INTRODUCTION

AIM
The aim of the formulary is to:

- promote safe, effective and economic use of drugs
- rationalise prescribing within the hospitals
- rationalise the number of preparations stocked by pharmacies, thus reducing stock holding and drug wastage

GUIDELINES FOR USING THIS BOOKLET
The text is laid out in the same order as the British National Formulary (BNF). It should be used in conjunction with the current BNF. The Drug Formulary is not intended to be a replacement for it. Drugs can be located using the BNF section number or by the alphabetical list in the index at the back. If the BNF section has not been included, all preparations in that section are non-formulary.

Strengths, formulations available, prescribing restrictions and notes for local guidance are included in the main text.
The new British Approved Name (BAN) has been used, with the former name in brackets after. In some instances the trade name, indicated by ®, is included where it is necessary or with some compound preparations. Where there are modified release preparations, this is indicated by m/r and enteric coated preparations by e/c.

Some sizes or strengths of preparations are currently available only on particular sites. Please refer to the pharmacy for further information.

Various guidelines and protocols are referred to in the text. Details are available from pharmacy on request. In general the drugs listed are those stocked in Pharmacy.

For requests for non-formulary drugs please refer below.

REQUESTING A DRUG FOR INCLUSION INTO THE FORMULARY

The Drug and Therapeutics Committee meets every two months to consider requests from Consultants. A ‘new drug request form’ is available from the Trust Intranet. The Consultant should complete this fully, providing information about the intended indication, estimate patient numbers and supply supporting evidence for the inclusion of the drug. The form should be completed and signed by the Consultant, his/her Clinical Director, General Manager and clinical lead pharmacist. Funding will then need to be found. The pharmacy department will then produce an evidence-based evaluation for the Drug and Therapeutics Committee. Managing the entry of new drugs is a Trust requirement as part of its Medicines Management initiative.

INITIATION OF A NON-FORMULARY PREPARATION OR DRUG

All preparations initiated within BHR for in- and out-patient prescribing should be from this formulary. According to Trust directives, prescriptions for non-formulary drugs will be queried by pharmacy staff, who will suggest alternatives from the formulary, where appropriate.

REQUESTING URGENT, NON-FORMULARY DRUGS

In exceptional circumstances non-formulary drugs may be requested for use by a prescriber. A Principal/ Senior Principal Pharmacist will discuss the circumstances with the relevant Consultant. The pharmacist may authorise use or refer the matter to the Chairman of the Drug and Therapeutics Committee for a decision. If there are significant clinical risks or financial implications, then the matter will be discussed with the relevant Clinical Director.

CONTINUATION OF THERAPY

Supplies of medication are usually obtained for patients already established on non-formulary preparations. Patients on non-formulary products such as laxatives, indigestion remedies, calcium supplements, OTC analgesia etc., should be switched to an equivalent formulary preparation.

SPECIAL CONSIDERATIONS

- RESTRICTED DRUGS
  Where specified, initiation may be by the request of a Specialist. For example, many antibiotics are restricted to Microbiologists only. This is to help prevent resistance emerging and contain costs.

- MODIFIED RELEASE PREPARATIONS AND PHARMACEUTICAL FORMS
  In some cases a drug may be approved, but not in all the pharmaceutical forms available: e.g. the oral preparation may be formulary but the injection or the
cream, non-formulary. Some modified release preparations are disproportionately costly for the benefit they offer and are therefore not included.

- SPECIFIC CLINICAL NEEDS
  Non-formulary drugs for individual patients may be approved via Trust procedure. There will be occasions where a patient’s clinical needs cannot be met by any of the preparations listed. Special requirements must be discussed in the first instance with the Ward/ Liaison pharmacist. This may then be referred to a Senior Principal Pharmacist, who may authorise the approval for purchase.

PAYMENT BY RESULTS (PbR) EXCLUSIONS
Throughout the formulary some drugs have been labelled with nPbR. Non PbR drugs are those expensive drugs that have been agreed nationally should be reported to the CCGs on a monthly basis and invoiced accordingly. It has been agreed on a London-wide basis that the prescribing of these drugs should be only for NICE indications or for approved licensed indications where NICE has not yet reviewed (see details on the intranet). Before these drugs can be dispensed we must be provided with full patient details, including the clinical indication for the drug.

The drugs that are included in this group are:

- **Anti TNFs e.g. Etanercept, Infliximab**
  Antifibrinolytic drugs and haemostatics e.g. Drotrecogin alfa
  Torsion dystonia and other involuntary movements e.g. Riluzole and Botulinum
  Motor Neurone Disease
  Antifungals e.g. liposomal amphotericin
  Hepatitis B & C Peginterferon alfa, ribavirin
  Growth Hormone (Somatropin)
  Drugs affecting bone metabolism e.g. Teriparatide
  Immunomodulating drugs e.g. Alpha and Beta Interferon
  Somastatin analogues e.g. Octreotide
  Natalizumab
  Glatiramer
  Treatment of Macular Degeneration (Age –related) e.g. Lucentis and Avastin
  Drugs used in neutropenia e.g. Filgastrim
  Drugs used in metabolic disorders e.g. Laronidase
  Hyperuricaemia associated with cytotoxic drugs e.g. Rasburicase
  Immunoglobulins
  Tisseel

The minimum data set required by CCGs before they will pay for a patient’s treatment is:

- Patient name
- NHS Number
- Hospital number
- Diagnosis
- Cost of drug
- Strength and form of drug
- Date dispensed
- Consultant code/ cost centre
- CCGs
Unless previously agreed with the CCGs on a named-patient basis, we will only be funded for treatment that has been undertaken in line with NICE guidance and the CCGs will require assurance that prescribing has been in accordance with NICE.

Prescribing of these drugs should only be in accordance with NICE guidance OR for licensed indications that have been approved by the Drugs and Therapeutics Committee.

If a Consultant has a patient whom you believe requires one of these drugs but does not come under NICE or a licensed indication the Chief Pharmacist should be contacted before a request to a CCG or GP is made. Such requests will then be ‘fast-tracked’ to the Drugs and Therapeutics Committee for a decision.

MEDICINES INFORMATION SERVICE
The Medicines Information service is based at Queen’s Hospital (QH) and may be contacted on extension 3354. It provides a source of up to date medicines information and advice on drug therapy and related areas to all healthcare professionals. The Trust Intranet also provides drug-related information under the section “Medicines Information for Doctors” and carries the Electronic Medicines Compendium

OUT OF HOURS SERVICE
The on-call Pharmacist for Queen’s Hospital (QH) and King George Hospital (KGH) can be contacted via Queen’s Hospital (QH) switchboard and/or King George Hospital switchboard outside opening hours.

BHRUT Medicines Optimisation Committee
Chair: Dr. John McAuley, Consultant Neurologist

EDITORS:
Grace Lipinska, Senior Pharmacist (Formulary and Medicines Information)

REVISED: Updated October 2019
1 GASTRO-INTESTINAL SYSTEM

1.1 DYSPEPSIA & GASTRO-oesophageal reflux disease

1.1.1 Antacids & Dimeticone
Magnesium trisilicate mixture
Asilone ® suspension
(Aluminium hydroxide, light magnesium oxide & dimeticone)

1.1.2 Compound Alginate & proprietary indigestion preparations
Gaviscon ® Advance suspension
Infant Gaviscon ® oral powder

Notes: Magnesium trisilicate should be prescribed when a simple antacid is needed.
Gaviscon is an antacid-alginate preparation, indicated for treatment of reflux & hiatus hernia.
Caution: Some antacids can contain high levels of sodium, e.g magnesium trisilicate mixture. Gaviscon liquid contains about 6 mmol sodium/10 ml

1.2 Antispasmodics & other drugs altering gut motility
Atropine sulphate
600 mcg tablet,
500 mcg/5 ml syrup (unlicensed)
(Paediatrics & ENT only)

Dicycloverine (Dicyclomine)
10 mg tablet, 10 mg/5 ml syrup

Hyoscine butylbromide (Buscopan ®)
10 mg tablet, 20 mg/ml injection

Mebeverine
135 mg tablet, 50 mg/5 ml liquid

Peppermint oil 0.2 ml capsule
Peppermint water
(Unlicensed preparation)

Motility stimulants
Metoclopramide
10 mg tablet, 5 mg/5 ml syrup,
10 mg/2 ml injection

Domperidone
10 mg tablet, 5 mg/5 ml suspension,
30 mg suppositories

Notes: Metoclopramide may induce dystonic reactions, especially in young children, young adults & the elderly. Use of metoclopramide in patients under 20 years is not recommended. May cause confusion in the elderly. Avoid in Parkinson’s disease.

1.3 Ulcer healing drugs

1.3.1 H2-receptor antagonists
Ranitidine
150 mg tablet, 75 mg/5 ml syrup,
50 mg/2 ml injection

1.3.3 Chelates and complexes
Sucralfate
1 g tablet, 1 g/5 ml suspension

Tripotassium dicitratobismuthate
(De-Noltab ®) 120 mg tablet
(Gastroenterologists only)

1.3.5. Proton pump inhibitors
1st Choice: Omeprazole 10mg & 20mg capsules
2nd Choice: Lansoprazole 15 mg & 30 mg capsules

For adults with swallowing difficulties or on enteral feeding tubes use Lansoprazole 15 & 30mg FasTabs ®

Omeprazole MUPS 10mg & 20mg
(Paediatric use only)
**Esomeprazole** 20 mg tablet

*(For patients with erosive oesophagitis who have failed to improve with omeprazole)*

**Omeprazole** 40 mg infusion

*(In accordance with PPI guidelines)*

**H. PYLORI ERADICATION THERAPY (ALL FOR SEVEN DAYS)**

Lansoprazole 30 mg b.d
Amoxicillin 1g b.d
Clarithromycin 500 mg b.d

Or

Lansoprazole 30 mg b.d
Amoxicillin 1g b.d
Metronidazole 400 mg b.d

*(Penicillin-allergic patients):*

Lansoprazole 30 mg b.d
Clarithromycin 250 mg b.d
Metronidazole 400 mg b.d

**1.4 ACUTE DIARRHOEA**

**1.4.2 ANTIMOTILITY DRUGS**

**Codeine phosphate**

15 mg & 30 mg tablets, 25 mg/5 ml syrup

**Co-phenotrope** (equivalent to Lomotil®)

Tablet

**Loperamide**

2 mg tablet, 1 mg/5 ml syrup

*Note:* It is important to rule out infective diarrhoea before prescribing anti-diarrhoeals

**Eluxadoline** (Truberzi®) 75mg and 100mg film-coated tablets

**1.5 TREATMENT OF CHRONIC BOWEL DISORDERS**

**1.5.1 AMINOSALICYLATES**

**Mesalazine**

*(Asacol® MR)*

400 mg e/c tablet, 1 g foam enemas, 250 mg & 500 mg suppositories

*(Gastroenterologists only)*

*(Pentasa®)*

500 mg m/r tablet, 1 g granules

*(Gastroenterologists only)*

*(Salofalk®)* 3 g granules and 1 g suppositories

**Octasa®** 400mg & 800mg M/R tablets

**Balsalazide** 750 mg capsule

*(Gastroenterologists only)*

**Sulfasalazine (Sulphasalazine)**

500 mg tablet & e/c tablet, 250 mg/5 ml suspension

500 mg suppositories

*Notes:* The aminosalicylates, mesalazine & sulfasalazine, may cause blood disorders. See B.N.F. Sulfasalazine may colour the urine & stain contact lens

nPbR = Indicates a drug excluded from HRG tariff price
1.5.2 CORTICOSTEROIDS

**Beclometasone** 5mg m/r tablet (Clipper®)

**Budesonide**
1mg orodispersible tablets (Joverza®) *(Consultant Gastroenterologists only for the treatment of eosinophilic esophagitis)*

3 mg CR capsules *(Consultant Gastroenterologists only)*

**Hydrocortisone**
10% foam application

**Prednisolone**
25 mg & 5 mg tablet,
2.5 mg & 5 mg e/c tablets,
5 mg soluble tablet, 5 mg suppositories,
20 mg/ 100 ml retention enema,
20 mg foam application

1.5.3 Drugs affecting the immune response

**Azathiprine**

**Mercaptopurine**

**Methotrexate** 2.5mg tablets and various strengths of injections

**CYTOKINE INHIBITORS**

nPbR **Infliximab** 100 mg IV infusion *(Remicade®)*

nPbR **Infliximab Biosimilars** 100mg powder for concentrate for solution for infusion *(Remsima® & Inflectra®)* *(Consultant Gastroenterologists only for Crohn’s Disease. All scripts should be referred to a Senior Principal Pharmacist for approval)*

nPbR **Adalimumab** *(2nd line treatment of crohn’s disease if infliximab ineffective or not tolerated)*

**Biosimilars:**
1st line choice Hyrimoz®
2nd line choice Amgevita®

nPbR **Vedolizumab** 300mg vial

1.6 LAXATIVES

**Note:** Before prescribing laxatives consider other contributory factors to constipation: inadequate fluid intake, drugs, lack of exercise & dietary fibre

1.6.1 BULK-FORMING LAXATIVES

**Ispaghula husk** *(for Fybogel®)*
3.5 g sachets

**Notes:** Ispaghula husk should be stirred into a large glass of water & drunk immediately. This should not be taken at night

1.6.2 STIMULANT LAXATIVES

**Bisacodyl**
5 mg tablet,
5 mg (paediatric) & 10 mg (adult) suppositories

**Dantron** *(Danthron)*
Co-danthramer
25/200 in 5 ml suspension &
75/1000 in 5 ml (strong) suspension
(see guidance note below)

Co-danthrusate
50/60 capsule

Notes: Co-danthrusate &
co-danthramer should be restricted for
terminally ill patients. Both may colour the
urine. They should be avoided in
incontinent patients, as prolonged contact
may irritate the skin

nPbR = Indicates a drug excluded from HRG tariff price
**Docusate sodium** 100 mg capsule, 12.5 mg/ 5 ml & 50 mg/ 5 ml oral solution

**Notes:** Docusate is frequently under prescribed. It is a useful laxative, combining both stimulant & lubricant action

**Senna**
7.5 mg tablet, 7.5 mg/ 5 ml syrup

**Glycerin** 1 g, 2 g & 4 g suppositories

**Sodium picosulphate** 5 mg/ 5 ml elixir

**Califig ® syrup** *(NELMHT only)*

**1.6.3** **FAECAL SOFTENERS**
**Arachis oil** enema

**Liquid Paraffin BP**
*(Consultant Paediatricians only)*

**1.6.4** **OSMOTIC LAXATIVES**
**Lactulose** 3.35 g/ 5 ml solution

**Liquid paraffin & magnesium hydroxide** *(Milpar ®)* oral emulsion

**Macrogols** *(Movicol ®)*

**Laxido®**

**Phosphate Enemas (Fletcher’s)**
**Sodium citrate** microenema *(Relaxit ®)* *(Micolette®)*

**1.6.5** **BOWEL CLEANSING SOLUTIONS**
**Citramag ®**
Magnesium citrate powder

**Fleet Phospho-soda ®**
oral solution

**Klean-Prep ®** oral powder
Where Picolax and Citramag have been ineffective.

**Moviprep®** oral powder

**Picolax ®** oral powder
Sodium picosulfate & magnesium citrate sachets

**AMIDOTRIZOATES**

**Diatrizoates**

**Gastrografin® Solution,** sodium amidotrizoate 100 mg, meglumine amidotrizoate 660 mg/mL 100ml Bottle

**1.6.6 PERIPHERAL OPIOID-RECEPTOR ANTAGONISTS**

**Naloxegol** 12.5 and 25 mg film-coated tablets

**1.6.7 5HT4-RECEPTOR AGONISTS**

**Prucalopride** 1mg and 2mg film coated tablets (as per NICE recommendations)

**LAXATIVES GUANYLATE CYCLASE-C RECEPTOR AGONISTS**

**Linaclotide** 290microgram capsules

**1.7 LOCAL PREPARATIONS FOR ANAL & RECTAL DISORDERS**

**1.7.1 SOOTHING HAEMORRHOIDAL PREPARATIONS**

**Anusol ®**
Cream, ointment & suppositories

**1.7.2 PREPARATIONS WITH CORTICOSTEROIDS**

**Anusol HC ®** ointment & suppositories

**1.7.3 RECTAL SCLEROSANTS**

**Phenol oily, B.P** injection 5 %
1.7.4 Management of anal fissures
1st Choice: Glyceryl Trinitrate Rectal ointment 0.4% (Rectogesic®)

