastatin 40mg, the dose of atorvastatin may be up-titrated up to 80mg (see below). In preference to increasing the dose of simvastatin, patients should be switched to an appropriate dose of atorvastatin, 20mg followed by up-titration if required through 40mg to 80mg. Use in children aged over 10 years is restricted to initiation by paediatricians or physicians specialising in the management of lipid disorders.

**Rosuvastatin**

Restricted to use in patients who fail to reach target lipid levels in accordance with NHSGLC Lipid Lowering Guidelines or for patients who are intolerant to simvastatin or atorvastatin. Doses in excess of 40mg should only be initiated by, or on the advice of a specialist.

**Colestyramine****Bezafibrate****Fenofibrate****Ⓢ Ezetimibe**

Excludes combination preparations of ezetimibe and simvastatin. Restricted to initiation by specialists when cholesterol targets are not reached on the maximum tolerated and optimised statin therapy.

**2.13****Ⓢ Sodium tetradecyl sulfate**

**3****3.1.1.1 Salbutamol****Terbutaline****Salmeterol**

Seretide 500 accuhaler® is not recommended by SMC for patients with COPD with an FEV<sub>1</sub> of less than 60 percent

**Formoterol****3.1.2 Ipratropium bromide****Tiotropium**

Spiriva-Respimat® is restricted to patients with poor manual dexterity who have difficulty using the Handihaler® device

**3.1.3 Aminophylline**

Prescribe by brand name.

**Theophylline**

Prescribe by brand name.

**3.2 Beclometasone**

CFC-free beclometasone inhalers may not all be of an equivalent dose to regular beclometasone inhalers and the BNF should be consulted when prescribing.

**Budesonide**

Budesonide respules are restricted to hospital inpatient treatment of acute croup only.

**Hydrocortisone****Fluticasone**

Excludes nebuliser solution. Seretide 500 accuhaler® is not recommended by SMC for patients with COPD with an FEV<sub>1</sub> of less than 60%. Fluticasone provides equal clinical activity to beclometasone and budesonide at half the dosage.

**Prednisolone****Budesonide and formoterol**

Combination inhalers are restricted

for use in patients on step 3 or above of the BTS/ SIGN asthma guidelines or for patients with COPD in accordance to current NHSGGC COPD Guidelines.

**Fluticasone and salmeterol**

Combination inhalers are restricted for use in patients on step 3 or above of the BTS/ SIGN asthma guidelines or for patients with COPD in accordance to current NHSGGC COPD Guidelines.

**Beclometasone and formoterol**

Combination inhalers are restricted for use in patients on step 3 or above of the BTS/SIGN asthma guidelines.

**3.3.1 Cromoglicate sodium****3.3.2 Montelukast**

Restricted to clinicians experienced in treating asthma. Use for seasonal allergic rhinitis is non-Formulary.

**3.4.1 Cetirizine****Chlorphenamine****Fexofenadine****Loratadine****Alimemazine****Hydroxyzine****Promethazine****Omalizumab**

To be used according to local protocol and SMC restrictions.

**3.4.3 Adrenaline****Chlorphenamine****Hydrocortisone****3.5.1 Ⓢ Doxapram****Ⓢ Caffeine base**

Restricted to use on the advice of specialists in neonatal paediatrics

**3.5.2 Ⓢ Poractant**

Restricted to specialist use in neonatal respiratory distress syndrome by consultant paediatricians and specialist registrars.

- 3.7 **Carbocisteine**
- 3.8 **Benzoin tincture compound**
- 3.9 **Pholcodine**  
**Simple linctus**

**4**

- 4.1.1 **Diazepam**  
**Nitrazepam**  
**Temazepam**  
**Zopiclone**  
Restricted to use only in patients who require pharmacological treatment where temazepam is not tolerated or appropriate.
- Chloral hydrate**  
**Clomethiazole**
- 4.1.2 **Chlordiazepoxide**  
**Diazepam**  
**Oxazepam**  
Ⓢ **Lorazepam**  
Ⓢ **Buspirone**  
**Propranolol**
- 4.2.1 Ⓢ **Quetiapine**  
Restricted to initiation by consultant psychiatrist
- Risperidone**  
The Quicklet® formulation is restricted for use in patients with swallowing difficulties where orodispersible is an appropriate formulation. The CSM have advised that there is an increased risk of stroke in elderly patients with dementia treated with risperidone.
- Ⓢ **Amisulpride**  
Restricted to initiation by a consultant psychiatrist.
- Ⓢ **Aripiprazole**  
Restricted to initiation by a consultant psychiatrist with the injection being further restricted to use by consultant psychiatrists only. The treatment of moderate to severe manic episodes in bipolar 1 disorder and the prevention of a new manic episode in patients who experienced predominantly manic episodes is non-Formulary.

**Ⓢ Clozapine**

Consultant only. Patients must be registered with a Clozapine patient monitoring scheme.

**Ⓢ Olanzapine**

CSM have advised that there is an increased risk of stroke in elderly patients with dementia treated with olanzapine. Restricted to initiation by consultant psychiatrist. The injection is restricted to use when oral therapy is not suitable.

**Chlorpromazine**

IM chlorpromazine is not recommended for rapid tranquillisation.

**Haloperidol****Levomepromazine****Ⓢ Flupentixol****Ⓢ Sulpiride****Ⓢ Trifluoperazine****Ⓢ Zuclophenthixol**

4.2.2

**Ⓢ Flupentixol decanoate****Ⓢ Fluphenazine decanoate****Ⓢ Haloperidol decanoate****Ⓢ Pipotiazine palmitate****Ⓢ Risperidone**

Restricted to use under the overall supervision of a psychiatrist and subject to NHSGGC protocol.

**Ⓢ Zuclophenthixol decanoate**

4.2.3

**Carbamazepine****Lithium**

Prescribe by brand name. Plasma concentrations should be monitored by sampling at least 12 hours after preceding dose and should be checked every 3 months in stabilised patients.

4.3.1

**Amitriptyline****Ⓢ Clomipramine****Imipramine****Lofepramine****Trazodone**

4.3.2

**Phenelzine**

Restricted to patients who have failed to respond to first line antidepressants.

**Ⓢ Tranylcypromine**

Specialist initiation. Restricted to patients who have failed to respond to first line antidepressants.

**Moclobemide**

Restricted to patients who have failed to respond to first line antidepressants.

4.3.3

**Fluoxetine****Citalopram****Paroxetine****Sertraline**

4.3.4

**Ⓢ Duloxetine**

Restricted to psychiatrist initiation only as a third line therapy for major depressive episodes. The SMC has not recommended its use for generalised anxiety disorders.

**Mirtazapine**

Restricted to use as a second line agent for depression.

**Venlafaxine**

Restricted to use as a third line agent for depression. See NHSGGC depression guidelines. The CSM have advised that venlafaxine should not be used in children and adolescents under 18 years of age. The treatment of moderate to severe generalised social anxiety disorder/social phobia has not been accepted for use by SMC and is non-Formulary.

## 4.4

**Ⓢ Atomoxetine**

Restricted to initiation by specialists with appropriate knowledge and expertise in treating ADHD in children over 6 years and adolescents who do not respond to stimulants or in whom stimulants are contraindicated or not tolerated.

**Ⓢ Dexamphetamine**

Restricted to second line therapy for the treatment of ADHD and initiation by child or adolescent psychiatrists or paediatricians with expertise in ADHD.

**Ⓢ Methylphenidate**

Restricted to initiation by child or adolescent psychiatrists or paediatricians with expertise in ADHD. The modified-release preparations are restricted to second line therapy where there is evidence of compliance problems or where clear evidence that administration of a midday dose is problematic or inappropriate.

**Ⓢ Modafinil**

Very few indications - specialist advice required. Modafinil is not approved for excessive daytime sleepiness associated with obstructive sleep apnoea/hypopnoea syndrome or shift work sleep disorder.

## 4.5.1

**Orlistat**

Restricted to use for patients with BMI  $>30$  with relevant co-morbidities and BMI  $>35$  without co-morbidities. Other conditions for prescribing should be in accordance with NICE TA22. It should be prescribed only on the advice of the Glasgow and Clyde Weight Management Service.

**Ⓢ Methylcellulose****Sibutramine**

Restricted to use for patients with BMI  $>30$  with relevant co-morbidities and BMI  $>35$  without co-morbidities. Other prescribing conditions in accordance with NICE TA31. It should be prescribed on the advice of the Glasgow and Clyde Weight Management Service.

## 4.6

**Cinnarizine****Ⓢ Cyclizine****Ⓢ Promethazine****Ⓢ Chlorpromazine****Prochlorperazine****Domperidone****Metoclopramide**

Metoclopramide causes more frequent extra-pyramidal side effects than domperidone and is not indicated in patients less than 20 years of age except for limited indications when the dose should be determined on the basis of body weight.

**Ⓢ Granisetron**

In the management of post-operative nausea and vomiting (PONV), restricted to use in patients refractory to routine antiemetics or with a substantial history of PONV. Prolonged use can cause severe constipation and routine laxatives should be considered.

**Ⓢ Ondansetron**

In the management of post-operative nausea and vomiting (PONV), restricted to use in patients refractory to routine antiemetics or with a substantial history of PONV. Prolonged use can cause severe constipation and routine laxatives should be considered.

Not on the Formulary for the management of PONV.