2nd Choice: Diltiazem
2% cream (Unlicensed)

1.8 STOMA CARE
Stomahesive paste

1.9 DRUGS AFFECTING INTESTINAL SECRETION

1.9.1 DRUGS ACTING ON THE GALL BLADDER
Ursodeoxycholic acid
250 mg capsule, 150 mg tablet,
250 mg / 5 ml suspension

1.9.2 BILE ACID SEQUESTRANTS
Colestyramine (Cholestyramine)
4 g sachets

Notes: Other drugs should be taken at least 1 hour before or 4-6 hours after colestyramine to reduce possible interference with absorption

Colesevelam Hydrochloride
625mg tablets

1.9.4 PANCREATIN
Creon ® 10 000 capsule

nPbR = Indicates a drug excluded from HRG tariff price
2 CARDIOVASCULAR SYSTEM

2.1 POSITIVE INOTROPIC DRUGS

2.1.1 CARDIAC GLYCOSIDES

Digoxin
62.5, 125 & 250 micrograms tablets, 50 micrograms/ ml elixir, 500 micrograms/ 2 ml & 100 micrograms/ ml injection

Notes: Hypokalaemia predisposes to digoxin toxicity. Please note difference in bioavailability between the formulations. Use as a guide: 125 mcg tablet = 100 mcg elixir = 75 mcg injection

DIGOXIN-SPECIFIC ANTIBODY

Digifab® 40mg/vial digoxin immune Fab injection (RUM drug)

Notes: Please refer to Registrar or Consultant before issuing. BHR Labs measure digoxin levels in nmol/ L. The manufacturers use ng/ ml in the literature, hence conversion may be required. (new level) ng/ ml = 0.78 X (level) nmol/ L

2.1.2 PHOSPHODIESTERASE INHIBITORS

Milrinone 10 mg/ 10 ml injection (RUM drug) (ITU & Cardiologists only)

2.2 DIURETICS

2.2.1 THIAZIDES & RELATED DIURETICS

Bendroflumethiazide (Bendrofluazide) 2.5 & 5 mg tablets

Notes: Bendroflumethiazide 2.5mg daily is the drug of choice for mild-moderate hypertension. Allow 4 weeks for maximal antihypertensive effect of bendroflumethiazide

Indapamide 2.5mg & 1.5mg m/r tablets
Metolozane 5 mg tablet

Notes: Use metolozane with caution, especially when combined with loop diuretics. Monitor K+ and renal function

2.2.2 LOOP DIURETICS

1st choice: Furosemide
20 mg, 40 mg & 500 mg tablets, 20 mg/ 2 ml, 50 mg/ 5 ml & 250 mg/ 25 ml injection, 40 mg / 5 ml oral solution

2nd choice: Bumetanide 1 mg & 5 mg tablets, 1mg/ 5 ml liquid, 2 mg/ 4 ml injection

Note: At low doses 40 mg furosemide is equivalent to 1 mg bumetanide

2.2.3 POTASSIUM-SPARING DIURETICS

Amiloride 5 mg tablet, 5 mg/ 5 ml solution

Notes: Potassium sparing diuretics such as amiloride are usually necessary only if hypokalaemia develops

ALDOSTERONE ANTAGONISTS

1st choice: Spironolactone 25 mg & 100 mg tablets, 25 mg/ 5 ml & 100 mg/ 5 ml suspension, 1 mg/ ml suspension (for paediatrics, unlicensed)

Notes: Spironolactone is licensed only for congestive cardiac failure, nephrotic syndrome, ascites associated with cirrhosis or malignancy & primary aldosteronism

Alternative: Eplerenone 25 & 50mg tablet. For Spironolactone intolerant patients. In view of its high cost it will not replace Spironolactone.

2.2.4 POTASSIUM-SPARING DIURETICS WITH OTHER DIURETICS
Co-amilofruse (amiloride/ furosemide)  
2.5 mg/ 20 mg & 5 mg/ 40 mg tablet

Co-amilozide  
(amiloride/ hydrochlorothiazide)  
2.5 mg/ 12.5 mg & 5 mg/ 25 mg tablets

Co-triamterzide  
(triamterene/ hydrochlorothiazide)  
50 mg/ 25 mg tablet

### 2.2.5 OSMOTIC DIURETICS

Mannitol 10 % & 20 % infusion

**Notes:** Crystal formation may occasionally occur in mannitol bags. These disappear on gentle warming before use

### 2.3 ANTI-ARRHYTHMIC DRUGS

#### SUPRAVENTRICULAR ARRHYTHMIAS

Adenosine 6 mg/ 2 ml injection

Dronedarone 400mg f/c tablets (as per NICE recommendations)

#### SUPRAVENTRICULAR & VENTRICULAR ARRHYTHMIAS

Amiodarone 100 mg & 200 mg tablets, 150 mg/ 3 ml injection, 300 mg/ 10 ml minijet (Resus. only)

**Notes:** Liver function & thyroid function tests should be performed at baseline & 6 monthly thereafter. A chest X-Ray should be done before treatment

Flecainide 50 mg & 100 mg tablets, 150 mg/ 15 ml injection

Disopyramide 100 mg capsule, 150 mg & 250 mg SR tablets, 50 mg/ 5 ml injection

Propafenone 150 mg tablet

**Notes:** Disopyramide, flecainide & propafenone should be used under the guidance of a Consultant Cardiologist only

#### DRUGS FOR VENTRICULAR ARRHYTHMIAS

Lidocaine (Lignocaine)  
1% & 2 % injection, 0.1% & 0.2 %/ glucose 5 % infusion, 100 mg/ 10 ml minijet

Mexiletine 50 mg & 200 mg capsules, 250 mg/ 10 ml injection

**Notes:** This category of drugs should be used under the guidance of a Consultant Cardiologist only

### 2.4 BETA-ADRENOCEPTOR BLOCKING DRUGS

Atenolol 25 mg, 50 mg & 100 mg tablets, 25 mg/ 5 ml syrup, 5 mg/ 10 ml injection

Metoprolol 50 mg tablet, 5 mg/ 5 ml injection

Propranolol 10 mg, 40 mg & 80 mg tablets, 80 mg & 160 mg SR tablets, 1 mg/ ml injection, 40 mg/ 5 ml oral solution, 10 mg/ 5 ml oral solution, 5 mg/ 5 ml oral solution,

Sotalol 40 mg & 80 mg tablets, 40 mg/ 4 ml injection

Bisoprolol 1.25 mg & 2.5 mg 5 mg & 10 mg tablets

Carvedilol 3.125 mg, 6.25 mg, 12.5 mg & 25 mg tablets

Esmolol 100 mg/ 10 ml injection (Theatres only)

Labetalol 50 mg & 100 mg tablets 100 mg/ 20 ml injection

### 2.5 DRUGS AFFECTING THE RENIN-ANGIOTENSIN SYSTEM & OTHER ANTIHYPERTENSIVES

#### 2.5.1 VASODILATOR ANTIHYPERTENSIVE DRUGS

Hydralazine 25 mg & 50 mg tablets, 20 mg/ ml injection

nPbR = Indicates a drug excluded from HRG tariff price
Sodium nitroprusside
50 mg/ 5 ml intravenous infusion

2.5.2 CENTRALLY ACTING ANTIHYPERTENSIVE DRUGS
Methyldopa 250 mg/ 5 ml suspension,
125 mg, 250 mg & 500 mg tablet
2.5.3 ADRENERGIC NEURONE BLOCKING DRUGS
Guanethidine 10 mg/ml injection (Day Stay (KGH), Dr Ather & Orthopaedic surgeons (OCH) only)

2.5.4 ALPHA-ADRENOCEPTOR BLOCKING DRUGS
Doxazosin 1 mg, 2 mg & 4 mg tablets
Phentolamine 10 mg/ml injection

2.5.5 DRUGS AFFECTING THE RENIN-ANGIOTENSIN SYSTEM
2.5.5.1 ACE (ANGIOTENSIN CONVERTING ENZYME) INHIBITORS
1st Choice: Lisinopril
2.5 mg, 5 mg, 10 mg & 20 mg tablets
Alternative: Ramipril (in accordance with HOPE guidelines)
1.25 mg, 2.5 mg & 5 mg & 10 mg tablets
Captopril
12.5 mg, 25 mg & 50 mg tablets
Notes: First dose hypotension can occur in patients who are taking high dose diuretics, volume depleted, on a low-sodium diet or with heart failure. The first dose should always be given at night. Caution with potassium-sparing diuretics. Urea & electrolytes should be checked within 1 week of commencing therapy.

2.5.5.2 ANGIOTENSIN 2 RECEPTOR ANTAGONISTS
Angiotensin 2 receptor antagonists (AR2As) should only be used when there is intolerance to ACE inhibitors e.g. cough

2.5.5.3 RENIN INHIBITORS
Aliskiren 150 mg & 300 mg f/c tablets
(Consultant Cardiologists’ and Dr. Fahal’s use only). To be used as a 4th line agent after all other antihypertensives have been used at their maximum tolerated doses. Rx must include a consultant cardiologists’ signature

2.6 NITRATES, CALCIUM-CHANNEL BLOCKERS & POTASSIUM-CHANNEL ACTIVATORS
2.6.1 NITRATES
Glyceryl trinitrate
500 micrograms sublingual tablets,
400 micrograms/ dose sublingual spray,
2 mg & 5 mg buccal tablets,
50 mg/ 10 ml injection,
5 mg/ 5 ml injection,
5 mg & 10 mg patch
Isosorbide mononitrate
10 mg & 20 mg tablets & 60mg m/r tablets
Note: All other slow-release nitrates are non-formulary

RENAL PROTECTION IN TYPE 2 DIABETIC PATIENTS WITH NEPHROPATHY
1st Choice: Losartan (use when intolerant to ACE inhibitors)

TREATMENT OF HEART FAILURE
Sacubitril/Valsartan 24mg/ 26mg, 49mg/51mg & 97mg/103mg film coated tablets (Entresto®)

(All AR2As are unlicensed for this indication, ACE inhibitors are 1st Choice)
Alternative: Candesartan (use when intolerant to ACE inhibitors)

2.6.3 NITRATES, CALCIUM-CHANNEL BLOCKERS & POTASSIUM-CHANNEL ACTIVATORS
2.6.4 NITRATES
Glyceryl trinitrate
500 micrograms sublingual tablets,
400 micrograms/ dose sublingual spray,
2 mg & 5 mg buccal tablets,
50 mg/ 10 ml injection,
5 mg/ 5 ml injection,
5 mg & 10 mg patch
Isosorbide mononitrate
10 mg & 20 mg tablets & 60mg m/r tablets
Note: All other slow-release nitrates are non-formulary

nPbR = Indicates a drug excluded from HRG tariff price
2.6.2 CALCIUM-CHANNEL BLOCKERS

**Notes:** Bioavailability may vary between different formulations (brands) of diltiazem, verapamil & nifedipine. However, it is Trust policy to use formulations (brands) for diltiazem specified below. Once daily preparations should be used only when compliance is a problem.

**Amlodipine** 5 mg & 10 mg tablets

**Diltiazem**
- (Twice or Three times daily preparation) 60 mg m/r tablet
- (Twice daily preparation: Tildiem Retard) 90 mg, 120 mg & 180 mg m/r tablets
- (Once daily formulation: Adizem XL) 120 mg, 180 mg, 200 mg, 240 mg & 300mg m/r capsules

**Nifedipine** 5 mg & 10 mg capsules,
- (Twice daily preparation) 10 mg & 20 mg m/r tablets
- (Once daily formulation) 20 mg, 30 mg & 60 mg m/r tablets

**Verapamil**
40 mg, 80 mg & 120 mg tablets,
120 mg, 180 mg & 240 mg m/r capsules/ tablets,
5 mg/ 2 ml injection

**Nimodipine** 30 mg tablet, 200 micrograms/ ml injection

**Note:** Nimodipine injection must be administered centrally

2.6.3 OTHER ANTIANGINAL DRUGS

**Ivabradine** 5mg & 7.5mg tablets

**Note:** Approved for 3rd line treatment of stable angina pectoris in patients who are intolerant to beta-blockers and diltiazem. Ivabradine should be initiated in primary care only if there’s access to a multidisciplinary heart failure team. Dose titration and monitoring should be carried out by a heart failure specialist or in primary care by either a GP with a special interest in heart failure or a heart failure specialist nurse.

**(To be restricted to senior members of medical Team)**

**Nicorandil** 10 mg & 20 mg tablets

**Ranolazine** 375mg, 500mg & 750mg m/r tablets *(as per angina treatment pathway)*

2.6.4 PERIPHERAL & CEREBRAL VASODILATORS

**Naftidrofuryl** 100 mg capsule

**Iloprost** infusion
50 microgram/ 0.5 ml injection *(Unlicensed. Refer to the protocol. For severe Raynaud’s phenomenon & limb-threatening peripheral arterial occlusive disease only)*

**Pentoxifylline (Oxpentifylline)**
400mg tablet *(Consultant Vascular Surgeons only)*

**Note:** Other peripheral vasodilators are considered less suitable for prescribing by the B.N.F

2.7 SYMPATHOMIMETICS

2.7.1 INOTROPIC SYMPATHOMIMETICS

**Dobutamine** 250 mg/ 20 ml injection

**Dopamine** 200 mg/ 5 ml injection

**Dopexamine** 10 mg/ ml strong sterile solution *(ITU Consultants only)*
Notes: Dopamine must be administered into a major vein. Peripheral infusions may lead to skin necrosis & thrombophlebitis

See following pages for dobutamine & dopamine infusion tables

nPbR = Indicates a drug excluded from HRG tariff price
**DOBUTAMINE INFUSION CHART**

Concentration = 250 mg in 100 ml saline or 5 % glucose = 2500 micrograms per ml.
Give through a Baxter Floguard pump

<table>
<thead>
<tr>
<th>mcg/ kg/ min</th>
<th>2.5</th>
<th>3.0</th>
<th>4.0</th>
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When using a 50 ml syringe pump add 250 mg dobutamine to 50 ml normal saline or 5% glucose and halve the above infusion rates.
**DOPAMINE INFUSION CHART**

Concentration = 200 mg in 100 ml saline or 5% glucose = 2000 micrograms per ml.

Give through a Baxter Fioguard pump

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nPbR = Indicates a drug excluded from HRG tariff price
When using a 50 ml syringe pump add 200 mg dopamine to 50 ml normal saline or 5% glucose and halve the above infusion rates.

### 2.7.2 VASOCONSTRICTOR SYMPATHOMIMETICS

**Noradrenaline (Norepinephrine)**
1 mg/ ml (1/1000) injection

**Metaraminol** injection 10 mg in 1 ml *(Unlicensed)*

**Phenylephrine** 10 mg/ ml (1 %) injection

### 2.7.3 CARDIOPULMONARY RESUSCITATION

**Adrenaline (Epinephrine)**
1 mg/ 10 ml minijet

**Notes:** In accordance with the Trust Resuscitation Policy. See resuscitation drugs list for BHR. Any queries please consult the Resus Officer.