**S Nabilone**  
**Betahistine**

4.7.1 **Paracetamol**

The infusion should only be used when the IV route can be clinically justified over other routes of administration.

**Ibuprofen**

**Co-codamol**

Dispersible formulations are considerably more expensive and should be restricted to patients with swallowing difficulties. Their high sodium content (up to 8g daily) exceeds WHO recommendations and may compromise antihypertensive therapy.

**Co-dydramol**

4.7.2 **Codeine phosphate**

**Cyclimorph®**

**Diamorphine**

**Dihydrocodeine**

Excludes DF118 Forte®, Remedeine® and Remedeine Forte®.

**Morphine sulphate**

Modified-release preparations should be prescribed by brand name

Excludes Morcap SR®, Moraxen® and Depodur®

**Oxycodone**

Modified-release preparations should be prescribed by brand name

Oxycodone is restricted use in patients where morphine is ineffective or not tolerated. The injection is restricted to initiation by specialists in palliative care and oncology for use in patients for whom morphine/diamorphine is ineffective or not tolerated. Oxycodone injection is non-Formulary for post-operative use. Excludes the combination product of oxycodone and naloxone (Targinact®).

**Pethidine**

**S Fentanyl citrate lozenges**

Restricted to initiation by hospital palliative care and cancer specialists.

**S Fentanyl transdermal patches**

Restricted to use on specialist advice in palliative care and to second line use in patients with intractable, non-malignant pain which is relatively stable and has been controlled by oral therapy. It should be reserved for patients with swallowing difficulties or who have problems with opiate constipation.

**S Methadone**

Excludes Eptadone®

**Tramadol capsules**

Restricted to use when simple analgesia has failed or is not tolerated.

Excludes modified-release and combination preparations.

**S Tramadol injection**

4.7.3

**Amitriptyline**

**Carbamazepine**

**Gabapentin**

**S Phenytoin**

**Pregabalin**

Restricted to use for peripheral neuropathic pain in adults who have not responded to or tolerated conventional first and second line treatments. Treatment should be discontinued if the patient has not shown sufficient benefit within 8 weeks of reaching the maximally tolerated therapeutic dose.

**S Duloxetine**

Restricted to specialist initiation as second or third line therapy.

4.7.4.1 **Aspirin****Ibuprofen****Migraleve®**

Migraleve® yellow is equivalent to co-codamol 8/500, but much more expensive.

**Paracetamol****Paramax®**

Contains metoclopramide. Not indicated in patients less than 20 years of age except for limited indications when the dose should be determined by body weight.

**Rizatriptan**

Plasma concentrations may be increased by concomitant use of propranolol, therefore the 5mg dose of rizatriptan should be used.

**Zolmitriptan**

Excluding nasal spray.

**Frovatriptan****Sumatriptan**

The rapid-disintegrating tablets are restricted to second line treatment for patients for whom standard tablets are not appropriate.

4.7.4.2 **Pizotifen****Propranolol**Ⓢ **Topiramate**

Use in the prophylaxis of migraine is restricted to initiation by specialists and treatment should be managed under specialist supervision or shared care arrangements in patients who have not responded to prophylactic treatment with at least one other agent.

4.8.1 Ⓢ **Carbamazepine**

Prescribe by brand name.

Ⓢ **Lacosamide**

Restricted to patients with refractory epilepsy.

Ⓢ **Phenobarbital**Ⓢ **Phenytoin**

Prescribe by brand name.

Ⓢ **Rufinamide**Ⓢ **Sodium valproate**

Prescribe by brand name.

Ⓢ **Semisodium vaproate**

Restricted to specialist initiation for the treatment of mania in bipolar disorder.

Ⓢ **Acetazolamide**Ⓢ **Clobazam**Ⓢ **Clonazepam**Ⓢ **Ethosuximide**Ⓢ **Fosphenytoin**Ⓢ **Gabapentin**Ⓢ **Lamotrigine**Ⓢ **Levetiracetam**

Monotherapy for partial onset seizures (with or without secondary generalisation) in newly diagnosed patients is further restricted to second line treatment when usual first line treatment are ineffective or not tolerated. The infusion is restricted to specialist use only.

Ⓢ **Oxcarbazepine**

Excluding liquid.

Ⓢ **Pregabalin**

Restricted to initiation only by physicians who have appropriate experience in the treatment of epilepsy and should be used principally in patients who have not benefited from treatment with older anti-convulsants or for whom these drugs are unsuitable because of contraindications, interactions or poor tolerance. Pregabalin has not been accepted by the SMC for use in the treatment of central neuropathic pain and generalised anxiety disorder and is non-Formulary for these indications.

- Ⓢ **Primidone**
- Ⓢ **Tiagabine**
- Ⓢ **Topiramate**
- Ⓢ **Vigabatrin**
- Ⓢ **Zonisamide**

Restricted to initiation by physicians who have appropriate experience in the treatment of epilepsy for use in patients who have not responded to established anticonvulsants or for whom these drugs are unsuitable or not tolerated.

#### 4.8.2 **Diazepam**

##### **Lorazepam**

- Ⓢ **Clonazepam**
- Ⓢ **Fosphenytoin**
- Ⓢ **Midazolam (buccal)**

Buccal midazolam should only be initiated on the advice of a specialist in accordance with agreed local guidelines and following appropriate training of the parent or carer. It may, however, be continued to be prescribed in primary care.

- Ⓢ **Paraldehyde**
- Ⓢ **Phenytoin**

#### 4.8.3 **Paracetamol**

The infusion should only be used when the IV route can be clinically justified over other routes of administration.

##### **Diazepam**

#### 4.9.1 **Co-beneldopa**

##### **Co-careldopa**

Excludes intestinal gel.

##### **Levodopa/carbidopa/entacapone**

##### Ⓢ **Apomorphine**

Apomorphine is restricted to use in patients with mid/late stage Parkinson's disease under consultant supervision only. Its use is subject to a shared care protocol.

##### **Bromocriptine**

##### **Cabergoline**

##### **Pergolide**

##### **Pramipexole**

Pramipexole dosing can be expressed as either base or salt and this should be clearly documented when prescribing. Restricted to use on the advice of consultants with a special interest in Parkinson's disease or movement disorders. The use of pramipexole in restless legs syndrome (RLS) is restricted to those patients with severe RLS (symptoms resulting in significant disruption to sleep and impairment of daily living).

##### **Ropinirole**

Restricted to use on the advice of consultants with a special interest in Parkinson's disease or movement disorders. Use in restless legs syndrome is restricted to those patients with severe RLS (symptoms resulting in significant disruption to sleep and impairment of daily living).

##### Ⓢ **Rotigotine transdermal patch**

Restricted to specialist initiation for patient where the transdermal route would facilitate treatment

##### **Entacapone**

##### Ⓢ **Selegiline**

Excludes selegiline melt.

##### Ⓢ **Amantadine**

#### 4.9.2 **Trihexyphenidyl**

##### **Orphenadrine**

##### **Procyclidine**

#### 4.9.3 **Propranolol**

##### Ⓢ **Chlorpromazine**

##### Ⓢ **Haloperidol**

##### Ⓢ **Pimozide**

##### Ⓢ **Primidone**

**Ⓢ Riluzole**

Use is subject to a shared care protocol.

**Ⓢ Sulpiride****Ⓢ Tetrabenazine****Ⓢ Botulinum A toxin**

Not recommended for focal spasticity, including the treatment of wrist and hand disability due to upper limb spasticity associated with stroke in adults. Three brands available (Dysport®, Xeomin® and Botox®). The doses are specific to the preparations and they are not interchangeable. Treatment of focal spasticity with Dysport® in conjunction with physiotherapy has not been accepted by SMC.

**Ⓢ Botulinum B toxin**

4.10

**Ⓢ Acamprosate**

Use is subject to a shared care protocol.

**Ⓢ Disulfiram**

Only to be used under specialist supervision.

**Nicorette® patch****Bupropion****Varenicline**

Restricted to use according to local protocol which includes: Patients must have had a previous attempt to quit smoking on the NHS more than six months previously; The patient must have attempted to quit using NRT for at least a four-week period; Patients must be linked to one of the recognised smoking cessation support programmes.

**Methadone 1mg/ml oral solution****Ⓢ Buprenorphine (Subutex®)**

Restricted to specialist services (Alcohol and Drug directorate and Glasgow Addictions Services).

**Ⓢ Lofexidine**

Restricted to specialist services (Alcohol and Drug directorate and Glasgow Addictions Services).

**Ⓢ Buprenorphine and naloxone (Suboxone®)**

Restricted to specialist services (Alcohol and Drug directorate and Glasgow Addictions Services) for those patients in whom methadone is not suitable and for whom the use of buprenorphine is considered appropriate.

4.11

**Ⓢ Donepezil**

Use subject to a Shared Care Protocol. Orodispersible tablets are restricted to patients with swallowing difficulties.

**Ⓢ Galantamine**

Use subject to a Shared Care Protocol.

**Ⓢ Rivastigmine**

Restricted to use according to local protocol. Use of the transdermal patch is further restricted to patients for whom rivastigmine is an appropriate choice and in whom a transdermal patch is an appropriate choice of formulation.

**5****5.1.1.1 Benzylpenicillin  
Phenoxymethylpenicillin****5.1.1.2 Flucloxacillin****5.1.1.3 Amoxicillin****Co-amoxiclav**

Excludes Augmentin Duo®.