NELMHT: Please refer to own policy

### 2.8 ANTICOAGULANTS & PROTAMINE

#### 2.8.1 PARENTERAL ANTICOAGULANTS

**Heparin sodium** 1000 units/ ml, 5000 units/ ml, 25,000 units/ ml injection, 500 units/ 500 ml sodium chloride 0.9 % infusion

**Heparin calcium** injection 5000 units/ 0.2 ml prefilled syringe

**LOW MOLECULAR WEIGHT HEPARINS**

**Dalteparin (Fragmin®)** injection 2500 units/ml 4ml ampoule (for prophylaxis and treatment of thrombosis in children). *(Consultant Haematologists and Paediatricians only)*

**Enoxaparin (Clexane ®)** injection 20 mg in 0.2 ml prefilled syringe

40 mg in 0.4 ml prefilled syringe
60 mg in 0.6 ml prefilled syringe
80 mg in 0.8 ml prefilled syringe
100 mg in 1.0 ml prefilled syringe
120 mg in 0.8 ml prefilled syringe
150 mg in 1.0 ml prefilled syringe

**Notes:** Monitor renal function and adjust dose if necessary. This should not delay first dosing, but subsequent dosing must be based on the results. Risk of bleeding is increased in severe renal impairment

**Argatroban Monohydrate** *(Exembol®)100mg/ml*

**HIRUDINS**

**Lepirudin** 50 mg/ ml injection *(Haematologists only)*
HEPARIN FLUSHES

Heparinised saline
50 units/ 5 ml injection
(Paediatric & Hickman lines only)

EPOPROSTENOL

nPbR Epoprostenol 500 micrograms injection (ITU/ HDU patients on haemofiltration with low platelets, SCBU, Vascular Surgeons, KGH only for Peripheral Vascular Disease, unlicensed)

Fondaparinux sodium 5mg/ml injection 0.5ml pre-filled syringe

2.8.2 ORAL ANTICOAGULANTS

Warfarin 1 mg, 3 mg & 5 mg tablets
Alternative: Atenocoumarol (Nicoumalone) 1 mg tablet
Alternative: Phenindione 10 mg & 25 mg tablets

Rivaroxaban (Xarelto®) 2.5mg, 10mg, 15mg & 20mg film-coated tablet. (For thromboprophylaxis following knee and hip replacement surgeries, orthopaedics use only) & Treatment of VTE by Haematologists only. Also approved for prophylaxis of stroke and systemic embolism in non-valvular atrial fibrillation by Haematologists, Cardiologists and Stroke physicians. Also approved for prophylaxis of atherothrombotic events following ACS as per NICE TA 335

Apixaban (Elliquis®) 2.5mg & 5mg f/c tablets. (For prophylaxis of stroke and systemic embolism in non-valvular atrial fibrillation by Haematologists, Cardiologists and Stroke physicians )

Dabigatran (Pradaxa®) 75mg, 110mg & 150mg capsules. (For prophylaxis of stroke and systemic embolism in non-valvular atrial fibrillation by Haematologists, Cardiologists and Stroke physicians )

Edoxaban (Lixiana®) 60mg f/c tablet (For preventing stroke and systemic embolism in people with non-valvular atrial fibrillation & for treating and preventing deep-vein thrombosis and pulmonary embolism as recommended by NICE TA354 & TA355)

2.8.3 PROTAMINE SULPHATE

Protamine sulphate 10 mg/ ml injection

2.9 ANTIPLATELET DRUGS

Aspirin 75 mg dispersible tablet
Notes: There is no evidence to support the use of enteric-coated aspirin preparations. These preparations are non-formulary.

Clopidogrel 75 mg tablet
Notes: Clopidogrel is restricted for intolerance or hypersensitivity to aspirin & for treatment of acute coronary syndrome (ACS)

Dipyridamole 200 mg m/r capsule, 25 mg & 100 mg tablets, 50 mg/ 5 ml suspension (unlicensed)
Notes: Dipyridamole tablets are licensed only for prophylaxis of thromboembolism associated with prosthetic heart valves. Dipyridamole MR is also licensed for the secondary prevention of stroke or TIA (used alone or with aspirin)

Eptifibatide 2mg/ml injection (Consultant Cardiologists only)

Prasugrel 5mg & 10mg f/c tablets

1. For patients who have experienced a stent thrombosis during clopidogrel therapy.
2. On a consultant decision basis for selected high-risk patients with GRACE

nPbR = Indicates a drug excluded from HRG tariff price
risk score ≥ 140 and low risk of bleeding meeting NICE criteria).

**Ticagrelor** 60mg & 90mg tablets

**Notes:** To be used according to NICE TA236 and NICE TA420

**Abciximab**
10 mg/ 5 ml injection

*Refer to protocol*

*For administration of a bolus dose prior to transfer to the London Chest Hospital for acute MI patients for primary angioplasty.*

*(Consultant Neuro-Radiologist only, for thromboembolism involving cerebral arteries, unlicensed indication, needs patient consent)*

### 2.10 MYOCARDIAL INFARCTION & FIBRINOLYSIS

#### 2.10.2 FIBRINOLYTIC DRUGS

**Streptokinase**
250,000 units & 1.5 mega units injection

**Notes:** See B.N.F. for contra-indications to streptokinase. Refer to Trust ICP for CHD

**Alteplase (Tissue Plasminogen Activator) (TPA)**
50 mg injection
2mg (Actilyse Cathflo)

**Tenecteplase**
50mg (10,000 units) injection

**Urokinase injection**
10,000 units & 50,000 units
*(Unlicensed import, for unblocking TPN & Hickman lines only)*

### 2.11 ANTIFIBRINOLYTIC DRUGS & HAEMOSTATICS

**1st Choice: Tranexamic acid**
500 mg tablet,
250 mg/ 2 ml injection

**Etamsylate**
500 mg tablet

**Drotrecogin Alfa (activated)**
Recombinant activated Protein C (nPbR Drug)

NICE guidance: Drotrecogin alfa should be considered for adults with severe sepsis that has resulted in the failure of two or more major organs and who are receiving optimum intensive care support.

### 2.12 LIPID-REGULATING DRUGS

#### ANION-EXCHANGE RESINS

**Colestyramine (Cholestyramine)**
4 g sachet

**Notes:** other drugs should be taken at least 1 hour before or 4-6 hours after anion-exchange resins to reduce possible interference with absorption

**EZETIMIBE**

Ezetimibe 10 mg tablets

**Notes:** Ezetimibe is indicated for combination therapy with a statin and in patients intolerant to statins.

#### FIBRATES

**Bezafibrate** 200 mg & 400 mg tablets, 400 mg m/r tablet

#### STATINS

**Atorvastatin** **Pravastatin** **Rosuvastatin** **Simvastatin**
Note: Statins, other than atorvastatin, should be taken at night for optimum effect

The following table recommends dosage advice for drugs which are known to interact with simvastatin, which may result in an increase in risk of myopathy or rhabdomyolosis

<table>
<thead>
<tr>
<th>Interacting drug</th>
<th>Simvastatin Prescribing Recommendations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Erythromycin and Clarithromycin</td>
<td>Contraindicated. If unavoidable, suspend simvastatin during course of treatment.</td>
</tr>
<tr>
<td>Ciclosporin</td>
<td>Maximum 10mg daily</td>
</tr>
<tr>
<td>Amiodarone</td>
<td>Maximum 20mg daily</td>
</tr>
<tr>
<td>Verapamil</td>
<td>Maximum 20mg daily</td>
</tr>
<tr>
<td>Diltiazem</td>
<td>Maximum 40mg daily</td>
</tr>
<tr>
<td>Warfarin</td>
<td>Caution: monitor INR</td>
</tr>
<tr>
<td>HIV protease inhibitors</td>
<td>Use Pravastatin</td>
</tr>
<tr>
<td>Grapefruit juice</td>
<td>AVOID</td>
</tr>
</tbody>
</table>

Note: The above list is not exhaustive. Please refer to the current edition of the BNF for further advice

Omega-3-Acid Ethyl Esters
(Omacor ®) 1 g capsules

Approved for anti-retroviral induced hyperlipidemia not responding to statins (GU and HIV initiation only)

2.13 LOCAL SCLEROSANTS

Absolute alcohol injection
Ethanolamine oleate injection
Sodium tetracycl sulphate 0.5 %, 1 % & 3 % injection

2.14 PRE-ANGIOGRAM

Acetylcysteine (Parvolex ®) 2 g/10 ml injection- Unlicensed use

N-Acetylcysteine 600mg tablets (unlicensed), to be used prophylactically before angiogram and in combination with prednisolofne and azathioprine for the long-term management of patients with Idiopathic Pulmonary fibrosis.

Note: 600 mg Acetylcysteine injection can also be given orally (mixed with cola or orange juice) twice daily for 2 days, in those patients with renal dysfunction. First dose starting evening before angiogram. This is to protect the kidney from damage by the contrast dye. Please refer to ICP for Angiogram

LIPID-MODIFYING DRUG – OTHER

Alirocumab (Praluent®) 75mg/1ml & 150mg/1ml solution for injection pre-filled pen

Evolocumab (Repatha® and Repatha Sureclick) 140mg/1ml solution for injection pre-filled syringes/pre-filled disposable devices

nPbR = Indicates a drug excluded from HRG tariff price
3 RESPIRATORY SYSTEM

3.1 BRONCHODILATORS

3.1.1 ADRENOCEPTOR AGONISTS

3.1.1.1 SELECTIVE BETα₂ AGONISTS

1st Choice: Salbutamol
100 micrograms/ dose inhaler (CFC Free), 100 micrograms Easibreathe (mdi), Easyhaler, 2.5 mg/ 2.5 ml & 5 mg/ 2.5 ml nebuliser solution, 500 micrograms/ ml injection, 100 micrograms/ dose autohaler, 5 mg/ 5 ml injection for infusion, 2 mg & 4 mg tablets, 2 mg/ 5 ml syrup

Alternative: Terbutaline
250 micrograms/ dose inhaler, 500 micrograms/ dose turbohaler (dpi) (Respiratory Physicians & Paediatricians only)

LONG ACTING BETα₂ AGONISTS

1st Choice: Salmeterol
25 micrograms/ dose inhaler and 50 micrograms/ blister Accuhaler (in accordance with BTS guidelines)

Alternative: Formoterol (Eformoterol)
6 micrograms & 12 micrograms/ dose turbohaler

Indacaterol 150 & 300 microgram inhalation powder capsules (Onbrez®)

Indacaterol with Glycopyrronium
85/43 micrograms per dose (Ultibro Breezehaler®)

Olodaterol 2.5microgram per dose (Striverdi Respimat®)

Olodaterol with Tiotropium 2.5/2.5 micrograms/ per dose (Spiolto Respimat®)

3.1.2 ANTIMUSCARINIC BRONCHODILATORS and COMBINATIONS

Aclidinium 400 micrograms/metered inhalation powder (Eklira Genuair®)

Aclidinium with Formoterol
340micrograms/ 12 micrograms per dose (Duaklir Genuair®)

Glycopyrronium
50 micrograms/ hard capsule (inhalation powder) Seebri Breezehaler®

Ipratropium bromide
20 micrograms/ dose inhaler (CFC Free)
250 micrograms/ ml & 500 micrograms/ 2 ml nebuliser solution

Tiotropium
18 micrograms/ capsule (Dry powder for inhalation) “Spiriva®”
2.5 micrograms/metered inhalation (solution for inhalation) “Respimat®”

Umeclidinium bromide
55 micrograms/dose (dpi) (Incruse®)

Umeclidinium with Vilanterol 55/22 micrograms per dose (Anoro Ellipta®)

Notes: Spacers, autohalers & turbohalers are available for patients who are unable to use aerosol metered dose inhalers

3.1.3 THEOPHYLLINE

Aminophylline
(Phyllocontin Continus ®)
225 mg m/r tablet,
250 mg/ 10 ml injection

Theophylline
(Uniphyllin Continus ®)
200 mg, 300 mg & 400 mg m/r tablets

(Slo-Phyllin ®)
60 mg, 125 mg & 250 mg m/r capsule

Notes: The brand name should be specified when prescribing m/r preparations of theophylline to distinguish one from another. The different formulations should not be regarded as interchangeable.
Caution when co-prescribing drugs which can affect metabolism of theophyllines, e.g. cimetidine, erythromycin, warfarin & ciprofloxacin

Caffeine citrate
10 mg/ ml solution & injection (as base)
(Unlicensed, neonates only)

3.1.5 PEAK FLOW METERS, INHALER DEVICES & NEBULISERS

Aerochamber
Volumatic
Nebuhaler
Haleraid

Peak flow meters

3.2 CORTICOSTEROIDS

1<sup>st</sup> Choice in adults: Beclometasone (CFC-free) (QVAR ®)
50 micrograms/ dose &
100 micrograms/ dose inhaler
(NOT recommended in children)

Beclomethasone & Formoterol
Fostair® NEXThaler 100 micrograms/ 6 micrograms/ metered inhalation
200micrograms/6micrograms/metered inhalation

Budesonide 50 micrograms/ dose &
200 micrograms/ dose inhaler,
100 micrograms/ dose,
200 micrograms/ dose &
400 micrograms/ dose turbohaler
500 micrograms/ 2ml & 1 mg/ 2 ml respules

Budesonide & Formoterol
Symbicort ® 100/ 6 & 200/ 6 turbohaler

Duoresp Spiromax®160/4.5 & 320/9 micrograms

Fluticasone
50 micrograms/ dose,
125 micrograms/ dose &
250 micrograms/ dose inhaler

Fluticasone & formoterol
Flutiform® 50/5 micrograms,
125/5micrograms & 250/10 micrograms inhalers

Fluticasone & Salmeterol
Seretide® 50, 125, 250 Evohalers 100, 250micrograms & 500micrograms Accuhalers

Fluticasone & Vilanterol
92/22 microgranms per dose
(Relvar Ellipta®)

3.3 CROMOGLICATE, RELATED THERAPY & LEUKOTRIENE RECEPTOR ANTAGONISTS

3.3.1 CROMOGLICATE & RELATED THERAPY

Sodium cromoglicate
5 mg/ dose inhaler (Paediatricians & Respiratory Physicians only)

Nedocromil sodium 2 mg/ dose inhaler
(Respiratory Physicians only)

nPbR = Indicates a drug excluded from HRG tariff price
Notes: Cromoglycate is more effective in children than adults. It may be useful in adults with ‘exercise-induced’ asthma

3.3.2 LEUKOTRIENE RECEPTOR ANTAGONISTS

Montelukast
10 mg tablet- Licensed for adults
5 mg chewable tablets- Licensed for 6-14 years of age.
4mg chewable tablets- Licensed for 2-5 years of age
Paediatric 4mg granules- Licensed for Paediatric patients aged 6 months- 5 years of age

Notes: Use in accordance with BTS guidelines

3.3 Phosphodiesterase type-4 inhibitor
Roflumilast  500micrograms fill-coated tablets
(For the treatment of COPD- NICE TA 461)

3.4 ANTIHISTAMINES, HYPOSENSITISATION & ALLERGIC EMERGENCIES

3.4.1 ANTIHISTAMINES
NON-SEDATING ANTIHISTAMINES
1st Choice: Cetirizine
(For adults and children 6 years and over)
10 mg tablet
5 mg/ 5 ml oral solution
(Not licensed for under 6 years)

Alternative: Desloratadine
(For children 1-5 years of age)
Syrup 2.5mg/5 mL
(Licensed for use in children 1-5 years of age)

Alternative: Fexofenadine

120 mg tablet- Licensed for Seasonal Allergic Rhinitis
180 mg tablet- Licensed for Chronic Idiopathic Urticaria

SEDATING ANTIHISTAMINES
Chlorphenamine (Chlorpheniramine)
4 mg tablet, 2 mg/ 5 ml syrup,
10 mg/ ml injection

Hydroxyzine
10 mg & 25 mg tablets,
10 mg/ 5 ml syrup

Promethazine hydrochloride
10 mg & 25 mg tablets, 5 mg/ 5ml elixir,
25 mg/ ml injection,

Alimemazine (Trimeprazine)
10 mg tablet, 7.5 mg/ 5 ml &
30 mg/ 5 ml syrup

3.4.3 ALLERGIC EMERGENCIES

Adrenaline (Epinephrine)
S/C or IM injection 1 in 1,000 (1 mg/ ml),
Min-I-Jet ® 1 in 1000 (1 mg/ ml),
EpiPen ® IM injection for self-administration,
IV injection 1 in 10,000 (1 mg/ 10 ml)
IV injection 5 mg/ 5 ml

Warning: Note strengths of adrenaline. See Anaphylaxis policy for more details

3.5 RESPIRATORY STIMULANTS & PULMONARY SURFACTANTS

3.5.1 RESPIRATORY STIMULANTS
Doxapram 1000 mg/ 500 ml infusion,
100 mg/ 5 ml injection

3.5.2 PULMONARY SURFACTANTS
Poractant alfa (Curosurf ®)
120 mg/ 1.5 ml solution
3.7 MUCOLYTICS

Carbocisteine 375 mg capsules
250mg/5ml syrup
*(Prescribe according to NICE guidelines)*

Sodium Chloride 3% and 6% nebuliser solution (Mucoclear®)

3.8 AROMATIC INHALATIONS

Benzoin Tincture Compound BP
Add one 5ml spoonful to a pint of hot, not boiling water and inhale the vapour

3.9 COUGH PREPARATIONS

COUGH SUPPRESSANTS

Simple linctus BP (sugar free)
Pholcodine linctus (sugar free)
5 mg/ 5 ml

Codeine linctus BP
15 mg/ 5 ml

Menthol & Eucalyptus Inhalation BP

3.10 SYSTEMIC NASAL DECONGESTANTS

Pseudoephedrine
60 mg tablet, 30 mg/ 5 ml elixir

3.11 PRODUCTS FOR PLEURODESIS

Sterile Talc powder
*(Unlicensed, Respiratory physicians only)*

Notes: Sterile talc powder *administered by doctor*, in accordance with protocol. Usually 4g in 30 ml sodium chloride 0.9 % injection.
Once procedure complete flush with 20 ml sodium chloride 0.9 % injection

Tetracycline
500 mg injection
*(Unlicensed product for Pleurodesis. Respiratory physicians only)*

nPbR = Indicates a drug excluded from HRG tariff price
# CENTRAL NERVOUS SYSTEM

**Notes:** The NELMHT formulary is under revision. If there are any queries regarding psychiatric drugs, please contact the Principal Pharmacist for Mental Health.

## 4.1 HYPNOTICS & ANXIOLYTICS

### 4.1.1 HYPNOTICS

- **Temazepam** (CD)
  10 mg tablet, 10 mg/5 ml syrup

- **Zopiclone** 3.75 mg & 7.5 mg tablets

- **Zolpidem** 5 mg & 10 mg tablets
  *(Psychiatrists only)*

**Notes:** Hypnotics should be used only where insomnia is severe, disabling or where patient is extremely distressed, after due consideration to non-pharmacological measures. NICE recommends that they may be prescribed for one to two weeks. Tolerance/dependence develops rapidly.

- **Chloral hydrate**
  500 mg/5 ml mixture *(unlicensed)*,
  25 mg, 50 mg & 100 mg suppositories *(unlicensed)*
  143 mg/5 ml elixir
  *(Paediatrics only)*

- **Cloral betaine** *(Welldorm ®)*
  707 mg tablet = 414 mg chloral hydrate

- **Clomethiazole** 192 mg capsule,
  250 mg/5 ml syrup *(edisylate)*

**Note:** Clomethiazole should not be used for alcohol withdrawal.

- **Promethazine hydrochloride**
  10 mg & 25 mg tablets,
  5 mg/5 ml elixir, 25 mg/ml injection

- **Melatonin** 2 mg M/R tablet *(Circadin®)*
  *(for insomnia and delirium in ICU patients)*

### 4.1.2 ANXIOLYTICS

- **Diazepam**
  2 mg & 5 mg tablets,
  2 mg/5 ml & 5 mg/5 ml syrup,
  10 mg/2 ml injection,
  10 mg/2 ml *(emulsion)* injection,
  2.5 mg, 5 mg & 10 mg per dose rectal tubes *(solution)*

- **Chlordiazepoxide**
  5 mg capsule, 10 mg tablet

**Note:** Chlordiazepoxide is the drug of choice for control of alcohol withdrawal.

- **Lorazepam**
  1 mg tablet, 4 mg/ml injection

## 4.2 DRUGS USED IN PSYCHOSES & RELATED DISORDERS

### 4.2.1 ANTIPSYCHOTIC DRUGS

- **Chlorpromazine**
  10 mg, 25 mg, 50 mg & 100 mg tablets,
  25 mg/5 ml oral solution, 100 mg/5 ml syrup, 50 mg/2 ml injection

**Note:** Injection not to be used on psychiatric wards

- **Haloperidol**
  500 micrograms capsule,
  1.5 mg, 5 mg & 10 mg tablets,
  10 mg/5 ml liquid,
  5 mg/ml, 20 mg/2 ml &
  50 mg/ml injection

- **Sulpiride**
  200 mg & 400 mg tablets,
200 mg/ 5 ml oral solution  
*(Psychiatrists only)*

**Trifluoperazine**  
1 mg & 5 mg tablets, 1 mg/ 5 ml syrup & 5 mg/ 5 ml oral solution,  
2 mg, 10 mg & 15 mg m/r capsules  
*(Spansules ®)*

**Zuclopenthixol dihydrochloride**  
2 mg, 10 mg & 25 mg tablets  
*(Psychiatrists only)*

Zuclopenthixol acetate  
*(Clopixol Accuphase ®)*  
50 mg/ ml & 100mg/ 2 ml injection  
*(Psychiatrists only)*

**ATYPICAL ANTIPSYCHOTICS**

**Olanzapine**  
2.5 mg, 5 mg, 7.5 mg & 10 mg tablets,  
5 mg, 10 mg, 15 mg, 20 mg oro-dispersible tablets,  
5 mg/ml injection  
*(see notes below on tablets & injection)*

**Risperidone**  
1 mg/ ml liquid, 0.5 mg, 1 mg, 2 mg, 3 mg & 4 mg & 6 mg tablets, 1mg and 2mg oro-dispersible tablet, 25mg injection  
*(Neurologists for Parkinson’s psychosis, unlicensed use & Psychiatrists only)*

**Notes:** The Committee on Safety of Medicines (CSM) has advised that risperidone or olanzapine should not be used for the treatment of behavioural symptoms of dementia because there is clear evidence of an increased risk of stroke in elderly patients with dementia. The mechanism by which these drugs are associated with stroke is unknown.

**4.2.2 ANTIPSYCHOTIC DEPOT INJECTIONS**

**4.2.3 ANTIMANIC DRUGS**

**Lithium carbonate**  
Camcolit ® 250 mg & 400 mg tablets  
Priadel ® 200 mg & 400 mg m/r tablets  
*(Psychiatrists only)*

**Lithium citrate**  
Priadel ® 509 mg/ 5 ml liquid  
*(Note: Lithium carbonate 200 mg is equivalent to 509 mg lithium citrate)*

Valproic acid  
*(Depakote ®)*  
250 mg & 500 mg e/c tablets  
*(Psychiatrists only)*

**Notes:** Depakote ® is licensed for the treatment of manic episodes associated with bipolar disorder. This is not for maintenance therapy

**4.3 ANTIDEPRESSANT DRUGS**

**4.3.1 TRICYCLIC & RELATED ANTIDEPRESSANTS**

**Amitriptyline**

**Notes:** For clozapine, the patient & Consultant must be registered with the clozapine monitoring system. Monitoring of white blood cell counts & neutrophils is mandatory. Consult pharmacy for further advice.

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nPbR = Indicates a drug excluded from HRG tariff price
10 mg, 25 mg & 50 mg tablets, 25 mg/ 5 ml & 50 mg/ 5 ml oral solution

Dosulepin (Dothiepin)
25 mg capsule, 75 mg tablets, 25 mg/ 5 ml & 75 mg/ 5 ml liquid

Lofepramine
70 mg tablet, 70 mg/ 5 ml suspension

Imipramine
10 mg & 25 mg tablets, 25 mg/ 5 ml syrup

RELATED ANTIDEPRESSANTS

4.3.2 MONOAMINE-OXIDASE INHIBITORS (MAOI's)

4.3.3 SELECTIVE SEROTONIN REUPTAKE INHIBITORS (SSRI's)

Fluoxetine
20 mg & 60 mg capsules, 20 mg/ 5 ml liquid

Sertraline 50 mg & 100 mg tablets
Citalopram
10mg & 20 mg tablet, 40 mg/ ml liquid

Notes: The dose used for citalopram liquid is lower than that given for the tablets. A 20 mg tablet is equivalent to 16 mg (8 drops) of the oral liquid

Paroxetine 20 mg & 30 mg tablets, 10 mg/ 5 ml liquid

Note: Recommended adult daily dose of paroxetine for depression is 20 mg

4.3.4 OTHER ANTIDEPRESSANTS

Duloxetine 30mg & 60mg capsules
(Treatment of diabetic neuropathic pain in adults, after tricyclic antidepressants and as an alternative to pregabalin)
Flupentixol (Flupenthixol)
500 micrograms & 1 mg tablets
(Consultant Psychiatrists only)

Mirtazapine 30mg and 45mg tablets, 15 mg, 30 mg & 45 mg oro-dispersible tablets
(Neurologists & Psychiatrists only)
Venlafaxine
37.5 mg & 75 mg tablets, 75 mg & 150 mg m/r capsules
(Consultant Psychiatrists & Dr Quigley for menopausal symptoms in patients on tamoxifen, and/ or who are post chemotherapy, unlicensed use)

Notes: All antidepressants take up to 14 days or more for full therapeutic effect & adequate doses are needed. Of the tricyclics, amitriptyline & dosulepin carry the greatest risk in overdose. SSRI's have fewer antimuscarinic & cardiotoxic side effects than the tricyclics. However, they must still be used in caution in patients with poorly controlled epilepsy, cardiac disease & renal or hepatic impairment. Caution in pregnancy, consult Medicines Information. SSRI's are preferred in the elderly. Obtain advice when stopping or changing an antidepressant

4.4 CENTRAL NERVOUS SYSTEM STIMULANTS

Dexamfetamine (CD) 5 mg tablet
(Psychiatrists)
Methylphenidate 10 mg tablet, 18 mg & 36 mg m/r tablets (Concerta XL ®)
(Consultant Paediatricians, Psychiatrists only)

4.5 DRUGS USED IN THE TREATMENT OF OBESITY

Methylcellulose 500 mg tablet
Orlistat 120 mg capsule
(Dr Pearson only)
4.6 DRUGS USED IN NAUSEA & VERTIGO

ANTIHISTAMINES

Cinnarizine
15 mg tablet

Cyclizine
50 mg tablet, 50 mg/ ml injection

Promethazine teoclate 25 mg tablet

Promethazine hydrochloride
(See section 3.4.1 for formulations)

PHENOTHIAZINES & RELATED DRUGS

Prochlorperazine
5 mg tablets, 5 mg/ 5 ml syrup, 5 mg & 25 mg suppositories, 12.5 mg/ ml injection (IM only)

Levomepromazine
(Methotrimeprazine)
25 mg tablet, 25 mg/ ml injection
(Oncologists, Haematologists & Palliative care team only)

DOMPERIDONE & METOCLOPRAMIDE

Metoclopramide
10 mg tablet, 5 mg/ 5 ml oral solution, 10 mg/ 2 ml injection

Notes: Metoclopramide may induce dystonic reactions, especially in young children, young adults and the elderly. Use of metoclopramide in patients under 20 years is not recommended. May cause confusion in the elderly. Avoid in Parkinson’s disease

Domperidone
10 mg tablet, 5 mg/ 5 ml suspension, 30 mg suppositories

Note: Domperidone is less likely to cause central effects such as sedation & dystonic reactions

5-HT₃ ANTAGONISTS

1ˢᵗ Choice: Ondansetron
4 mg & 8 mg tablets, 4 mg/ 5 ml syrup
4 mg/ 2 ml & 8 mg/ 4 ml injection

2ⁿᵈ Choice: Granisetron
1 mg tablet, 1 mg/ 5 ml liquid, 1 mg/ ml injection

Palonosetron with netupitant
300mg/0.5mg capsules (Akynzeo®)

HYOSCINE

Hyoscine hydrobromide
300 micrograms tablet, Scopoderm TTS ® 1.5 mg patch (absorption of 1 mg/ 72 hour) (Unlicensed use to reduce secretions)

OTHER DRUGS FOR MÉNIÈRE’S DISEASE

Betahistine 8 mg tablets

4.7 ANALGESICS

4.7.1 NON-OPIOID ANALGESICS

Aspirin
75mg dispersible tablets
300 mg dispersible tablets
300mg suppositories
500mg injection (unlicensed)

Paracetamol
500 mg tablet & dispersible tablets
120 mg/ 5 ml & 250 mg/ 5 ml suspension
15 mg, 30 mg & 60 mg suppositories (Unlicensed)
125 mg, 240 mg, 500 mg and 1g suppositories
1g/100ml IV infusion
(IV infusion for intra- and post-operative use for patients nil-by-mouth or unable to take drugs by other routes)

nPbR = Indicates a drug excluded from HRG tariff price
Co-dydramol (dihydrocodeine/paracetamol) 10/500 tablet
Co-codamol (codeine/paracetamol) 8/500 tablet
Co-codamol (codeine/paracetamol) 8/500 effervescent tablet

Note: Use separate tablets of 30mg codeine and paracetamol where possible as this is much cheaper

4.7.2 OPIOID ANALGESICS

Refer to Management of acute and chronic pain in adults policy

Morphine sulphate injection (CD)
10mg, 15mg, 20mg and 30mg injection
100mg/50ml injection vials
50mg/50ml injection vials for PCA and also pre-prepared as 50mg/50ml PCA syringes

Morphine sulphate slow release (CD)
5 mg, 10 mg, 15 mg, 30 mg, 60 mg, 100 mg & 200 mg m/r tablets, 20 mg & 30 mg m/r granules

Morphine sulphate oral solution (Oramorph ®) (CD)
10 mg/5 ml oral solution
100 mg/5 ml oral concentrated oral solution, 10 mg/5 ml unit dose vials

Morphine sulphate tablets - immediate release
(Sevredol ®) (CD) 10 mg and 20mg

Cyclimorph ® (CD)
Morphine sulphate (10 mg/ml) & cyclizine (50 mg/ml) injection

Buprenorphine (CD) (Transtec ®)
300 micrograms injection
200 micrograms S/L tablet
35, 52.5 & 70 micrograms patches

The Transtec patches should be changed every 96 hours (4 days). For convenience the patch can be changed twice a week at regular intervals e.g. on Mondays and Thursdays.