**5.1.1.4 S Tazocin®**

Recommended for use on the advice of a microbiologist or an infectious disease physician as second line therapy in severely ill patients with multi-resistant organisms.

**5.1.2 Cefalexin****Cefaclor****S Cefotaxime****S Cefradine**

Avoid using oral cephalosporins as a step down following IV use.

**S Ceftazidime****S Cefuroxime**

Avoid using oral cephalosporins as a step down following IV use.

**S Aztreonam**

Restricted to use on microbiological and infectious disease physician advice only.

**S Doripenem**

Restricted to use on the advice of local microbiologists or specialists in infectious diseases for the treatment of nosocomial pneumonia and as second or third line treatment of complicated intra-abdominal infections resistant to current conventional treatment.

**S Ertapenem**

Restricted to second or third line treatment of community-acquired intra-abdominal infections resistant to current conventional treatments.

Treatment of diabetic foot infections of the skin and soft tissue is restricted to use by specialists managing diabetic foot infection on the advice of a microbiologist. The indication of prophylaxis of surgical site infection following elective colorectal surgery in adults remains non-Formulary.

**S Imipenem with cilastin**

Restricted to use on microbiological and infectious disease physician advice only.

**S Meropenem**

Restricted to use on microbiological and infectious disease physician advice only.

**5.1.3 Doxycycline****Minocycline****Oxytetracycline****Tetracycline****S Tigecycline**

Restricted to second or third line use under the advice of local microbiologists or specialists in infectious diseases.

**5.1.4 S Amikacin**

Restricted to use on microbiological and infectious disease physician advice only.

**S Gentamicin****S Neomycin****S Netilmicin**

Restricted to use on microbiological and infectious disease physician advice only.

**S Tobramycin****5.1.5 Azithromycin**

Only Formulary for indications which require its powerful anti-chlamydial effect.

**Clarithromycin**

Excluding Clarosip®.

**Erythromycin**5.1.6 **Clindamycin**

Excludes vaginal cream.

5.1.7 **Chloramphenicol****Colistin**

Restricted to use on microbiological and infectious disease physician advice only.

**Daptomycin**

Restricted to use in patients not responding to or intolerant of a glycopeptide. Use for VRE, VISA and VRSA2 or known or suspected MRSA infection is restricted to the advice of a microbiologist or specialist in infectious diseases.

**Linezolid**

Restricted to hospital-based use on the advice of a microbiologist or infectious disease physician. Prolonged use (>2 weeks) must be avoided.

**Quinupristin-dalfopristin**

Restricted to use on the advice of consultant microbiologist for management of infection due to vancomycin resistant organisms.

**Sodium fusidate****Teicoplanin**

Restricted to use on microbiological and infectious disease physician advice only. Vancomycin is the first line glycopeptide.

**Vancomycin**

Restricted to use on microbiological and infectious disease physician advice only. Vancomycin is the first line glycopeptide.

5.1.8 **Trimethoprim****Co-trimoxazole**

The CSM has recommended that co-trimoxazole be restricted to use in *Pneumocystis carinii* pneumonia, toxoplasmosis and nocardiasis. It should only be used in urinary or respiratory tract infections where there is bacterial evidence of sensitivity and good reason to prefer the combination to a single antibiotic.

5.1.9 **Rifampicin**

Recommended for the prevention of secondary cases of meningococcal meningitis and *Haemophilus influenzae* type B infection.

**Ethambutol****Isoniazid****Rifabutin**

Restricted to patients with mycobacterial infections resistant to conventional anti-tuberculosis drugs.

**Rifater®****Rifinah®****Streptomycin**5.1.10 **Dapsone**5.1.11 **Metronidazole**5.1.12 **Ciprofloxacin**

Excluding eye drops and 100mg tablets for uncomplicated UTI. Oral ciprofloxacin has good bioavailability and should be prescribed in preference to IV whenever possible.

**Ofloxacin**

Restricted to patients with pelvic inflammatory disease.

**Levofloxacin**

Restricted to second line use by hospital specialists for penicillin allergic patients with community acquired pneumonia or for cystic fibrosis patients intolerant of

ciprofloxacin where a quinolone is required.

#### Ⓢ **Moxifloxacin**

Restricted to second line use by hospital specialists for penicillin allergic patients with community acquired pneumonia or for cystic fibrosis patients intolerant of ciprofloxacin where a quinolone is required.

#### Ⓢ **Norfloxacin**

Restricted to prophylactic use only for spontaneous bacterial peritonitis in line with the GGC management of decompensated liver disease guidelines

### 5.1.13 **Trimethoprim**

First line choice for uncomplicated UTIs.

#### **Nitrofurantoin**

### 5.2 **Fluconazole**

#### **Griseofulvin**

#### **Itraconazole**

Not approved for fungal nail infections.

#### **Terbinafine**

#### Ⓢ **Anidulafungin**

The treatment of invasive candidiasis in adult non-neutropenic patient is restricted to use on the advice of a consultant microbiologist where other treatment options are unsuccessful or inappropriate.

#### Ⓢ **Amphotericin**

Abelcet®, AmBisome® and Amphocil® are restricted to use in systemic mycoses when toxicity (especially nephrotoxicity) precludes the use of conventional amphotericin.

AmBisome® is not approved for the empirical treatment of fungal infections in the febrile neutropenic patient.

#### Ⓢ **Caspofungin**

Caspofungin is restricted to adult and paediatric patients with fluconazole-resistant *Candida* infection unresponsive to or who cannot tolerate amphotericin B therapy. It is not recommended by SMC for invasive aspergillosis. Restricted for empirical therapy for presumed fungal infections in febrile, neutropenic adult and paediatric patients on the advice of microbiologists or specialists in infectious diseases.

#### Ⓢ **Flucytosine**

#### Ⓢ **Ketoconazole**

#### **Nystatin**

#### Ⓢ **Posaconazole**

Use for the prophylaxis of invasive fungal infections in immunocompromised patients is restricted to patients in whom there is a specific risk of aspergillus infection or where fluconazole or itraconazole are not tolerated in accordance with local protocol.

#### Ⓢ **Voriconazole**

Restricted to use in secondary care on the advice of microbiologist/haematologist primarily in immunocompromised patients with progressive, possibly life-threatening infections. Treatment of candidaemia in non-neutropenic patients is restricted to those who cannot tolerate amphotericin B therapy or who are at an increased risk of serious side effects with amphotericin.

### 5.3.1

#### Ⓢ **Abacavir**

Restricted to use by HIV specialists.

#### Ⓢ **Trizivir®**

Restricted to use by HIV specialists.

**Ⓢ Kivexa®**

Restricted to use by HIV specialists.

**Ⓢ Didanosine**

Restricted to use by HIV specialists.

**Ⓢ Emtricitabine**

Restricted to use by HIV specialists.

**Ⓢ Lamivudine**

Restricted to use by HIV specialists.

**Ⓢ Stavudine**

Restricted to use by HIV specialists.

**Ⓢ Tenofovir**

Restricted to use by HIV specialists.  
Treatment of hepatitis B is restricted to use according to Hepatitis MCN protocol.

**Ⓢ Truvada®**

Restricted to use by HIV specialists.

**Ⓢ Atripla®**

Restricted to use by HIV specialists.

**Ⓢ Zidovudine**

Restricted to use by HIV specialists.

**Ⓢ Combivir®**

Restricted to use by HIV specialists.

**Ⓢ Atazanavir**

Restricted to use by HIV specialists only. Use in naïve HIV-1 infected adults in combination with other antiretrovirals is further restricted to when other treatments are not tolerated or inappropriate.

**Ⓢ Darunavir**

Restricted to use by HIV specialists.

**Ⓢ Fosamprenovir**

Restricted to use by HIV specialists.  
Treatment of infected adolescents and children of 6 years and above remains non-Formulary.

**Ⓢ Indinavir**

Restricted to use by HIV specialists.

**Ⓢ Nelfinavir**

Restricted to use by HIV specialists.

**Ⓢ Ritonavir**

Restricted to use by HIV specialists.

**Ⓢ Kaletra®**

Restricted to use by HIV specialists.

**Ⓢ Saquinavir**

Restricted to use by HIV specialists.

**Ⓢ Efavirenz**

Restricted to use by HIV specialists.

**Ⓢ Nevirapine**

Restricted to use by HIV specialists.  
Potentially fatal liver toxicity and skin reactions.

**Ⓢ Enfuvirtide**

Restricted to use by HIV specialists.

**Ⓢ Raltegravir**

Restricted to use by HIV specialists only in patients with triple-class resistant HIV-1 infection.

**5.3.2.1 Aciclovir****Famciclovir**

Not approved for genital herpes.

**Valaciclovir**

Not approved for prevention of recurrent herpes.

**5.3.2.2 Ⓢ Cidofovir**

Restricted to use by HIV specialists.

**Ⓢ Foscarnet**

Restricted to use by HIV specialists.

**Ⓢ Ganciclovir**

Restricted to use by HIV specialists.

**Ⓢ Valganciclovir**

Restricted to use by HIV specialists.

**5.3.3 Ⓢ Adefovir dipivoxil**

Restricted for use subject to local protocol by Hepatitis MCN.

**S Entecavir**

Restricted to specialist initiation in line with Hepatitis MCN protocol.

**S Lamivudine**

Restricted to recommendation by consultants treating hepatitis B.

**S Ribavirin**

Use subject to Hepatitis MCN protocol with pegylated interferon alfa in hepatitis C.

**S Telbivudine**

Restricted to specialist initiation in line with the Hepatitis MCN protocol.

**S Tenofovir**

Treatment of hepatitis B is restricted to use according to Hepatitis MCN protocol.

**5.3.4 Oseltamivir**

Oseltamivir use in the prophylaxis of influenza is subject to NICE TA158 and the treatment of influenza is subject to NICE TA168 .

**Zanamivir**

Zanamivir use in the prophylaxis of influenza is subject to NICE TA158 and the treatment of influenza is subject to NICE TA168 .

**5.3.5 S Palivizumab**

Restricted to use as indicated in West of Scotland protocol.

**S Ribavirin****S Tipranavir**

Restricted to specialist initiation in line with Hepatitis MCN protocol  
Restricted to patients with a tipranavir mutation score of less than 4.

**5.4.1 Chloroquine  
Mefloquine****Proguanil****S Halofantrine**

It is restricted for use in specialist centres, for quinine resistance.

**S Quinine**

Quinine IV should be administered with caution under the supervision of a specialist in infectious diseases.

**5.4.8 S Co-trimoxazole**

Use on advice of specialist in infectious diseases.

**S Pentamidine**

Use on advice of specialist in infectious diseases.

**S Atovaquone**

Use on advice of specialist in infectious diseases.

**5.5.1 Mebendazole  
Pripsen®**

## 6

6.1.1 **Insulin**

See BNF, noting additional restrictions below. Inhaled insulin is excluded from the Formulary.

Ⓢ **Insulin glargine**

Insulin glargine is restricted to initiation by consultant diabetologists in patients with severe/ frequent nocturnal hypoglycaemia. Not for routine use in type 2 diabetes unless patients suffer from recurrent episodes of hypoglycaemia or require assistance with their insulin injections.

Ⓢ **Insulin detemir**

Insulin detemir (Levemir®) is restricted to initiation by consultant diabetologists in children, adolescent and adult patients with severe/ frequent nocturnal hypoglycaemia. Not for routine use in type 2 diabetes unless patients suffers from recurrent episodes of hypoglycaemia.

**Insulin glulisine**

Restricted to use in patients where regular human soluble insulin is inappropriate.

6.1.2.1 **Gliclazide**

**Glipizide**

**Glibenclamide**

Glibenclamide should be avoided in the elderly due to the high incidence of hypoglycaemia.

6.1.2.2 **Metformin (excluding SR preparations)**

Metformin is the antidiabetic drug of choice in both overweight and normal weight patients. It is contra-indicated in patients with renal failure or dysfunction (creatinine clearance <60 ml/min).

6.1.2.3 Ⓢ **Acarbose**

Restricted to clinicians experienced in treating diabetes. Acarbose is restricted to use in patients refractory or intolerant to treatment with metformin.

**Pioglitazone**

Restricted to clinicians experienced in treating diabetes. Monotherapy is restricted to type 2 diabetes mellitus patients in whom consideration is otherwise being given to commencing insulin therapy. It is not recommended as monotherapy for any other group of patients. Triple therapy (in combination with metformin and a sulphonylurea) in type 2 diabetes is restricted to initiation and monitoring only by physicians experienced in the treatment of diabetes mellitus who will be able to identify and manage patients who might benefit. Use in combination with insulin is restricted to specialist initiation.

Ⓢ **Rosiglitazone**

Restricted to initiation by or on the advice of a consultant diabetologist. Monotherapy is restricted to type 2 diabetes mellitus patients in whom consideration is otherwise being given to commencing insulin therapy. It is not recommended as monotherapy for any other group of patients. Triple therapy in combination with metformin and a sulphonylurea is restricted to patients who are unable to achieve sufficient glycaemic control despite oral therapy and where insulin therapy is not appropriate.

**Pioglitazone and metformin**

Restricted to initiation by physicians experienced in the treatment of diabetes mellitus for patients who

cannot be treated or controlled with a sulphonylurea in combination with metformin.

Ⓢ **Rosiglitazone and metformin**

Restricted to initiation by or on the advice of a consultant diabetologist. Rosiglitazone and metformin (Avandamet®) may offer advantages for concordance in some patients. Restricted to the 2mg/1000mg and 4mg/1000mg formulations. Use in triple therapy is restricted to use in patients who cannot be controlled with a sulphonylurea in combination with metformin.

Ⓢ **Exenatide**

Restricted to specialists initiation as an alternative for patients who have failed treatment on metformin and / or sulphonylureas and in whom insulin would be the next treatment option.

Ⓢ **Sitagliptin**

Restricted to specialist initiation when used in combination with a sulphonylurea when metformin is contraindicated or not tolerated or in combination with a sulphonylurea and metformin. In primary care, it is expected that initiation would follow interaction between the GP/Diabetic Specialist Nurse and the consultant contact within the acute sector.

Ⓢ **Vildagliptin**

Restricted to use in combination with metformin only when the addition of a sulphonylurea is not appropriate for patients with insufficient glycaemic control despite maximum tolerated dose of monotherapy with metformin. In primary care it is expected that initiation would follow interaction between the GP/Diabetic Specialist

Nurse and the consultant contact within the acute sector.

Ⓢ **Vildagliptin and metformin**

Restricted to specialist initiation only when the addition of a sulphonylurea is not appropriate for patients with insufficient glycaemic control despite maximum tolerated dose of monotherapy with metformin. In primary care it is expected that initiation would follow interaction between the GP/ Diabetic Specialist Nurse and the consultant contact within acute care.

6.1.4 **Glucose**

**Glucagon**

6.2.1 **Levothyroxine**

Ⓢ **Liothyronine**

6.2.2 **Carbimazole**

Ⓢ **Aqueous iodine**

Ⓢ **Propylthiouracil**

6.3.1 **Fludrocortisone**

**Hydrocortisone**

6.3.2 **Dexamethasone**

**Hydrocortisone**

**Prednisolone**

Ⓢ **Betametasonone**

Ⓢ **Cortisone**

Ⓢ **Methylprednisolone**

Ⓢ **Triamcinolone**

6.4.1.1 **See BNF, excludes Angeliq®**

**Oestradiol 0.6% gel (Oestrogel®)**

Restricted to patients who fail to tolerate oral or patch preparations.

Ⓢ **Raloxifene hydrochloride**

Restricted to use in patients for whom bisphosphonates are contraindicated or not appropriate.

6.4.2 **Ⓢ Testosterone**

Excludes Intrinsa® injection which has not been accepted for use by SMC and remains non-Formulary. Testosterone gel and transdermal patches are restricted to use on the recommendation of consultant endocrinologists, urologists and oncologists. Testosterone mucoadhesive buccal prolonged-release tablets (Striant SR®) are restricted to use in patients who would benefit particularly from this mode of administration where intramuscular treatment is not suitable.

**Cyproterone**Ⓢ **Dutasteride**Ⓢ **Finasteride**6.4.3 **Ⓢ Nandrolone decanoate**6.5.1 **Clomifene (clomiphene)**Ⓢ **Tetracosactide**Ⓢ **Choriogonadotropin alfa (Ovitrelle®)**Ⓢ **Chorionic gonadotrophin**Ⓢ **Human menopausal gonadotrophins****Lutropin alfa**Ⓢ **Somatropin**

Somatropin for use in adults with growth hormone deficiency is restricted to initiation by consultant endocrinologists and subject to a shared care protocol. The treatment of growth disturbance in short children born small for gestational age and who have failed to show catch-up growth by 4 years of age or later is restricted to initiation and monitoring by a paediatrician with expertise in managing childhood growth disorders and growth hormone therapy.

Ⓢ **Gonadorelin**Ⓢ **Protirelin**6.5.2 **Ⓢ Terlipressin****Desmopressin**

Desmopressin tablets are restricted to use in patients unable to use intramuscular preparations. Intravenous desmopressin is restricted to specialist use in haemophilia centres.

Ⓢ **Demeclocycline**6.5.1 **Ⓢ Parathyroid Hormone (PTH-184, Preoctact®)**

Restricted to specialist use for the treatment of osteoporosis according to local prescribing protocol following assessment of fracture risk including measurement of bone mineral density.

Ⓢ **Teriparatide (PTH 1-34, Forsteo®)**

Restricted to specialist use for the treatment of osteoporosis only for those patients for whom parathyroid hormone (PTH 1-84) is not licensed or not tolerated. The treatment of osteoporosis associated with glucocorticoid therapy in women and men at increased risk of fracture is non-Formulary.

6.6.2 **Alendronic acid****Risedronate**

Excludes the treatment of osteoporosis in men at high risk of fractures as not recommended by SMC.

**Strontium ranelate**

Restricted for the treatment of postmenopausal osteoporosis in women of 75 years or over with previous fracture and T-score <-2.4 (or other women at similarly high risk) when bisphosphonates are contraindicated or not tolerated.

**Pamidronate**Ⓢ **Clodronate**

**S Ibandronic acid (excluding Bonviva® tablets)**

The use of the injection for osteoporosis is restricted to use in patients who are unsuitable for or unable to tolerate oral treatment options for osteoporosis. Treatment initiation should be under specialist supervision. Restricted to second line use by specialist oncologists for prevention of skeletal events in patients with breast cancer and metastatic bone cancer and to consultants treating tumour induced hypercalcaemia.