(Patches: for chronic pain only)

Buprenorphine (CD) (BuTrans®)
Patches
Change Butrans patch every 7 days.
5 micrograms/hour
10 micrograms/hour
20 micrograms/hour
(Pain team only)

Codeine phosphate
15 mg & 30 mg tablets
25mg/5ml syrup
15mg/5ml linctus
30mg/ml injection (CD) (Unlicensed)

Diamorphine hydrochloride (CD)
5 mg, 10 mg, 30 mg, 100 mg & 500 mg injections

Dihydrocodeine tartrate
30 mg tablet, 10 mg/5 ml elixir, 50 mg/ml injection (CD)

Fentanyl (CD)
25 micrograms/hour, 50 micrograms/hour, 75 micrograms/hour & 100 micrograms/hour patches
200 micrograms, 400 micrograms, 600 micrograms & 800 micrograms
Sublingual tablet (“Abstral ®”)
100micrograms & 400micrograms/dose nasal spray

(Sublingual tablets are for Palliative care team prescribing only as per Trust guidelines)

Notes: Fentanyl patches and sublingual tablet are suitable for use only in those patients with unacceptable opioid toxicity, where oral route is unavailable, or when recommended by the Palliative care team.
If patients are intolerant to morphine, oxycodone should be tried before fentanyl patches are prescribed.
Each replacement patch should be applied to a non-hairy, different area of the body. The patches are not suitable for patients with chronic skin disorders.

Meptazinol
200 mg tablet, 100 mg/ ml injection

Oxycodone hydrochloride oral-immediate release (CD) (OxyNorm ®)
5 mg, 10 mg & 20 mg capsules
5mg/ 5ml oral solution
50mg/5ml concentrated oral solution

Oxycodone hydrochloride- slow release (CD) (OxyContin ®)
5 mg, 10 mg, 20 mg,
40 mg & 80 mg m/r tablets

Oxycodone injection (CD) (OxyNorm)
10mg and 20mg injection
(For patients unable to tolerate morphine, in accordance with Trust guidelines)

Papaveretum (CD) 15.4 mg/ ml injection

Pethidine hydrochloride (CD)
50 mg tablet,
50 mg/ ml & 100 mg/ 2 ml injection
(Injection no longer used in A&E)

Notes: Pethidine is weaker than morphine or diamorphine & has a shorter duration of action. It is used mainly in obstetrics as it may cause less respiratory depression in the neonate. It should not be used for continuous pain as toxic metabolites may accumulate on extended use. Refer to acute, chronic pain & palliative care guidelines

Tramadol hydrochloride
50 mg capsules, 50 mg dispersible tablets, 100 mg & 200 mg m/r capsules & 100 mg/ 2 ml injection
(Refer to Management of acute and chronic pain policy)

Notes: NSAIDs are a useful addition in moderate to severe bony or musculo-skeletal pain, except where contraindicated. Enteric coated tablets should not be prescribed prn, as this has a delayed onset of action. Laxatives: Narcotic analgesics will almost always require co-prescribing of laxatives

4.7.3 NEUROPATHIC PAIN
Carbamazepine, Amitriptyline or Sodium valproate (Unlicensed indication)
(see sections 4.3.1 & 4.8.1 for preparations)

Gabapentin
100 mg & 300 mg capsules
400mg tablets
(Not 1st line for trigeminal neuralgia)

4.7.4 ANTIMIGRAINE DRUGS

4.7.4.1 TREATMENT OF THE ACUTE MIGRAINE ATTACK
Notes: Simple analgesic such as paracetamol or a NSAID is often effective. Concomitant antiemetic may be required

1st Choice: Sumatriptan
50 mg & 100 mg tablets,
6 mg/ 0.5 ml injection

Note: Sumatriptan is to be used only when treatment with conventional analgesics & antiemetics have failed

2nd Choice: Zolmitriptan
2.5 mg tablet

4.7.4.2 PROPHYLAXIS OF MIGRAINE
Pizotifen
500 micrograms & 1.5 mg tablets,
250 micrograms/ 5 ml elixir

nPbR = Indicates a drug excluded from HRG tariff price
**Clonidine** 25 micrograms tablet  
**Methysergide** 1 mg tablet  
*Neurologists only*  
**Propranolol**  
*(see section 2.4 for formulations)*  
**Flunarizine** 5mg & 10mg tablets  
*Consultant Neurologists only*  
Stock will be ordered as needed

### 4.8 ANTI-EPILEPTICS

#### 4.8.1 CONTROL OF EPILEPSY

**Brivaracetam** (Briviact®) 10mg, 25mg, 50mg, 75mg and 100mg tablets, 10mg/ml oral solution and 50mg/5ml solution for injection  
*(Brivaracetam can only be initiated by an epileptologist or neurologist with special interest in epilepsy)*

**Carbamazepine**  
100 mg & 200 mg tablets,  
200 mg & 400 mg m/r tablets,  
100 mg/5 ml syrup,  
125 mg & 250 mg suppositories

**Eslicarbazepine** 800 mg tablets

**Oxcarbazepine** 150mg, 300mg and 600mg tablets

**Ethosuximide**  
250 mg capsules, 250 mg/5 ml syrup

**Gabapentin**  
100 mg & 300 mg capsules  
400mg tablets

**Lacosamide** 50mg, 150mg, 200mg f/c tablets, 10mg/ml syrup and 10mg/ml solution for infusion

**Lamotrigine**  
25 mg 50 mg & 100 mg tablets  
5 mg, 25 mg & 100 mg dispersible tablets

**Levetiracetam**  
250 mg, 500 mg & 1g tablets 100mg/ml oral solution  
*Notes: Levetiracetam is for the treatment of adults as per NICE guidance. This includes patients who have not benefited from treatment with older antiepileptic drugs, or in whom older drugs are unsuitable due to contraindications, interactions or poor tolerability*  
*(Also for Consultant Paediatrician initiation as add-on treatment for the control of refractory partial seizures with or without secondary generalisation in children already on one or two anticonvulsants)*

**Perampanel** (Fycompa®) 2mg, 4mg, 6mg, 8mg, 10mg, 12mg tablets

**Phenobarbital (Phenobarbitone) (CD)**  
15 mg & 30 mg tablets,  
15 mg/5 ml elixir *(contains alcohol)*,  
50 mg/5 ml suspension *(alcohol, sugar & colour free, unlicensed preparation. Used in paediatrics & neonates)*  
15 mg/ml, 30 mg/ml, 60 mg/ml & 200 mg/ml injection

**Primidone** 250 mg tablet

**Phenytoin** 25 mg 50 mg & 100 mg & 300 mg capsules, 30 mg/5 ml suspension, 250 mg/5 ml injection  
*Note: 90 mg in 15 ml phenytoin (base) suspension is equivalent to 100 mg phenytoin sodium tablet or capsule. Patients admitted on tablets or Infatabs should remain on these preparations*

** Rufinamide** 100mg, 200mg and 400mg tablets *(Specialist Paediatric Consultants Only)*

*Note: For 2nd line treatment of Lennox-Gastaut syndrome in children who are refractory to other treatment and on multiple anti-epileptic agents.*
GPs will only prescribe once patients have been stabilised in hospital.

**Sodium valproate (Epilim)**
- 100 mg crushable tablet, 200 mg & 500 mg e/c tablets, 200 mg/ 5 ml liquid, 400 mg injection, 200 mg, 300 mg & 500 mg m/r tablets

**Topiramate** 25 mg, 50 mg and 100mg tablets 15mg and 25mg sprinkle capsules

**Vigabatrin** 500 mg tablet & sachets

**Zonisamide** 25mg, 50mg and 100mg Capsules

(Also for Dr. Misbahuddin for treating tremor in Parkinson’s disease)

**Clobazam** 10 mg tablet

**Clonazepam** 1 mg/ ml injection, 500 micrograms & 2 mg tablets

4.8.2 DRUGS USED IN STATUS EPILEPTICUS

**Diazepam** (see section 4.1.2 for preparations)

**Clonazepam** 1 mg/ ml injection

**Phenytoin** 250 mg/ 5 ml injection

**Paraldehyde** 5 ml injection (Consultant Neurologists & Paediatricians only. Dose given diluted with olive oil & given rectally as enema)

4.9 DRUGS USED IN PARKINSONISM & RELATED DISORDERS

4.9.1 DOPAMINERGIC DRUGS USED IN PARKINSONISM

**Co-beneldopa** (benserazide hydrochloride & levodopa)

**Madopar @)**
- 62.5 mg, 125 mg & 250 mg capsules,
- 62.5 mg & 125 mg dispersible tablets (Madopar CR ®) 125 mg m/r capsule
- Co-careldopa (carbidopa & levodopa)
- (Sinemet LS ®) 62.5 mg tablet
- (Sinemet 110 ®) 110 mg tablet
- (Sinemet Plus ®) 125 mg tablet
- (Sinemet 275 ®) 275 mg tablet
- (Half Sinemet CR ®) 125 mg m/r tablet
- (Sinemet CR ®) 250 mg m/r tablet

**Duodopa 5/20/ml** Intestinal gel (CCG’s funding required)

**Amantadine** 100 mg capsule,
- 50 mg/ 5 ml syrup

**Apomorphine**
- 20 mg/ 2ml & 50 mg/ 5 ml injection
- 10 mg/ ml pre-loaded pen (Consultant Neurologist only)

**Cabergoline** 1 mg tablet (Cabaser ®)

**Entacapone** 200 mg tablet

**Opicapone** 50mg capsule

**Pramipexole** 88mcg, 180mcg and 700mcg tablet (for treatment of Parkinson’s, Consultant Neurologists only)

**Ropinirole**
- “ReQuip” tablet (for treatment of idiopathic parkinsons disease)
- “Requip XL” tablet

“Adartrel” 0.25mg, 0.5mg and 2mg tablets (for the treatment of restless legs syndrome) Neurologists’ use only

**Rotigotine** transdermal patches
- 2mg/24hr, 4mg/24hr and 8mg/24hr (for patients with swallowing difficulties)

**Stalevo** tablet
(Levodopa/Carbidopa/Entacapone)

nPbR = Indicates a drug excluded from HRG tariff price
**Rasagiline** 1mg tablet (2nd line in patients who cannot tolerate Selegiline)

**Selegiline** 5 mg tablet, 10mg/5ml liquid
4.9.2 ANTIMUSCAROMOC DRUGS USED IN PARKINSONISM

Benzatropine (Benztropine)
2 mg/ 2 ml injection

Orphenadrine
50 mg tablet, 25 mg/ 5 ml liquid

Procyclidine
5 mg tablets

Trihexyphenidyll (Benzhexol)
2 mg & 5 mg tablets, 5 mg/ 5 ml syrup

4.9.3 DRUGS USED IN ESSENTIAL TREMOR, CHOREA, TICS & RELATED DISORDERS

Haloperidol
500 micrograms capsule, 1.5 mg, 5 mg, 10 mg, 20 mg tablets, 10 mg/ 5 ml liquid, 10 mg/ ml liquid concentrate, 5 mg/ ml injection, 10 mg/ 2 ml, 10 mg/ 5 ml & 20 mg/ 2 ml injection

nPbR Riluzole 50 mg tablet (Consultant Neurologists only)

Tetrabenazine 25 mg tablet

TORSION DYSTONIAS & OTHER INVOLUNTARY MOVEMENTS

Botulinum A toxin-Haemagglutinin complex (Botox ® 100 unit injection Dysport ® 500 unit injection & Xeomin 100 unit injection)

Ophthalmologists & Neurologists use.

Consultant Gastroenterologists for achalasia when surgery is unsuitable (unlicensed use, needs patient consent)

Botulinum B toxin (NeuroBloc ®)
Dr. Gupta, Dr. McCauley & Prof. Findley for cervical dystonia resistant to Botox ® and Dysport ®

4.10 DRUGS USED IN SUBSTANCE DEPENDENCE

ALCOHOL DEPENDENCE

Chlordiazepoxide capsules
(See section 4.1.2 for strengths)

Acamprosate 333 mg e/c tablet (Specialist Consultant use only)

CIGARETTE SMOKING

Nicotine
2 mg and 4 mg gum (Nicorette), 2 mg lozenges, NiQuitin 1.5 mg lozenges
NiQuitin patches (‘7’, ‘14’, ‘21’), Nicorette 10 mg/16 hr, 15 mg/16 hr and 25 mg/16 hr patches, Nicorette inhalator 15 mg cartridge
Nicorette nasal spray 500 micrograms/metered spray
Nicorette Quickmist mouthspray 1 mg/metered dose

OPIOID DEPENDENCE

Methadone (CD) 1 mg/ ml mixture
(Not to be confused with methadone linctus 2 mg/ 5 ml for cough)
(Specialist advice needed)

4.11 DRUGS FOR DEMENTIA

Donepezil 5 mg & 10 mg tablets (Community dementia team, Memory Clinic & Neurologists only)

Galantamine 4 mg & 8 mg tablets, 4 mg/ ml oral solution

nPbR = Indicates a drug excluded from HRG tariff price
(Community dementia team, Memory Clinic & Neurologists only)

**Memantine**
5mg, 10mg, 15mg & 20mg tablets
10mg/ml oral solution

**Rivastigmine**
1.5 mg, 3 mg, 4.5 mg & 6 mg capsules,
2 mg/ml oral solution, 4.6mg/24 hours & 9.5mg/24 hours
(Community dementia team, Memory Clinic & Neurologists only)
5 INFECTIONS

5.1 ANTIBACTERIAL DRUGS

**Notes:** Unless otherwise specified, refer to the Trust Antibiotic Guidelines for approved indications

5.1.1 PENICILLINS

5.1.1.1 Benzylpenicillin & Phenoxyethylpenicillin (Penicillin V)

**Benzylpenicillin** 600 mg injection

**Penicillin V** 250 mg tablet, 125 mg/5 ml & 250 mg/5 ml syrup

**Benzylpenicillin & procaine penicillin** 1485 mg & 300 mg injection (*Unlicensed medicine*)

5.1.1.2 Penicillinase-resistant penicillins

**Flucloxacillin** 250 mg & 500 mg capsules, 125 mg/5 ml & 250 mg/5 ml syrup, 250 mg & 500 mg injection

5.1.1.3 Broad spectrum penicillins

**Amoxicillin** 250 mg & 500 mg capsules, 500 mg dispersible tablet, 125 mg/5 ml & 250 mg/5 ml syrup, 250 mg & 500 mg injection, 3 g sachets

**Co-amoxiclav** (amoxicillin & clavulanic acid) (*Often prescribed as Augmentin®*) 250/125 tablet & dispersible tablet, 500/125 tablet, 125/31 syrup & 250/62.5 syrup, 500 mg/100mg & 1000 mg/200 mg injection

**Pivmecillinam hydrochloride** 200 mg tablets

**Notes:** Prescribe in accordance with microbiology guidelines.

5.1.1.4 Antipseudomonal penicillins

**Piperacillin & tazobactam** 2.25 g & 4.5 g injection

**Temocillin** (*Negaban®*) 1 g injection

5.1.2 CEPHALOSPORINS

**Cefadroxil** 500 mg capsule,

**Cefaclor** 125 mg/5 ml & 250 mg/5 ml suspension

**Cefuroxime** 250 mg, 750 mg & 1.5 g injection

**Cefotaxime** 500 mg & 1 g injection

**Ceftazidine** 250 mg, 500 mg, 1 g & 2 g injection

**Ceftriaxone** 250 mg, 1 g & 2 g injection

**Ceftazidine 2g/ Avibactam 0.5g** injection

**OTHER BETA-LACTAM ANTIBIOTICS**

**Meropenem** 500 mg & 1 g injection

**Ertapenem** 1 g injection

nPbR = Indicates a drug excluded from HRG tariff price
5.1.3 TETRACYCLINES

Doxycycline
50 mg & 100 mg capsules,
100 mg dispersible tablets
40mg m/r capsules (Efracea®) for the
treatment of rosacea –
(Dermatologist’s use only)

**First choice:** Limecycline 408mg
capsule

**Alternatives:**

Minocycline
50 mg & 100 mg tablets,
100 mg m/r capsule
(Dermatologists only for existing patients
or those suffering treatment failure)

Oxytetracycline 250 mg tablet

**Notes: Tetracyclines must not be given
to children under 12 years old or to
pregnant or breast-feeding women**

Tigecycline 50-mg vial (for multi-
resistant organisms on a consultant
microbiologist’s recommendation)

5.1.4 AMINOGLYCOSIDES

Gentamicin
80 mg/ 2 ml injection

Amikacin
100 mg/ 2 ml & 500 mg/ 2 ml injection

5.1.5 MACROLIDES

Erythromycin
250 mg tablet, 1 g injection,
125 mg/ 5 ml & 250 mg/ 5 ml suspension

Azithromycin
250 mg capsule,
200 mg/ 5 ml suspension

Clarithromycin
250 mg tablets, 125 mg/ 5 ml syrup,
500 mg injection

**Notes: Clarithromycin should be
reserved for H.pylori eradication & HIV
patients for MAI prophylaxis**
5.1.6 **CLINDAMYCIN**

**Clindamycin**
- 150 mg capsule
- 300 mg/ 2 ml injection

5.1.7 **SOME OTHER ANTIBACTERIALS**

**Chloramphenicol**
- 250 mg capsule, 1 g injection

**Sodium fusidate**
- 250 mg e/c tablet, 500 mg injection

**Fusidic acid** 250 mg/ 5 ml suspension

*Note:* 750 mg fusidic acid suspension is equivalent to 500 mg sodium fusidate tablet. Monitor LFT’s

**Vancomycin**
- 125 mg capsule *(as per C difficile treatment guidelines)*
- 500 mg injection

**Teicoplanin**
- 200 mg & 400 mg injection

**Daptomycin** 350mg & 500mg injection

*Note:* Daptomycin should be reserved for treatment of skin and soft tissue infection, allergy to Vancomycin and teicoplanin bacteraemia and endocarditis & for OPAT (Outpatient Parenteral Antibiotic Therapy) (Unlicensed).

**Linezolid** *(Zyvox ®)*
- 600 mg tablet, 100 mg/ 5 ml suspension, 600 mg infusion

**Colistin**
- 0.5,1& 2 million unit injection, 1.5 million unit tablet

**Rifaximin** *(Targaxan®)*
- 550mg tablets
  *(For reduction in recurrence of hepatic encephalopathy)*

**Fidaxomicin** *(Dificlir®)*
- 200mg tablets
  *(For recurrent cases of Clostridium difficile infection (CDI) and severe CDI under strict recommendation of a Consultant Microbiologist)*

**Fosfomycin**
- 3g granules sachets

nPbR = Indicates a drug excluded from HRG tariff price
5.1.8 SULPHONAMIDES & TRIMETHOPRIM

Trimethoprim
100 mg & 200 mg tablets,
50 mg/5 ml suspension,
100 mg/5 ml injection

Co-trimoxazole
480 mg & 960 mg tablets,
240 mg/5 ml suspension,
480 mg/5 ml & 960 mg/10 ml injection
(For PCP management & Microbiologist initiation only)

5.1.9 ANTITUBERCULOUS DRUGS

Ethambutol 100 mg & 400 mg tablets

Isoniazid 100 mg tablet,
100 mg/5 ml elixir (unlicensed),
50 mg/2 ml injection

Pyrazinamide
500 mg tablet (Unlicensed)

Rifampicin 150 mg & 300 mg capsules,
100 mg/5 ml syrup,
300 mg/5 ml injection

Rifampicin & Isoniazid
150 mg & 100 mg (Rifinah ® 150) tablet
300 mg & 150 mg (Rifinah ® 300) tablet

Notes: Combination preparations should be prescribed whenever possible to aid compliance. They should preferably be given before breakfast

Streptomycin 1 g injection

5.1.10 ANTILEPROTIC DRUGS

Dapsone 50 mg tablet

5.1.11 METRONIDAZOLE

Metronidazole
200 mg & 400 mg tablets,
200 mg/5 ml suspension,
500 mg & 1 g suppositories,
500 mg infusion,
0.75 % gel (Metrogel ®) (for malodorous fungating tumours)
0.75% gel (Acea ®) (for acne rosacea, Dermatologists only)

5.1.12 QUINOLONES

Ciprofloxacin
250 mg & 500 mg tablets,
250 mg/5 ml suspension,
100 mg/50 ml, 200 mg/100 ml &
400 mg/200 ml infusion

Levofloxacin 250 mg & 500 mg tablets
500 mg/100 ml injection

Moxifloxacin 400 mg tablet

Notes: Quinolones should be prescribed with caution in children. Convulsions may be induced in those with or without a history of this. Quinolones have multiple drug interactions (see BNF).

N.B. Their absorption is reduced by concomitant administration of antacids, ferrous sulphate, calcium & zinc salts

5.1.13 URINARY TRACT INFECTIONS

Cefadroxil
(see section 5.1.2 for formulations)

Trimethoprim
(see section 5.1.8 for formulations)

Nitrofurantoin (Macrodantin ®)
50 mg capsule, 100 mg tablet

Notes: Avoid Nitrofurantoin in mild renal impairment
5.2 ANTIFUNGAL DRUGS

Fluconazole
50 mg, 150 mg & 200 mg capsules, 50 mg/5 ml & 200 mg/5 ml suspension, 50 mg/25 ml & 200 mg/100 ml injection

Amphotericin 50 mg injection
(Fungizone ®), (1st line)
(Amphocil ®), (2nd line to Fungizone ®, where renal function has deteriorated)

nPbR Liposomal Amphotericin
50 mg injection (Ambisome ®)
(for premature neonates, Microbiologist & Haematologist initiation only)

nPbR Caspofungin intravenous infusion
50mg vial and 70mg vial

Flucytosine 2.5 g/250 ml injection

Griseofulvin
500 mg tablet, 125 mg/5 ml suspension

Itraconazole
100 mg capsules, 10 mg/ml liquid
(Haematologists only)

nPbR Posaconazole
200mg/ml suspension
(Haematologists only)

Note: Posaconazole is for continuation of treatment after initiation at Bart’s and the London Hospital

Terbinafine 250 mg tablet
(Dermatologists only)

nPbR Voriconazole 50mg 200mg tablets
200mg intravenous infusion

5.3 ANTIVIRAL DRUGS

Note: All HIV therapy is for specialist use only

5.3.1 HIV

NUCLEOSIDE REVERSE TRANSCRIPTASE INHIBITORS

nPbR Abacavir 300 mg tablet

nPbR Abacavir 600 mg tablet & Lamivudine 300 mg (Kivexa ®)

nPbR Abacavir 300 mg & Lamivudine 150 mg & Zidovudine 300 mg tablet (Trizivir ®)

nPbR Didanosine 100 mg, 125 mg & 200 mg tablets, 400 mg enteric coated capsules

nPbR Emtricitabine 200mg & Tenofovir 245mg Tablets “Truvada ®”

nPbR Lamivudine 150 mg tablet

nPbR Stavudine 30 mg & 40 mg capsules

nPbR Tenofovir 245 mg tablet

nPbR Tenofovir 245mg with efavirenz 600mg and emtricitabine 200mg (Atripla®)

nPbR Zidovudine 100 mg & 250 mg capsules, 50 mg/5 ml syrup, 200 mg/20 ml injection

nPbR Zidovudine 300 mg & Lamivudine 150 mg tablet (Combivir ®)

HIV — PROTEASE INHIBITORS

nPbR Atazanavir 100 mg, 150mg and 200mg capsule

nPbR Darunavir 300mg tablets

nPbR = Indicates a drug excluded from HRG tariff price
nPbR **Fosamprenavir** 700mg tablets and Oral suspension 50mg/ml

nPbR **Indinavir** 400 mg capsule

nPbR **Lopinavir/ Ritonavir (Kaletra ®)**
- 133 mg/ 33.3 mg capsule
- 200mg/ 50mg tablet
- 400 mg/ 100 mg in 5 ml oral solution

nPbR **Nelfinavir** 250 mg tablet

nPbR **Ritonavir** 100 mg capsule

nPbR **Saquinavir** 200 mg capsule

nPbR **Efavirenz**
- 50mg, 100mg, 200 mg capsule
- 600 mg tablet
- 150mg/ 5ml oral solution

nPbR **Nevirapine** 200 mg tablet

5.3.3 VIRAL HEPATITIS

5.3.3.1 Chronic Hepatitis B

nPbR **Adefovir** 10mg tablet

nPbR **Lamivudine** 100 mg tablet

nPbR **Entecavir** 500micrograms and 1mg tablet

Oral Solution 50micrograms/ml

5.3.3.2 Chronic Hepatitis C

nPbR **Simeprevir** 150mg capsules

nPbR **Ledipasvir 90mg/ Sofosbuvir 400mg** film-coated tablets (Harvoni®)

*(In line with Interim NHSE Clinical Commissioning Statement)*

nPbR **Sofosbuvir 400mg/velpatasvir 100mg** film-coated tablets (Epclusa®)

*(In line with Interim NHSE Clinical Commissioning Statement)*

nPbR **Elbasvir 50mg/ Grazoprevir 100mg** film-coated tablets (Zepatier®)

*(As per NICE recommendation)*

nPbR **Sofosbuvir 400mg / Velpatasvir 100mg / Voxilaprevir 100mg** film coated tablets (Vosevi®)

*(Hepatology consultants only, in line with NHSE commissioning position/ NICE guidance)*

5.3.4 INFLUENZA

Oseltamivir 75mg capsule

60mg/ 5ml suspension (For treatment and prevention of influenza, see pandemic contingency plan)

5.3.5 RESPIRATORY SYNCYTIAL VIRUS

nPbR **Palivizumab**
- 50 mg & 100 mg IM injection
  *(Paediatrician initiation only)*

nPbR **Ribavirin (Tribavirin)**
- 6 g powder *(Paediatrician initiation only)*
- 200 mg capsules *(Consultant*
Gastroenterologists only for
1st line treatment of Hepatitis C

5.4 ANTIPROTOZOAL DRUGS

5.4.1 ANTIMALARIALS

Chloroquine sulphate
250 mg tablet = 155 mg base,
68 mg/ 5 ml syrup = 50 mg (base)/ 5 ml,
200 mg (base)/ 5 ml injection

Pyrimethamine 25 mg tablet

Pyrimethamine (25 mg) with
Sulfadoxine (500 mg) (Fansidar ®)
tablet

Quinine dihydrochloride
600 mg/ 2 ml injection
300mg/ ml injection
(Unlicensed)

Quinine sulphate
200 mg & 300 mg tablets

5.4.2 AMOEBICIDES

Diloxanide Furoate 500mg tablet

Metronidazole see section 5.1.11 for
preparations

5.4.7 DRUGS FOR TOXOPLASMOSIS

Pyrimethamine 25 mg tablet

Sulfadiazine
500 mg tablet, 1g injection

5.4.8 DRUGS FOR PNEUMOCYSTIS
PNEUMONIA

Co-trimoxazole
(See section 5.1.8 for formulations)

Pentamidine isethionate
300 mg/ 5 ml respiratory solution,
300 mg injection

Atovaquone suspension 750 mg/5ml

5.5 ANTHELMINTICS

Albendazole
400mg tablet
(Unlicensed- named patient only)
See Antibiotic Guidelines for approved
indications

Mebendazole
100 mg tablet,
100 mg/ 5 ml suspension

Mefloquine 250 mg tablet (Restricted to HIV)

Primaquine 7.5 mg tablet (unlicensed-
named patient only)

Proguanil 100 mg & atovaquone
250 mg (Malarone ®) tablet

Atovaquone liquid 750mg/5ml (Wellvone®)
3rd line secondary prophylaxis of PCP in HIV patients.
(Consultant Microbiologist and GUM Consultants initiation only)

nPbR = Indicates a drug excluded from HRG tariff price
6 ENDOCRINE SYSTEM

6.1 DRUGS USED IN DIABETES

6.1.1.1 SHORT-ACTING INSULINS

SOLUBLE INSULIN

Actrapid ® (Human)
100 units/ml injection
10 ml vial, 3 ml cartridge
3 ml disposable pen

Insuman Rapid 100 units/ml cartridge

Insulin Aspart
NovoRapid ® 100 units/ml injection
10 ml vial, 3 ml cartridge, 3 ml FlexPen

Insulin Lispro
Humalog ® 100 units/ml injection
10 ml vial, 3 ml cartridge
3 ml disposable pen

6.1.1.2 INTERMEDIATE- &
LONG-ACTING INSULINS

ISOPHANE INSULIN

Humulin I 100 units/ml, 10 ml vials, 3 ml cartridges, KwikPen

Insulatard ® (Human)
100 units/ml injection
10 ml vial, 3 ml cartridge
3 ml Novolet pen,
Innolet device: Initiation by Diabetes team only

Insuman Basal 100 units/ml
3 ml cartridges, pre-filled Solostar pen, 5 ml vials

BIPHASIC INSULINS

Biphasic insulin Aspart
Novomix ® 30, 100 units/ml injection
3 ml cartridge, 3 ml FlexPen

Biphasic Insulin Isophane
Humulin® M3, 100 units/ml injection 3 ml cartridge, 3 ml KwikPen

Insuman Comb 15, 100 units/ml, 3 ml cartridges, pre-filled Solostar pen, 5 ml vials

Insuman Comb 25, 100 units/ml, 3 ml cartridges

Insuman Comb 50, 100 units/ml, 3 ml cartridges

Biphasic Insulin Lispro
Humalog ® Mix 25
3 ml cartridge, 3 ml Kwikpen pre-filled disposable injection devices

Humalog ® Mix 50
3 ml disposable Kwikpen pre-filled disposable injection devices

Insulin Degludec
Tresiba® Flextouch
100 units/ml pre-filled pen, 100 units/ml cartridges,
200 units/ml pre-filled pen (consultant endocrine only)

Insulin Degludec with Liraglutide
Xultophy ® 100 units/ml insulin degludec
+ 3.6 mg/ml Liraglutide, 3 ml pre-filled pen (consultant endocrine only)

Insulin Detemir
Levemir® 100 units/ml injection
Insulin Glargine
Lantus® 100 units/ml injection
10 ml vial, 3 ml cartridge & Solostar
3 ml OptiSet pen
(Endocrinologists only in accordance with protocol)

biosimilar
Abasaglar® 100 units/ml, 3 ml cartridge & pre-filled pen
Semglee® 100 units/ml, pre-filled pen

Toujeo® 300 units/ml, 1.5 ml pre-filled Solostar pen (consultant endocrine only)

Notes: When prescribing insulins, specify the source (e.g. Human), the strength of the mixture (e.g. 30) & the device required (e.g. 10 ml vial). When specifying the dose, please do not abbreviate the word ‘units’.