**S Tiludronic acid**

**S Zoledronic acid**

Restricted to prescribing by consultants treating tumour-induced hypercalcaemia and by specialist oncologists for the prevention of skeletal related events in patients with breast cancer and multiple myeloma. It is not approved for use for the prevention of skeletal related events in prostate or non-small cell lung cancer. Treatment of Paget's disease is restricted to specialist use only. The treatment for osteoporosis in post-menopausal women is restricted to specialist use in patients who are unsuitable for or unable to tolerate oral treatment options. The treatment of men at increased risk of fracture, including those with a recent low-trauma hip fracture, is not recommended by SMC.

**6.7.1 S Bromocriptine**

Restricted to use on the recommendation of a specialist endocrinologist or gynaecologist. The CSM has advised that bromocriptine and cabergoline have been associated

with pulmonary, retroperitoneal and pericardial fibrotic reactions. Refer to BNF for details.

**S Cabergoline**

Restricted to use on the recommendation of a specialist endocrinologist or gynaecologist. The CSM has advised that bromocriptine and cabergoline have been associated with pulmonary, retroperitoneal and pericardial fibrotic reactions. Refer to BNF for details.

**S Quinagolide**

**6.7.2 Buserelin  
Danazol**

**S Cetorelix**

**S Ganirelix**

**Goserelin**

**Leuprorelin**

**Nafarelin**

**Triptorelin**

Considered 1st choice gonadorelin analogue for treatment of advanced prostate cancer

**6.7.3 S Metyrapone**

**S Trilostane**

## 7

- 7.1.1 **Ergometrine**  
**Syntometrine**  
Ⓢ **Carboprost**  
Ⓢ **Dinoprostone**  
Ⓢ **Gemeprost**  
Ⓢ **Oxytocin**
- 7.1.1.1 Ⓢ **Alprostadil**  
Ⓢ **Indometacin**  
Ⓢ **Ibuprofen injection**
- 7.1.2 Ⓢ **Mifepristone**
- 7.1.3 Ⓢ **Ritodrine**
- 7.2.1 **Estring®**  
**Estradot®**  
**Ortho-Gynest®**  
**Ovestin®**  
**Vagifem®**
- 7.2.2 **Clotrimazole**  
**Miconazole**  
**Nystatin**  
**Aci-Jel®**  
**Metronidazole 0.75% vaginal gel**  
Metronidazole gel is restricted to patients unable to tolerate or comply with oral metronidazole therapy.  
**Povidone-iodine**  
**Sultrin**
- 7.3 **See BNF (excludes Yasmin®)**  
**Cerazette®**  
Restricted to patients in whom oestrogen containing contraceptives are not tolerated or are contraindicated.  
**Evra®**  
Restricted to use in women with poor compliance on the combined oral contraceptive.  
**Mirena®**
- 7.4.1 **Alfuzosin**  
**Terazosin**  
**Tamsulosin**  
Excludes modified-release tablets.
- Ⓢ **Dutasteride**  
Only suitable for patient with enlargement of the prostate.
- Ⓢ **Finasteride**  
Only suitable for patient with enlargement of the prostate.
- 7.4.2 **Darifenacin**  
Restricted to use in patients fail to respond to or tolerate normal-release oxybutynin.  
**Duloxetine**  
Restricted for use only as part of an overall management strategy for stress urinary incontinence in addition to pelvic floor muscle training and subject to use by NHSGGC protocol.  
**Oxybutynin**  
Oxybutynin patches are restricted to patients who derive benefit from oral oxybutynin but who experience intolerable anticholinergic side effects.  
**Tolterodine**  
**Trospium**  
**Solifenacin**  
Restricted to use in patients fail to respond to or tolerate normal-release oxybutynin.
- 7.4.3 **Potassium citrate**  
Ⓢ **Sodium bicarbonate**
- 7.4.4 **Chlorhexidine**  
Ⓢ **Dimethyl sulfoxide**  
Ⓢ **Glycine**  
Ⓢ **Noxythiolin**
- 7.4.5 **Sildenafil**  
Available for hospital and community prescribing but NHS prescribing by GPs is limited to nationally determined patient groups and schedule 11 restrictions. Prescribing for patients with severe distress must remain with the hospital specialist.

Consult Summary of Product Characteristics on drug interactions prior to prescribing.

### **Tadalafil**

Available for hospital and community prescribing but NHS prescribing by GPs is limited to nationally determined patient groups and schedule 11 restrictions. Prescribing for patients with severe distress must remain with the hospital specialist. Consult Summary of Product Characteristics on drug interactions prior to prescribing.

### **Vardenafil**

Available for hospital and community prescribing but NHS prescribing by GPs is limited to nationally determined patient groups and schedule 11 restrictions. Prescribing for patients with severe distress must remain with the hospital specialist. Consult Summary of Product Characteristics on drug interactions prior to prescribing.

### **Alprostadil**

## **8**

Many of the medicines within this chapter are subject to use in accordance with regional protocol. These will always be in line with SMC advice or other national guidance where available.

- 8.1**
- Ⓢ **Calcium folinate**
  - Ⓢ **Calcium levofolate**
  - Ⓢ **Mesna**
- 8.1.1**
- Ⓢ **Busulfan**
  - Ⓢ **Carmustine**  
Excluding carmustine implants
  - Ⓢ **Chlorambucil**
  - Ⓢ **Cyclophosphamide**
  - Ⓢ **Ifosfamide**
  - Ⓢ **Lomustine**
  - Ⓢ **Melphalan**
  - Ⓢ **Thiotepa**
  - Ⓢ **Treosulfan**
- 8.1.2**
- Ⓢ **Bleomycin**
  - Ⓢ **Dactinomycin**
  - Ⓢ **Doxorubicin**
  - Ⓢ **Doxorubicin pegylated liposomal**  
Use in the treatment of ovarian cancer is restricted to use in accordance with regional protocol. It is not approved for the treatment of HIV-related Kaposi's sarcoma, metastatic breast cancer or second line treatment for progressive multiple myeloma.
  - Ⓢ **Epirubicin**
  - Ⓢ **Mitomycin**
  - Ⓢ **Mitoxantrone**
- 8.1.3**
- Ⓢ **Capecitabine**  
Restricted to use in accordance with regional protocols
  - Ⓢ **Cladribine**
  - Ⓢ **Cytarabine (excludes liposomal)**

**Ⓢ Fludarabine**

Restricted to use for treatment of CLL in accordance with regional protocol.

**Ⓢ Fluorouracil**

**Ⓢ Gemcitabine**

Restricted to use only for bladder, pancreatic or lung cancer in accordance with regional protocols.

**Ⓢ Mercaptopurine**

Use in oncology is restricted to specialist use only. Oral use in the unlicensed indications of inflammatory bowel disease (see section 1.5) and autoimmune hepatitis is restricted to specialist initiation only in patients who fail to tolerate azathioprine.

**Ⓢ Methotrexate**

Use in the treatment of cancer is restricted to specialist use only, other indications require specialist initiation, but may be suitable for continuation by the GP.

**Ⓢ Nelarabine**

Restricted to specialist use in accordance to regional protocol.

**Ⓢ Pemetrexed**

Restricted to specialist use for the treatment of chemotherapy-naïve patients with stage III/IV unresectable malignant pleural mesothelioma. Use in the second line monotherapy of non-small cell lung cancer (NSCLC) is restricted to use according to regional protocol. First line treatment of locally advanced or metastatic NSCLC, other than predominantly squamous cell histology, in combination with cisplatin is non-Formulary.

**Ⓢ Tioguanine**

8.1.4

**Ⓢ Etoposide**

Excludes Etopophos®

**Ⓢ Vinblastine**

**Ⓢ Vincristine**

**Ⓢ Vindesine**

**Ⓢ Vinorelbine**

Restricted to use in accordance with regional protocols.

8.1.5

**Ⓢ Amsacrine**

**Ⓢ Bortezomib**

Restricted to use according to regional protocols. Use in the treatment of multiple myeloma is restricted to 3rd line and subsequent use only.

**Ⓢ Carboplatin**

**Ⓢ Cetuximab**

Use for head and neck cancer is restricted to use in accordance with regional protocol. Not approved for use in colorectal cancer.

**Ⓢ Cisplatin**

**Ⓢ Crisantaspase (asparaginase)**

**Ⓢ Dacarbazine**

**Ⓢ Dasatinib**

Restricted to use in the chronic phase of CML in accordance with regional protocol. All other indication are non-Formulary.

**Ⓢ Docetaxel**

Use for adjuvant and metastatic breast cancer, metastatic prostate cancer, non-small cell lung cancer and cancer of the head and neck is restricted to use in accordance with regional protocols. The use of docetaxel in metastatic gastric adenocarcinoma has not been accepted by SMC and remains non-Formulary.

**Ⓢ Hydroxycarbamide**

**Ⓢ Imatinib**

Restricted to use in the treatment of CML and GIST in accordance with regional protocols. All other indications remain non-Formulary.

**Ⓢ Irinotecan**

Restricted to use in the treatment of colorectal cancer in accordance with regional protocol.

**Ⓢ Oxaliplatin**

Restricted to use in accordance with regional protocols.

**Ⓢ Nilotinib**

Restricted to specialist use in accordance with regional protocol.

**Ⓢ Paclitaxel**

Restricted to use in the treatment of lung cancer, ovarian cancer and metastatic breast cancer only in accordance with regional protocols. Use in the treatment of AIDS related Kaposi's sarcoma is non-Formulary.