Flexpens have been approved for patients unable to use the cartridges on recommendation of the diabetes team

6.1.2 ORAL ANTIDIABETIC DRUGS
6.1.2.1 SULPHONYLUREAS
Gliclazide 80 mg tablet
Glimepiride 1 mg, 2 mg & 3 mg tablets
Tolbutamide 500 mg tablet

6.1.2.2 BIGUANIDES
Metformin 500 mg & 850 mg tablets
Glucophage 500 mg & 1 g sachets
GlucoPhage SR (Metformin) 500 mg, 750 mg & 1 g tablets

6.1.2.3 OTHER ANTIDIABETICS
Acarbose 50 mg tablet
Canagliflozin (Invokana®) 100 mg & 300 mg f/c tablets

Dapagliflozin (Forxiga®) 5 mg & 10 mg f/c tablets
Empagliflozin (Jardiance®) 10 mg & 25 mg f/c tablets
Exenatide (Byetta®) 250 micrograms/ml injection
Bydureon® 2 mg powder and solvent for prolonged-release suspension for injection
Liraglutide (Victoza®) 6 mg/ml injection
2 x 3 ml prefilled pens
Dulaglutide (Trulicity®) 0.75 mg/0.5 ml, 1.5 mg/0.5 ml pre-filled pen

Repaglinide 500 micrograms, 1 mg & 2 mg tablets
Pioglitazone 15 mg tablet

Notes: Acarbose, Repaglinide & Pioglitazone are for initiation by Consultant Endocrinologists only

Alogliptin 6.25 mg, 12.5 mg, 25 mg tablets
Linagliptin 5 mg tablets (Can be used in severe renal impairment)
Sitagliptin 25 mg, 50 mg & 100 mg tablets

Glucagon 1 mg injection
GlucoGel (23 g) glucose gel

6.1.4 TREATMENT OF HYPOGLYCAEMIA

6.1.5 TREATMENT OF DIABETIC NEPHROPATHY AND NEUROPATHY

Pregabalin 25 mg, 50 mg, 75 mg, 100 mg, 150 mg, 200 mg, and 300 mg capsules.
( to be used second line after

nPbR = Indicates a drug excluded from HRG tariff price
amitriptylline or duloxetine for painful diabetic neuropathy)

6.1.6 DIAGNOSTIC & MONITORING AGENTS FOR DIABETES MELLITUS

BLOOD GLUCOSE MONITORING
Advantage II ® Reagent strips

URINALYSIS
Diastix ®
Ketodiastix ®
Labstix ®
Multistix SG ®
Multistix 10 SG ®
Multistix GP ®
Multistix 8 SG ®

GLUCOSE TOLERANCE TEST
Anhydrous Glucose 75 g powder

6.2 THYROID & ANTITHYROID DRUGS

6.2.1 THYROID HORMONES
Levothyroxine (Thyroxine)
25 & 50 micrograms & 100 micrograms tablets

Liothyronine 20 micrograms tablet, 20 micrograms injection

Notes: 20 micrograms of Liothyronine is equivalent to 100 micrograms of Levothyroxine (Thyroxine)

6.2.2 ANTITHYROID DRUGS
Carbimazole 5 mg & 20 mg tablets
Propylthiouracil 50 mg tablet

Notes: Carbimazole is the antithyroid drug of choice. Prescribers should be aware of the possibility of carbimazole-induced bone marrow suppression. If neutropenia develops, stop the drug immediately.

6.3 CORTICOSTEROIDS

6.3.1 REPLACEMENT THERAPY
Fludrocortisone 100 micrograms tablet

6.3.2 GLUCOCORTICOID THERAPY
Prednisolone
1 mg, 5 mg & 25 mg tablets, 2.5 mg & 5 mg e/c tablets, 5 mg soluble tablet, 5mg/5ml oral solution

Prednisolone acetate
25 mg/ ml injection

Dexamethasone
500 micrograms & 2 mg tablets, 2 mg / 5 ml oral solution, 8 mg/ 2 ml injection

Hydrocortisone 10 mg & 20 mg tablets, 100 mg injection (sodium succinate & phosphate salts), 25 mg/ ml injection (acetate)

Betamethasone 500 microgram tablet & soluble tablet

Methylprednisolone sodium succinate (Solu Medrone ®)
40 mg, 125mg, 500 mg & 1 g IM and IV injection

Methylprednisolone (Depo-Medrone ®)
40 mg/ ml & 80 mg/ 2 ml IM depot injection

Notes: Patients should be issued with and carry steroid treatment cards. Withdrawal of systemic corticosteroids should be gradual in certain patient groups. Refer to B.N.F for further advice.
6.4 SEX HORMONES

6.4.1 FEMALE SEX HORMONES

6.4.1.1 OESTROGENS & HORMONE REPLACEMENT THERAPY

Oestrogen & progestogen (Cyclical oral preparations)
Women with uterus

Novofem® tablets
(Use when oestrogen of equine origin is not acceptable)

Premique Cycle® tablets
(Use when non-androgenic progesterone is needed)

Tridestra® tablets
(Produces 3 monthly bleeds
For use in peri-menopausal women when monthly bleeds are unacceptable)

Trisequens® tablets

Oestrogen & progestogen (Continuous oral preparations)
Women with uterus

For use when cyclical bleeding is unacceptable. Only for truly menopausal women, i.e. >54 years of age or at least 12 months since last natural bleed

Climesse® tablets
(Use when oestrogen of equine origin is not acceptable)

Kliovance® tablets
(Transdermal preparation of choice)

Evorel®
Twice weekly patch
(For Consultant use in patients meeting criteria for continuous combined HRT in whom oral therapy undesirable)

Evorel Conti®
Twice weekly patch
(For Consultant use in patients meeting criteria for continuous combined HRT in whom oral therapy undesirable)

Oestrogen only (tablets)
Women without uterus

1st Choice: Premarin® 0.625 mg & 1.25 mg tablets

Alternative: Climaval® 1 mg & 2 mg tablets
(Use when oestrogen of equine origin is not acceptable)

Oestrogen only (patches)
Women without uterus

Femseven®
Once weekly patch
(Transdermal preparation of choice)

Evorel®
Twice weekly patch
(Use when extended dosing range is required or once weekly patches have been unsuccessful)

IMPLANTS

Estradiol
25 mg, 50 mg & 100 mg implants

Raloxifene 60 mg tablet
(For prevention of vertebral fractures in post-menopausal women at increased risk of osteoporosis & intolerant of HRT)

Tibolone 2.5 mg tablet
(For use in women who exhibit idiosyncratic reactions to oestrogen or in whom oestrogen administration should be avoided. Consultant Gynaecologist only)

6.4.1.2 PROGESTOGENS AND PROGESTERONE RECEPTOR MODULATORS

Dydrogesterone 10 mg tablet

nPbR = Indicates a drug excluded from HRG tariff price
Medroxyprogesterone acetate
5 mg & 10 mg tablets

Norethisterone 5 mg tablet

Progestosterone
200 mg & 400 mg pessaries,
4 % & 8 % gel,
100 mg/ 2 ml injection (approved for postnatal depression, unlicensed use)

Progestosterone receptor modulators

Ulipristal acetate (Esmya®) 5mg tablets

6.4.2 MALE SEX HORMONES & ANTAGONISTS
TESTOSTERONE & ESTERS

Testosterone undecanoate
(Restandol® Testocaps) 40 mg capsule

1st Choice: Testosterone mucoadhesive buccal 30mg m/r tablets (Straint® SR)

2nd Choice: Testosterone
100 mg & 200 mg implant

3rd Choice: Testosterone 50 mg/5 g gel (Testim ®)- to be applied topically for hypogonadism due to testosterone deficiency in men

Testosterone enantate
250 mg/ ml injection

ANTIANDROGENS
Cyproterone acetate
50 mg & 100 mg tablets

Finasteride 5 mg tablet

6.5 HYPOTHALAMIC & PITUITARY HORMONES & ANTI-OESTROGENS

6.5.1 ANTI-OESTROGENS

Clomifene 50 mg tablet

CORTICOTROPHINS

Tetracosactide
Synacthen ® 250 micrograms/ ml injection
Synacthen Depot ® 1 mg/ ml IM injection

Notes: For short Synacthen test for the diagnosis of adrenocortical insufficiency. Give Synacthen ® 250 micrograms by IV/ IM injection. Take blood for cortisol (serum SST tube) pre-injection, 30 minutes and 60 minutes. Send all three samples to biochemistry. Normal response is a rise of more than 200 nmol/ L to a level of greater than 550 nmol/ L

GONADOTROPHINS

For use at the Infertility Clinic only

Chorionic gonadotrophin
1500, 2000 & 5000 units injection

Follitropin alfa (Gonal-F ®)
75 units & 450 units injection

Follitropin beta (Puregon ®)
50 units injection

Human menopausal gonadotrophins
Menogon ®/ Menopur ® injection

GROWTH HORMONE

nPbR Somatropin
16 units, 18 units & 36 units injection (as per shared care protocol) (Norditropin SimpleXx, NutropinAq, Saizen, Humatope, Genotropin, Omnitrope & Zomactan)
HYPOTHALAMIC HORMONES

Gonadorelin (GnRH; LH-RH)
100 micrograms injection

Protirelin (TRH)
200 micrograms/2 ml injection

6.5.2 POSTERIOR PITUITARY HORMONES & ANTAGONISTS

POSTERIOR PITUITARY HORMONES

Vasopressin (Synthetic Argirepressin)
20 units/ml injection

Desmopressin 100 micrograms tablet,
100 micrograms/ml intranasal solution,
10 micrograms/metered dose spray,
4 micrograms/ml injection

Terlipressin 1 mg injection

ANTIDIURETIC HORMONE ANTAGONISTS

Demeclocycline 150 mg capsule

Tolvaptan (Samsca®) 15mg & 30mg tablets

(Tolvaptan for the treatment of hyponatremia secondary to syndrome of inappropriate antidiuretic hormone secretion is to be prescribed and monitored by Endocrinologists and treatment course will not exceed 10 days. A tickbox form is required)

Tolvaptan has also been approved by NICE TA358 May 2016 for the treatment of autosomal dominant polycystic kidney disease. These patients are not being treated at BHRUT at this point, they are being referred to a dedicated clinic at Royal London Hospital

6.6 DRUGS AFFECTING BONE METABOLISM

6.6.1 CALCITONIN

Calcitonin (salmon) (Salcatonin)
50 units/ml & 100 units/ml injection
400 units/2 ml injection

nPbR Teriparatide
250 micrograms/ml injection
(Consultant Rheumatologists only)

6.6.2 BISPHOSPHONATES

Alendronic acid (alendronate)
10 mg tablet (once daily)
70 mg once weekly tablet

Notes: Daily alendronic acid is reserved for the treatment of osteoporosis in men only. Once weekly preparations are unlicensed for this indication

Risedronate sodium
5 mg once daily tablet, 35 mg once weekly tablet
30 mg tablet licensed for treatment of Paget's disease of bone 30 mg daily for 2 months; maybe repeated if necessary after at least 2 months

Pamidronate disodium 15 mg injection

Ibandronic acid 50 mg tablets and concentrate for IV infusion
(Bondronat®)

Sodium clodronate
400 mg capsule,
520 mg & 800 mg tablets
(Haematologists & Radiotherapists only)

nPbR Zoledronic acid (Aclasta®)
5 mg in 100 ml infusion
(Consultant Rheumatologists and Orthogeriatricians only)

Notes: Zoledronic acid is indicated in postmenopausal osteoporotic patients

nPbR = Indicates a drug excluded from HRG tariff price
who are intolerant of oral bisphosphonates and have suffered two fractures despite oral treatment and have a secondary cause for osteoporosis.

**Zoledronic acid (Zometa®)**
4mg vial
*(Consultant Oncologists only)*

**Notes:** Zometa is indicated in oncology patients for hypercalcaemia of malignancy.

**Denosumab** Injection 60mg/ml 1ml pre-filled syringe *(Prolia®)* *(Consultant Rheumatologists and Orthogeriatricians or as per NICE recommendations)*

**Notes:** Prolia® is indicated in postmenopausal women at increased risk of fractures who are unable to comply with the special instructions for administering alendronate and either risedronate or ibandronic acid or have an intolerance of, or a contraindication to those treatments.

Denosumab 70mg/ml 120mg vial *(Xgeva®)* *(Consultants oncologists only as per NICE recommendations)*

**Notes:** Xgeva® is indicated for the prevention of skeletal-related events in adults with bone metastases from solid tumours.

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**6.7 OTHER ENDOCRINE DRUGS**

**6.7.1 BROMOCRIPTINE & OTHER DOPAMINERGIC DRUGS**

**Bromocriptine**
1 mg, 2.5 mg & 5 mg tablets, 10 mg capsule

**Cabergoline**
500 micrograms tablet

**6.7.2 DRUGS AFFECTING GONADOTROPHINS**

**Danazol** 100 mg & 200 mg capsules

**Goserelin** *(Zoladex ®)* 3.6 mg Implant *(for prostate & breast cancer, please see section 8.3.4.2)*

**Leuprorelin** *(Prostap SR DCS®)* 3.75 mg injection *(Gynaecologists only for Endometriosis unresponsive to other treatments)*
7 OBSTETRICS, GYNAECOLOGY & URINARY-TRACT DISORDERS

7.1 DRUGS USED IN OBSTETRICS

7.1.1. PROSTAGLANDINS & OXYTOCICS

Carboprost 250 micrograms/ ml injection (Available for patients unresponsive to ergometrine & oxytocin)

Dinoprostone (Prostin E2 ®)
3 mg vaginal tablet,
1 mg & 2 mg vaginal gel
10mg pessary within retrieval device (Propess®)

Notes: Prostin E2 vaginal tablet & vaginal gel are not bioequivalent

Ergometrine maleate
500 micrograms/ ml injection

Ergometrine & oxytocin (Syntometrine ®)
500 micrograms & 5 units/ ml injection

Gemeprost 1 mg pessaries

Oxytocin (Syntocinon ®)
5 units/ ml & 10 units/ ml injection

Misoprostol
100 & 200 micrograms tablets
(Induction of Labour, Cervical priming prior to termination, Medical termination in 2nd trimester, Post-partum haemorrhage, Unlicensed indications)

Methotrexate injection
(Ectopic pregnancy in line with protocol, unlicensed indication)

7.1.2.1 DUCTUS ARTERIOSUS

MAINTENANCE OF PATENCY

Alprostadil (Prostin VR ®)
500 micrograms/ ml injection

CLOSURE

Ibuprofen (Orphan drug)
5 mg/ml injection- (treatment of closing patent ductus arteriosus (PDA) in preterm newborn infants) indomethacin is no longer used because of adverse effects such as necrotising enterocolitis (NEC). Ibuprofen has a better side effect profile)

7.1.2 MIFEPRISTONE

Mifepristone 200 mg tablet

7.1.3 MYOMETRIAL RELAXANTS

Ritodrine hydrochloride
10 mg tablet, 50 mg/ 5 ml injection

Atosiban
37.5 mg/ 5 ml & 6.75 mg/ 0.9 ml injection- (for use in patients with contraindications to ritodrine)

Salbutamol
(See section 3.1.1.1 for strengths of injection)

Terbutaline
0.5 mg/ ml & 2.5 mg/ 5 ml injection (for management of uterine hyperstimulation during induced labour-unlicensed use)

7.2 TREATMENT OF VAGINAL & VULVAL CONDITIONS

7.2.1 PREPARATIONS FOR VAGINAL ATROPHY

OESTROGENS, TOPICAL

Estriol (Ortho-Gynest ®)
0.01 % Intravaginal cream

nPbR = Indicates a drug excluded from HRG tariff price
Conjugated oestrogens (equine)  
(Premarin ®) vaginal cream

**Estradiol** (Vagifem ®)  
25 micrograms vaginal tablets

**Estradiol** (Estring ®)  
7.5 micrograms/ 24 hours vaginal ring  
(Use only when creams or vaginal tablets & systemic administration are inappropriate, Consultant Gynaecologists only)