**Ⓢ Pentostatin**

Restricted to use by specialists in haematological oncology for patients with hairy cell leukaemia.

**Ⓢ Procarbazine****Ⓢ Temozolomide**

Specialist use only in accordance with regional protocol.

**Ⓢ Topotecan**

Restricted to use in the treatment of ovarian and cervical cancer in accordance with regional protocols. Treatment of patients with relapsed small cell lung cancer has not been accepted by SMC and is non-Formulary.

**Ⓢ Trastuzumab**

Use in the treatment of HER2 positive early breast cancer and metastatic breast cancer is restricted to use in accordance with regional protocol.

**Ⓢ Tretinoin**

Restricted to use in accordance with regional protocols.

**Ⓢ Erlotinib**

Use for non-small cell lung cancer is restricted to use in accordance with regional protocol. The treatment of patients with metastatic pancreatic cancer remains non-Formulary

**8.2.1 Ⓢ Azathioprine**

Azathioprine should only be used instead of mycophenolic acid for renal transplantation if there is a low perceived immunological risk.

**Ⓢ Mycophenolate mofetil**

Mycophenolate mofetil is restricted to specialist use in selected patients who are at high risk of organ transplant rejection. Mycophenolate mofetil injection is restricted to use on specialist advice in exceptional cases e.g. patients who are nil by mouth.

**Ⓢ Mycophenolic acid**

Restricted to use by transplant specialists as part of an immunosuppressive regimen.

**8.2.2 Ciclosporin**

Formulations should not be substituted in individual patients due to varying bioavailability.

**Prednisolone****Ⓢ Basiliximab**

Restricted to specialist use in selected patients who are at high risk of renal transplant rejection or for kidneys expected to have significant ischaemic damage.

**Ⓢ Sirolimus**

Restricted to specialist use in specific patients with intolerance to calcineurin inhibitors.

### Ⓢ Tacrolimus

Restricted to specialist initiation. Tacrolimus preparations should be prescribed by brand name.

#### 8.2.3 Ⓢ Alemtuzumab

Use for treatment of B-cell chronic lymphocytic leukaemia is restricted according to regional protocol

### Ⓢ Rituximab

Use in haematology is restricted to use in accordance with regional protocols.

#### 8.2.4 Ⓢ Interferon alfa

Not approved for non-Hodgkin's lymphoma or malignant melanoma.

### Ⓢ Pegylated interferon alfa

Restricted to specialist use only in adults for the treatment of hepatitis C in combination with ribavirin.

### Ⓢ Pegylated interferon alfa 2b

Restricted to use for chronic hepatitis C in combination with ribavirin capsules in accordance with Hepatitis MCN protocol.

### Ⓢ Interferon beta

Restricted to use under the provision of the 'Risk Sharing Scheme' between the Scottish Executive Health Department and the manufacturers (NHS HDL (2002)6). Treatment of a single demyelinating event with an active inflammatory process has not been accepted by SMC and is non-Formulary.

### Ⓢ Glatiramer acetate

Restricted to use under the provision of the 'Risk Sharing Scheme' between the Scottish Executive Health Department and the manufacturers (NHS HDL (2002)6).

### Ⓢ Bacillus Calmette-Guerin

Restricted to use by consultant urologists.

### Ⓢ Natalizumab

Restricted to specialist use in accordance with agreed local protocol and SMC restrictions.

#### 8.3.1 Ⓢ Diethylstilbestrol

#### 8.3.2 Norethisterone

### Ⓢ Medroxyprogesterone

### Ⓢ Megestrol

#### 8.3.4.1 Ⓢ Anastrozole

Restricted to use on the advice of breast cancer specialists in accordance with regional protocols.

### Ⓢ Exemestane

Restricted to use on the advice of breast cancer specialists in accordance with regional protocols.

### Goserelin

For the management of advanced breast cancer (in pre- and peri-menopausal women), goserelin (but not Zoladex LA®) is approved where other treatments have failed.

### Ⓢ Letrozole

Restricted to use on the advice of breast cancer specialists in accordance with regional protocols.

### Ⓢ Tamoxifen

Excluding tamoxifen liquid.

#### 8.3.4.2 Ⓢ Triptorelin

Decapeptyl SR® 11.25mg is restricted for treatment of advanced prostate cancer in patients for whom the use of triptorelin is appropriate and would benefit from reduced frequency of administration compared with Decapeptyl SR® 3mg. Gonapeptyl Depot® is restricted to initiation by paediatricians only. It has not

been recommended by SMC for the treatment of advanced prostate cancer or endometriosis. Treatment of precocious puberty is restricted to specialist initiation.

Ⓢ **Aminoglutethimide**

Ⓢ **Bicalutamide**

Ⓢ **Cyproterone**

Owing to the risk of hepatotoxicity, cyproterone should be used for long-term treatment only where other treatments are not tolerated.

Ⓢ **Flutamide**

Ⓢ **Goserelin**

Ⓢ **Leuprorelin**

8.3.4.4 Ⓢ **Octreotide**

Ⓢ **Lanreotide Autogel**

The use in the treatment of thyrotrophic adenomas is non-Formulary.

**9**

9.1.1.1 **Ferrous fumarate**

**Ferrous gluconate**

**Ferrous sulphate**

**Sodium ferredetate**

**Pregaday®**

9.1.1.2 Ⓢ **Iron (III) hydroxide sucrose complex**

Ⓢ **Iron dextran**

9.1.2 **Folic acid**

**Hydroxocobalamin**

9.1.3 Ⓢ **Darbepoetin alfa**

Approved in NHSGGC only for anaemia associated with renal failure. This is the preferred Formulary agent for this indication.

Ⓢ **Epoetin alfa**

Approved in NHSGGC only for anaemia associated with renal failure.

Ⓢ **Epoetin beta**

Approved in NHSGGC only for anaemia associated with renal failure.

Ⓢ **Epoetin delta**

Approved in NHSGGC only for anaemia associated with renal failure.

Ⓢ **Methoxy Polyethylene Glycol-epoetin beta**

Approved in NHSGGC only for anaemia associated with renal failure.

Ⓢ **Desferrioxamine**

Ⓢ **Deferasirox**

Restricted to specialist use only. It is not recommended by SMC for patients with myelodysplastic syndromes.

9.1.4 Ⓢ **Anagrelide**

9.1.6 Ⓢ **Filgrastim**

Only to be prescribed by specialists.

Ⓢ **Lenograstim**

Only to be prescribed by specialists.

- 9.2.1.1 **Potassium chloride**  
 Ⓢ Calcium polystyrene sulphonate  
 Ⓢ Sodium polystyrene sulphonate
- 9.2.1.2 Ⓢ Sodium bicarbonate  
 Ⓢ Sodium chloride  
 Rapolyte®
- 9.2.1.3 Ⓢ Sodium bicarbonate
- 9.2.2 Ⓢ See BNF
- 9.2.2.2 Ⓢ Dextran 70  
 Ⓢ Gelofusine®  
 Ⓢ Haemaccel®
- 9.3 Ⓢ **Intravenous nutrition**  
 Use only on specialist advice.
- 9.4.1 Ⓢ **Foods for special diets**  
 Use only on specialist/dietetic advice.
- 9.4.2 **Fortisip® Bottle**  
**Fortisip® Yoghurt Style**  
**Fortijuice®**  
**Fortisip® Multi Fibre**  
**Calshake®**  
**Scandishake®**  
 Ⓢ **Enteral tube feeds**  
 Specialist/dietetic advice should be sought.
- 9.5.1.1 **Calcium carbonate**  
**Calcium chloride**  
**Calcium gluconate**  
**Calcium-Sandoz®**  
**Sandocal®**
- 9.5.1.2 Ⓢ **Cinacalcet**  
 Use in the treatment of secondary hyperparathyroidism in end stage renal disease is restricted to specialist initiation in accordance with local protocol. The SMC has not recommended its use for reduction of hypercalcaemia inpatients with primary hyperparathyroidism for whom parathyroidectomy would be indicated
- but not clinically appropriate or is contraindicated.  
 Also see section 6.6.
- 9.5.1.3 Ⓢ **Magnesium hydroxide**  
 Ⓢ **Magnesium sulphate**  
 Ⓢ **Co-magaldrox**
- 9.5.2.1 Ⓢ **Phosphate Sandoz®**
- 9.5.2.2 Ⓢ **Aluminium hydroxide**  
 Ⓢ **Calcium acetate**  
 Ⓢ **Calcium carbonate**  
 Ⓢ **Sevelamer**  
 Restricted to second line therapy on the recommendation of consultant nephrologists. Excludes the control of hyperphosphataemia in adults receiving peritoneal dialysis.
- Ⓢ **Lanthanum carbonate**  
 Restricted to use as a second line agent in patients where a non-aluminium, non- calcium phosphate binder is required on the recommendation of a consultant nephrologist.
- 9.5.3 Ⓢ **Sodium fluoride**
- 9.5.4 **Zinc sulphate**  
 For treatment of proven zinc deficiency only.
- 9.6.1 **No products recommended**
- 9.6.2 **Thiamine**  
**Pabrinex®**  
**Pyridoxine**
- 9.6.3 **Ascorbic acid**
- 9.6.4 **Alfacalcidol**  
**Calciferol**  
**Calcitriol**  
 Not approved for use in osteoporosis and excluding Calcijex®.
- Adcal D3®**  
**Calfovit D3®**  
**Calcichew D3 Forte®**

**Calceos®****Calcium with ergocalciferol**9.6.5 Ⓢ **Alpha tocopheryl acetate**9.6.6 **Menadiol sodium phosphate****Phytomenadione**

Phytomenadione can cause anaphylactic reactions when given IV and therefore the mixed micelle formulation is preferable.

9.6.7 **Abidec®****Vitamins capsules BPC**Ⓢ **Ketovite®**9.8.1 Ⓢ **Penicillamine**Ⓢ **L-carnitine****10**10.1.1 **Diclofenac**

Excluding Voltarol Rapid®, Voltarol Gel Patch® and Dyloject®

**Ibuprofen****Indometacin****Ketoprofen 2.5% gel****Mefenamic acid**

Restricted to gynaecological indications only.

**Naproxen****Piroxicam 0.5% gel****Celecoxib**

Use in ankylosing spondylitis was not accepted by SMC and remains non-Formulary.

**Etodolac****Meloxicam****Diclofenac and misoprostol (Arthrotec 75®)****Etoricoxib**

Restricted to use in acute gout only.

10.1.2.2 **Hydrocortisone****Methylprednisolone****Triamcinolone**10.1.3 **Sulfasalazine**

Enteric coated sulfasalazine is the only formulation licensed for use in rheumatoid arthritis

**Ⓢ Adalimumab**

Use for ankylosing spondylitis is restricted to use in accordance with the British Society for Rheumatology guidelines of July 2004. Treatment of chronic plaque psoriasis is restricted to specialist use in patients with severe disease as defined by a total Psoriasis Area Severity Index (PASI) score of  $\geq 10$  and a Dermatology Life Quality Index (DLQI) of  $> 10$ . Use for active polyarticular idiopathic arthritis in adolescents aged 13-17 years is

restricted to those who have an inadequate response to one or more DMARDs. Use in severe, active Crohn's disease has not been accepted by SMC and remains non-Formulary.

Ⓢ **Auranofin**

Ⓢ **Azathioprine**

Ⓢ **Ciclosporin**

Restricted to specialist use for refractory patients.

Ⓢ **Etanercept**

In adults, etanercept is restricted to initiation by consultant rheumatologists. In children, etanercept is restricted to the treatment of juvenile idiopathic arthritis by paediatric rheumatologists. Etanercept is restricted to use according to SMC and local implementation protocols. Its use in treating ankylosing spondylitis is restricted to use in accordance with the British Society for Rheumatology (BSR) guidelines of July 2004.

Ⓢ **Hydroxychloroquine**

Ⓢ **Infliximab**

In adults, infliximab is restricted to initiation by consultant rheumatologists. Infliximab for the treatment of ankylosing spondylitis is non-Formulary in accordance with NICE TA143. Use in the treatment of psoriatic arthritis is restricted to criteria set out in NICE Technology Appraisal 104.

Ⓢ **Leflunomide**

In adults, leflunomide is restricted to initiation by consultant rheumatologists.

Ⓢ **Methotrexate**

Ⓢ **Minocycline**

This is an unlicensed indication of minocycline and is restricted

to initiation by consultant rheumatologists for use in patients who could not be successfully treated with other DMARDs or anti-TNF therapy because of sepsis.

Ⓢ **Penicillamine**

Ⓢ **Sodium aurothiomalate**

Ⓢ **Rituximab**

Use in rheumatoid arthritis is restricted to specialist use in accordance with local protocol.

10.1.4 **Azapropazone**

**Etoricoxib**

Etoricoxib is restricted to use in acute gout in high risk patients. See section 10.1.1 in preferred list for CSM advice.

**Indometacin**

**Colchicine**

**Allopurinol**

Use for hyperuricaemia associated with cytotoxic drugs is restricted to specialist initiation.

Ⓢ **Rasburicase**

Restricted to use under the supervision of haematologists and oncologists and subject to NHSGGC protocol for adults and children.

10.2.1 **Edrophonium**

Ⓢ **Neostigmine**

Ⓢ **Pyridostigmine**

10.2.2 **Baclofen**

Injection is restricted to use in specialist units only. Slow withdrawal of baclofen over 1-2 weeks is recommended.

**Diazepam**

**Quinine**

Ⓢ **Dantrolene**

Ⓢ **Tizanidine**

Restricted to recommendation by designated specialists.

10.3.1 **S** Hyaluronidase

Algesal®

Movelat®

Transvasin®

Capsaicin

For advice on treatment, see NHSGGC  
primary care pain guidelines.

Kaolin poultice

**11**

## 11.3.1 Chloramphenicol

Fusidic acid

Gentamicin

Polyfax®

Polytrim®

Propamidine

**S** Framycetin**S** Neosporin®**S** Ofloxacin

## 11.3.2 See BNF

## 11.3.3 Aciclovir

## 11.4.1 Betametasone

Maxidex®

Prednisolone sodium phosphate

**S** Betnesol-N®**S** Clobetasone**S** Fluorometholone**S** Hydrocortisone**S** Prednisolone acetate

## 11.4.2 Emedastine

Olopatadine

Sodium cromoglicate

## 11.5 Cyclopentolate

Tropicamide

**S** Atropine**S** Homatropine**S** Phenylephrine

## 11.6

**S** Betaxolol**S** Carteolol**S** Levobunolol**S** Metipranolol**S** Timolol**S** Bimatoprost**S** Latanoprost**S** Travaprost**S** Brimonidine**S** Bimatoprost and timolol**S** Latanoprost and timolol**S** Dipivefrine

Ⓢ Acetazolamide

Ⓢ Brinzolamide

Ⓢ Dorzolamide

Ⓢ Dorzolamide and timolol

Preservative-free unit dose eye drops are restricted to patients in whom a combination of these two agents is appropriate and who have proven sensitivity to benzalkonium chloride.

Ⓢ Brimonidine and timolol

Ⓢ Travaprost and timolol

Ⓢ Pilocarpine

11.7 Proxymetacaine

Tetracaine

Ⓢ Cocaine

Ⓢ Lidocaine

Ⓢ Proxymetacaine and fluorescein

Ⓢ Oxybuprocaine

11.8.1 Carmellose

Hydroxyethylcellulose

Hypotears®

Hypromellose

Ilube®

Lacri-Lube®

Polyacrylic acid

Polyvinyl alcohol

Simple eye ointment

Sodium chloride

11.8.2 Fluorescein

Ⓢ Rose bengal

Ⓢ Apraclonidine

Apraclonidine 0.5% eye drops are restricted to use on specialist advice only for short term adjunctive therapy of chronic glaucoma.

Ⓢ Diclofenac

Ⓢ Flurbiprofen

Ⓢ Ketorolac

Ⓢ Miochol

Ⓢ Sodium hyaluronate

Ⓢ Verteporfin

Ⓢ Pegaptanib

Restricted to specialist use in patients with visual acuity between 6/12 to 6/60 (inclusive). It should be stopped if visual acuity falls below 6/60 during treatment or where severe visual loss is experienced.

Ⓢ Ranibizumab

Restricted to specialist use in accordance with local protocol.

11.9 See BNF

**12**

- 12.1.1 Aluminium acetate**  
**Betametasone**  
**Clotrimazole**  
**Betnesol-N®**  
**Gentisone HC®**  
 The CSM has advised that topical aminoglycosides are contra-indicated in tympanic membrane perforation due to increased risk of ototoxicity.  
**Locorten-Vioform®**  
**Otomize®**  
**Otosporin®**  
**Tri-Adcortyl Otic®**
- 12.1.2 Chloramphenicol**
- 12.1.3 Cerumol®**  
**Sodium bicarbonate**
- 12.2.1 Azelastine**  
**Beclometasone**  
**Betamethasone**  
**Budesonide**  
 Not approved for nasal polyps.  
**Ⓢ Fluticasone**  
 Excluding Nasules®. Fluticasone nasal sprays should be reserved for patients in whom beclometasone and budesonide have been ineffective or not tolerated.  
**Ⓢ Fluticasone furoate**  
 Restricted to allergic rhinitis patients in whom beclomethasone and budesonide have been ineffective or not tolerated.  
**Mometasone**  
 Mometasone nasal sprays should be reserved for patients in whom beclometasone and budesonide have been ineffective or not tolerated.  
**Sodium cromoglicate**
- 12.2.2 Ephedrine**  
**Ipratropium**
- Xylometazoline**
- 12.2.3 Mupirocin**  
**Naseptin®**
- 12.3.1 Adcortyl in Orabase®**  
**Benzydamine**  
**Choline salicylate**  
**Hydrocortisone pellets**
- 12.3.2 Amphotericin**  
**Miconazole**  
 Muco-adhesive buccal tablets are not recommended by SMC and are non-Formulary.
- Nystatin**
- 12.3.3 Not recommended.**
- 12.3.4 Chlorhexidine**  
**Hydrogen peroxide**  
**Sodium chloride**
- 12.3.5 Artificial saliva**  
 Some artificial saliva products can only be prescribed by GPs in line with ACBS approval, i.e. for dry mouth associated only with radiotherapy or sicca syndrome. See BNF for further details.

**13**

- 13.2.1 Aqueous cream  
Dermol 500®  
Diprobath®  
E45®  
Epaderm®  
Hydromol®  
Liquid and white soft paraffin ointment NPF  
Unguentum-M®
- 13.2.1.1 Alpha-Keri®  
Balneum®  
Diprobath®  
Hydromol Emollient®  
Oilatum Emollient®  
Oilatum Plus®
- 13.2.2 Dimeticone  
Sudocrem®
- 13.3 Calamine  
Crotamiton
- 13.4 Eurax-hydrocortisone®  
Hydrocortisone base or acetate (0.1-2.5%)  
Alclometasone dipropionate (Modrasone®)  
Betamethasone dipropionate (Diprosone®)  
Alphaderm®  
Betamethasone valerate (Betnovate RD®)  
Clobetasone butyrate (Eumovate®)  
Beclometasone dipropionate (Propaderm®)  
Betamethasone valerate (Betnovate®)  
Diprosalic®  
Fluticasone (Cutivate®)  
Hydrocortisone butyrate (Locoid®)  
Mometasone (Elocon®)
- Clobetasol propionate  
Canesten HC®  
Daktacort®  
Fucidin H®  
Nystaform HC®  
Timodine®  
Vioform Hydrocortisone®  
Trimovate®  
Betnovate-C®  
FuciBet®
- 13.5.1 Ichthammol  
Ⓢ Alitretinoin  
To be prescribed and dispensed via hospital.
- 13.5.2 Alphosyl HC®  
Calcipotriol  
Calcipotriol and betamethasone dipropionate  
Restricted to physicians experienced in treating inflammatory skin disease. The duration of treatment should not exceed 4 weeks.  
Calcitriol  
Coal tar  
Cocois®  
Dithranol  
Salicylic acid  
Sulphur  
Ⓢ Acitretin  
Restricted to hospital use under specialist dermatological supervision.
- 13.5.3 Ⓢ Ciclosporin  
Restricted to use under specialist dermatological supervision.  
Ⓢ Methotrexate  
Restricted to use under specialist dermatological supervision.  
Ⓢ Pimecrolimus cream  
Restricted to initiation by physicians experienced in the management of eczema. It is restricted to the

management of moderate eczema on the face and neck of children aged between 2 years and 16 years that has not been controlled by topical steroids or where there is serious risk of important adverse effects from further topical steroid use, particularly irreversible skin atrophy.

Ⓢ **Tacrolimus cream**

Topical tacrolimus is restricted to initiation and supervision by a dermatologist.

Ⓢ **Etanercept**

Use in psoriasis is restricted to initiation and supervision only by specialist physicians in accordance with NICE Technology Appraisal 103.

Ⓢ **Infliximab**

Treatment of severe plaque psoriasis in adults is restricted to specialist use in patients who failed to respond to, or who have a contraindication to, or are intolerant of other systemic therapy including ciclosporin, methotrexate or psoralen ultraviolet A (PUVA) and in accordance with the local approved protocol.

13.6.1 **Benzoyl peroxide**

**Clindamycin**

Excluding vaginal cream.

**Clindamycin/benzoyl peroxide gel (Duac®)**

**Erythromycin**

**Isotretinoin gel**

**Quinoderm®**

**Tretinoin**

**Azelaic acid**

**Zineryt®**

13.6.2 **Co-cyprindiol**

**Doxycycline**

**Erythromycin**

**Lymecycline**

**Minocycline**

Minocycline is reserved for patients who have failed on oxytetracycline and tetracycline therapy.

**Oxytetracycline**

**Tetracycline**

Ⓢ **Isotretinoin**

Restricted to use in hospitals, under specialist dermatological supervision.

13.7 **Occlusal®**

**Posalfinil®**

**Salatac®**

**Salactol®**

**Podophyllin**

**Podophyllotoxin**

13.8.1 **Sunsense® Ultra**

**Uvistat® (UVB-SPF 30)**

Ⓢ **Imiquimod cream (Aldara®)**

Imiquimod cream is restricted to second line use by specialist dermatologists for the topical treatment of small superficial basal cell carcinoma in adults where standard treatment with surgery or cryotherapy is contraindicated and fluorouracil is not appropriate. It is also restricted to specialist use for the treatment of clinically typical, nonhyperkeratotic, nonhypertrophic actinic keratoses on the face or scalp in immunocompetent adult patients.

Ⓢ **Methylaminolevulinate cream (Metvix®)**

Restricted to use by specialist dermatologists when other treatments are inappropriate or contra-indicated.

13.8.2 **Veil®**

- 13.9 **Alphosyl 2 in 1®**  
**Capasal®**  
**Ceanel concentrate®**  
**Coal tar**  
**Cocois®**  
**Ketoconazole**  
**Polytar®**  
**Salicylic acid**  
**Selenium sulphide**  
**Eflornithine**  
 Restricted for the treatment of facial hirsutism in women for whom alternative drug therapy is ineffective, contraindicated or considered inappropriate.
- 13.10.1.1 **Mupirocin**  
**Silver sulfadiazide**
- 13.10.1.2 **Metronidazole**
- 13.10.2 **Clotrimazole**  
**Miconazole (excludes Daktarin® powder)**  
**Nystaform®**  
**Nystatin**  
**Terbinafine**
- 13.10.3 **Aciclovir**  
**Penciclovir**
- 13.10.4 **Benzyl benzoate**  
**Carbaryl**  
**Dimeticone 4% (Hedrin®)**  
**Malathion**  
**Permethrin**  
**Phenothrin**
- 13.10.5 **Magnesium sulphate**
- 13.11.1 **Industrial methylated spirits**  
**Sodium chloride**  
**Surgical spirit**
- 13.11.2 **Chlorhexidine**  
**Chlorhexidine/cetrimide**
- 13.11.3 **See BNF**
- 13.11.4 **Povidone-iodine**
- 13.11.5 **See BNF**
- 13.11.6 **Hydrogen peroxide**  
**Potassium permanganate**  
**Zinc sulphate**
- 13.11.7 **Aserbine®**
- 13.12 **Aluminium chloride hexahydrate**
- 13.13 **See BNF**

**14****14.4 See BNF**

Excluding diphtheria-tetanus-acellular pertussis vaccine (Infanrix®), oral typhoid vaccine (Vivotif®), Alphaglobulin® or Vigam-S®.

**15**

- 15.1.1  Etomidate
- Ketamine
- Propofol
- Thiopental
- 15.1.2  Desflurane
- Entonox
- Isoflurane
- Nitrous oxide
- Sevoflurane
- 15.1.3  Atropine
- Glycopyrronium
- Hyoscine hydrobromide injection
- 15.1.4.1  Chlorpromazine
- Diazepam
- Lorazepam
- Midazolam
- Temazepam tablets
- Alimemazine
- 15.1.4.2  Diclofenac
- Ketorolac injection
- 15.1.4.3  Alfentanil
- Fentanyl injection
- Morphine (excludes Depodur®)
- Papaveretum
- Pethidine
- Remifentanil
- Restricted to use under direct supervision of a consultant anaesthetist.
- 15.1.5  Atracurium
- Cisatracurium
- Mivacurium
- Pancuronium
- Rocuronium
- Vecuronium
- Suxamethonium

- 15.1.6 **Ⓢ Edrophonium**  
**Ⓢ Neostigmine**  
**Ⓢ Robinul-Neostigmine®**  
**Ⓢ Sugammadex**  
 Restricted to use in the immediate reversal of rocuronium-induced neuromuscular blockade in adults only according to protocol. A register of use is to be maintained by specialists.
- 15.1.7 **Ⓢ Doxapram**  
**Ⓢ Flumazenil**  
**Ⓢ Naloxone**  
 Excludes the combination product of oxycodone and naloxone (Targinact®).
- 15.1.8 **Ⓢ Dantrolene**
- 15.2 **Ⓢ Tetracaine gel**  
**Ⓢ Bupivacaine**  
**Ⓢ Cocaine (excluding spray)**  
**Ⓢ Levobupivacaine**  
**Ⓢ Lidocaine 5% medicated plaster (Versatis®)**  
 Restricted to patients who are intolerant of first line therapies for post-herpetic neuralgia or where these therapies have been ineffective. Use for other indications remain non-Formulary.  
**Ⓢ Lidocaine and phenylephrine**  
**Ⓢ Emla®**  
**Ⓢ Lidocaine**  
**Ⓢ Phenol**  
**Ⓢ Prilocaine**  
**Ⓢ Procaine**

## 16

- 16.1 **Ⓢ Ipecacuanha**  
**Ⓢ Activated charcoal**  
 Excluding Charcodote®.
- 16.2 **Ⓢ Acetylcysteine**  
**Ⓢ Methionine**  
**Naloxone**  
**Ⓢ Desferrioxamine**  
**Ⓢ Dicobalt edentate**  
**Ⓢ Sodium nitrite**  
**Ⓢ Sodium thiosulphate.**  
**Ⓢ Fuller's earth**  
**Ⓢ Dimercaprol**  
**Ⓢ Penicillamine**  
**Ⓢ Sodium calcium edentate**

## Orphan products

- Orphan 2.11  
**Ⓢ Human protein C**
- Orphan 8.1.5  
**Ⓢ Bexarotene**
- Orphan 9.8.1  
**Ⓢ Mercaptamine**  
**Ⓢ Sodium phenylbutyrate**
- Orphan 9.8.2  
**Ⓢ Carglumic acid**  
 Restricted to use by experts providing the supraregional specialist service for N-acetylglutamate synthase deficiency.

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