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7.2.2 ANTINFECTIVE DRUGS

**PREPARATIONS FOR VAGINAL & VULVAL CANDIDIASIS**

**Clotrimazole**  
100 mg, 200 mg & 500 mg pessaries,  
1 %, 2% & 10 % vaginal cream

**Econazole nitrate** 150 mg pessary

**PREPARATIONS FOR OTHER VAGINAL INFECTIONS**

**Clindamycin phosphate** (Dalacin ®)  
Cream

**Metronidazole 0.75% gel** (Zidoval®)  
(alternative to oral metronidazole for the treatment of bacterial vaginosis)

**Povidone-iodine** (Betadine ®)  
200 mg pessary (G.U. Medicine only)

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7.3 CONTRACEPTIVES

7.3.1 COMBINED HORMONAL CONTRACEPTIVES

**LOW STRENGTH (ORAL)**

Ethinylestradiol & Desogestrel  
**Mercilon ®** tablet

**LOW STRENGTH (VAGINAL)**

Ethinylestradiol with Etonogestrel  
**NuvaRing®** vaginal ring

**STANDARD STRENGTH**

Ethinylestradiol & Levonorgestrel  
**Levest 150/30** tablet  
**Logynon ®** tablet

Ethinylestradiol & Norethisterone  
**TriNovum ®** tablet  
**Ovysmen ®** tablet *(Havering Community only)*

Ethinylestradiol & Norgestimate  
**Cilest ®** tablet
Ethinylestradiol & Desogestrel
**Gedarel®** tablet

Ethinylestradiol & Drospirenone
**Yasmin®** tablet

Ethinylestradiol & Gestodene
**Femodene®** tablet
**Millinette®**

**Note: Femodene, Gedarel, Mercilon & Millinette** are associated with a higher incidence of thrombosis & are available only for women who have experienced problems with other oral contraceptives & who have given their full, informed consent

**EMERGENCY CONTRACEPTION**

Levonorgestrel (Levonelle® 1500) tablet
 (*Family planning & GUM clinic only*)

Ulipristal acetate 30mg (**ellaOne®**) tablet

**7.3.2 PROGESTOGEN-ONLY CONTRACEPTIVES**

**7.3.2.1 ORAL PROGESTOGEN-ONLY CONTRACEPTIVES**

Desogestrel (**Cerazette®**)  
(*Dr Hollingworth only*)

Etynodiol (**Femulen®**) tablet

Norethisterone (**Micronor®**) tablet

Levonorgestrel (**Norgeston®**) tablet

**7.3.2.2 PARENTERAL PROGESTOGEN-ONLY CONTRACEPTIVES**

Medroxyprogesterone acetate  
(**Depo-Provera®**)  
150 mg pre-filled syringe

**Subcutaneous Medroxyprogesterone acetate**  
( *Sayana Press®* 104mg

**Etonogestrel** (Nexplanon®) Implant  
(*Family planning clinics only*)

**7.3.3 SPERMICIDAL CONTRACEPTIVES**

Nonoxinol ‘9’ 2% Gel 30g  
(*Gygel®*)

**7.3.4 CONTRACEPTIVE DEVICES**

GyneFix®  

**Nova-T® 380**

**7.4 DRUGS FOR GENITO-URINARY DISORDERS**

**7.4.1 DRUGS FOR URINARY RETENTION**

**ALPHA-BLOCKERS**

Alfuzosin (**Xatral XL®**) 10 mg m/r tablet

Indoramin 20 mg tablet

Tamsulosin 400 micrograms m/r capsule

**Notes:** The use of alpha-blockers is associated with postural hypotension, particularly after the first dose. Elderly patients, those with a history of orthostatic hypotension or those who are receiving hypotensive therapy are particularly at risk

nPbR = Indicates a drug excluded from HRG tariff price
PARASYMPATHOMIMETICS

Bethanechol chloride 10 mg tablet
Distigmine bromide 5 mg tablet

7.4.2 DRUGS FOR URINARY FREQUENCY, ENURESIS & INCONTINENCE

1st Choice: Oxybutynin
2.5 mg & 5 mg tablet, 2.5 mg/5 ml elixir

2nd Choices

Solifenacin succinate (Vesicare®)
5mg and 10mg film-coated tablets
Tolterodine 1mg and 2mg immediate release tablets
Fesoterodine (Toviaz®)
4mg and 8mg m/r tablets
Propantheline 15 mg tablet
Duloxetine 20mg and 40mg capsules
(last line for stress urinary incontinence as per NICE)

Mirabegron (Betmiga®)
25mg and 50mg m/r tablets

7.4.3 DRUGS USED IN UROLOGICAL PAIN

Potassium citrate
3 g granules & mixture BP

Notes: These granules should be taken with plenty of water.
Caution: 3 g sachet or 10 ml of mixture contains 28 mmol of potassium

Glycine 1.5 % Irrigation solution

7.4.5 DRUGS FOR ERECTILE DYSFUNCTION

Alprostadil
(Caverject ®) (Urologists only)
5 micrograms, 10 micrograms, 20 micrograms & 40 micrograms injection
(Viridal Duo®) starter pack
10 micrograms, 20 micrograms & 40 micrograms starter pack

(MUSE ®) (Urologists only)
250 micrograms, 500 micrograms & 1 mg urethral application

Papaverine
30 mg, 40 mg & 80 mg injection
(Unlicensed product, Urologists only)

1st Choice: Sildenafil 25 mg, 50mg & 100mg tablets

Alternatives treatments

Tadalafil 2.5mg, 5mg, 10mg & 20mg tablets (1st or 2nd line in patients who require more spontaneity and post prostatectomy).

Vardenafil 5mg, 10mg & 20mg tablets (Urologists only). To be used 2nd line after Sildenafil in non-responders and older patients over 70 yrs old.

Notes: Sildenafil is contraindicated in patients receiving nitrates. Prescriptions for erectile dysfunction need to be endorsed with SLS & signed by Consultant Urologists only. Supply is one tablet per week, with a maximum of one month supply only

PRIAPISM

Etilefrine 5mg tablets – unlicensed see Priapism guidelines on the intranet.
The drugs in this section are potentially highly toxic and should therefore, be used only by clinicians experienced in their use.

For advice on the use of the drugs the opinion of a Consultant in radiotherapy and oncology should be sought.

A central cytotoxic reconstitution service, based in the pharmacy, is in operation and should be always be used. The service presents the cytotoxic drug in its final form ready for use, i.e. the exact dose required drawn up in a syringe or in an infusion bag, labelled with the patient's name.

For advice on the handling of cytotoxic drugs please contact one of the numbers below.

For information about the reconstitution service, telephone Ext. 3029 (QH) or 8272 (KGH)

### 8.1.1 ALKYLATING AGENTS

**Busulfan** tablets

**Bendamustine** injection

**Carmustine** injection

**Chlorambucil** tablets

**Cyclophosphamide** tablets & injection

**Ifosfamide** injection

**Lomustine** capsules

**Melphalan** tablets & injection

### UROTHELIAL TOXICITY

**Mesna** tablets & injection

### 8.1.2 CYTOTOXIC ANTIBIOTICS

**Bleomycin** injection

**Daunorubicin** injection

**Doxorubicin** injection

**Epirubicin** injection

**Idarubicin** capsules & injection

**Mitomycin** injection

*Bladder instillation, Consultant Urologists only*

(Also for Pterygium excision and trabeculectomy in Ophthalmology – Consultant Ophthalmologists only)

**Mitoxantrone** (Mitozantrone) infusion

**Pixantrone** injection (Pixuvri®)

(as per NICE 306)

Notes: Pixantrone monotherapy is recommended as an option for treating multiply relapsed or refractory aggressive non-Hodgkin's B-cell lymphoma in patients:

- Who have previously been treated with rituximab and
- Who are receiving third- or fourth-line treatment and
- If the manufacturer provides pixantrone with the discount agreed in the patient access scheme

### 8.1.3 ANTIMETABOLITES

**Azacitidine** injection

**Capecitabine** tablets

**Cytarabine** injection

**Fludarabine** injection

**Fluorouracil** injection & cream

*cream: Dermatologists only*

**Gemcitabine** injection

**Mercaptopurine** tablets

**Methotrexate** tablets, injection

**Pemetrexed** injection

**Tegafur With** capsules

**Uracil**

**Tioguanine** tablets

**Liposomal cytarabine – daunorubicin** injection

nPbR = Indicates a drug excluded from HRG tariff price
FOLINIC ACID RESCUE
Calcium Folinate  tablets & injection

8.1.4   VINCA ALKALOIDS & ETOPOSIDE
Vinblastine  injection
Vincristine  injection
Vindesine  injection
Vinorelbine  injection & capsules

Notes: Vinca alkaloids should only be given IV. Inadvertent Intrathecal administration can be fatal

Etoposide  capsules & injection

8.1.5   OTHER ANTINEOPLASTIC DRUGS
nPbR Abemaciclib  tablets
nPbR Alectinib  capsules
Amsacrine  infusion
Altretamine  capsules (Radiotherapists only)
nPbR Anagrelide  tablets
nPbR Bortezomib  injection
nPbR Carfilzomib  infusion
nPbR Cetuximab  infusion
nPbR Crizotinib  capsules
nPbR Dacarbazine  injection
nPbR Eribulin  capsules
Hydroxycarbamide (Hydroxyurea)  tablets
nPbR Axitinib  capsules
nPbR Ceritinib  capsules
nPbR Dasatinib  tablets (for 2nd or 3rd line treatment of CML in line with Cancer network recommendations)
nPbR Everolimus  tablets
nPbR Ibrutinib  capsules
nPbR Idelalisib  150mg tablets
nPbR Imatinib  capsules
nPbR Ixazomib  capsules
nPbR Lapatinib  tablets

Notes: CCGs funding is required for Lapatinib
nPbR Lenvatinib (Kisplyx®) (Lenvima®)  capsules
nPbR Nilotinib  capsules
nPbR Nintedanib  capsules
nPbR Osimertinib  tablets
nPbR Pomalidomide  capsules
nPbR Ponatinib  tablets
nPbR Regorafenib  tablets
nPbR Ribociclib  tablets
nPbR Sorafenib  tablets
nPbR Sunitinib  capsules

Notes: CCGs funding is required for nilotinib, sorafenib and sunitinib
nPbR Venetoclax  tablets

Pentostatin  injection

PLATINUM COMPOUNDS
Carboplatin  injection
Cisplatin  injection
Oxaliplatin  injection
Procarbazine  capsules
TAXANES

Docetaxel infusion (Approved 3rd line therapy for metastatic prostate cancer)
Paclitaxel infusion
Paclitaxel (as albumin-bound nanoparticles) infusion
Cabazitaxel intravenous infusion 40mg/ml

ANTINEOPLASTIC DRUGS – Monoclonal Antibodies

nPbR Avelumab injection
nPbR Atezolizumab injection
nPbR Brentuximab vedotin injection
nPbR Daratumumab injection
nPbR Durvalumab injection
nPbR Nivolumab injection
nPbR Obinutuzumab injection
nPbR Ofatumumab injection
nPbR Pembrolizumab injection
nPbR Pertuzumab injection
nPbR Ramucirumab injection
nPbR Trastuzumab injection

TOPOISOMERASE I INHIBITORS

Irinotecan hydrochloride infusion
Topotecan infusion
nPbR Thalidomide tablets (Haematologists only for multiple myeloma and myelofibrosis with cytopenias +/- splenomegaly)

ONCOLYTIC VIRAL THERAPY

nPbR Talimogene laherparepvec injection

TARGETED THERAPY

nPbR Radium 223 dichloride injection

8.2 DRUGS AFFECTING THE IMMUNE SYSTEM

8.2.1 ANTIPROLIFERATIVE IMMUNOSUPPRESSANTS

Azathioprine
25 mg & 50 mg tablets, 50 mg injection

Mycophenolate mofetil
250 mg capsule, 500 mg tablet
(Unlicensed use - Treatment of lupus nephritis in child-bearing age patients & other autoimmune diseases in similar age groups)
(Also for second-line treatment of severe psoriasis when other treatments have failed – Consultant Dermatologists only)

nPbR Cladribine
10mg tablets
(For the treatment of relapsing-remitting multiple sclerosis – NICE TA493)

8.2.2 CORTICOSTEROIDS & OTHER IMMUNOSUPPRESSANTS

Prednisolone
See section 6.3.2 for preparations

Ciclosporin (Cyclosporin)
Neoral ®
10 mg, 25 mg 50 mg & 100 mg capsules, 100-mg/ml oral solution
(Specialist use only)
Ciclosporin 1mg per ml eye drops
0.3ml dose units (Ikervis®)
Ciclosporin 1mg/ml eye drops 0.3ml dose units (Verkazia®)

8.2.3 RITUXIMAB

Rituximab 10mg/ml, 10ml and 50ml vial for infusion (for Rheumatoid Arthritis)

8.2.4 OTHER IMMUNOMODULATING DRUGS

nPbR Glatarimer 20mg/L subcut. injection

nPbR = Indicates a drug excluded from HRG tariff price
Lenalidomide capsules
(3rd line treatment of multiple myeloma, CCGs funding essential before prescribing)

nPbR Interferon alfa (Roferon A ®) injection
3, 4.5 & 18 million-units vial,
3, 4.5 & 9 million-units pre-filled syringe,
18 million-units multidose cartridges

nPbR Interferon beta-1b (Betaferon ®)
9.6 million-unit injection
Consultant Neurologists only

nPbR Peginterferon alfa-2a
(Check brands & strengths stocked with Pharmacy)
(Consultant Gastroenterologist only, for patients with chronic hepatitis B and C)

(Consultant Haematology for patients with polycythaemia vera or essential thrombocythaemia)

nPbR Peginterferon beta-1a (Plegridy®)
(Consultant Neurologists Only)

BCG (Bacillus Calmette-Guerin))
Bladder installation
(Consultant Urologists only)

nPbR Dimethyl Fumarate
(Tecfidera®) 120mg & 240mg e/c capsules
(Consultant Neurologists only as per NICE TA320)
(Skilrance®) 30mg &120mg GR tablets for Plaque Psoriasis NICE TA 475

nPbR Glatiramer acetate
solution for injection

Fampridine 10mg MR tablets
(Consultant Neurologists only for Episodic ataxia type 2)

Anti-lymphocyte monoclonal antibodies

nPbR Alemtuzumab 10mg/ml concentrate for solution for infusion vials

nPbR Ocrelizumab 30mg/10ml concentrate for solution for infusion vials

8.3 SEX HORMONES & HORMONE ANTAGONISTS IN MALIGNANT DISEASE

8.3.1 OESTROGENS
Diethylstilbestrol (Stilboestrol) 1 mg tablet

8.3.2 PROGESTOGENS
Medroxyprogesterone acetate
100 mg, 400 mg & 500 mg tablets
(See section 6.4.1.2 for other strengths)
Megestrol acetate
40 mg & 160 mg tablets
Norethisterone
5 mg tablet

8.3.3 ANDROGENS
(See section 6.4.2 for preparations)

8.3.4 HORMONE ANTAGONISTS

8.3.4.1 BREAST CANCER
Tamoxifen 10 mg & 20 mg tablets, 10 mg/ 5 ml oral solution

nPbR Fulvestrant 250mg/5ml solution for injection
Anastrozole 1 mg tablet
Exemestane 25 mg tablet
(2nd line after 2 – 3yrs of tamoxifen therapy)

Letrozole 2.5mg tablet
Patent Blue V (Sulphan Blue)
(Unlicensed product. Diagnostic dye used to stain metastatic lymph nodes in axilla)

### 8.3.4.2 PROSTATE CANCER & GONADORELIN ANALOGUES

**Notes:** For patients receiving their first course of treatment, anti-androgens should be started three days before the gonadorelin analogue & normally continued for three weeks. This will help to avoid the tumour ‘flare’ that may occur after commencing gonadorelin therapy.

- **Abiraterone (Zytiga®)** 250mg tablets
  *(To be funded via Cancer Drugs Fund)*

- **Bicalutamide**
  50 mg & 150 mg tablets
  *(Urologists only)*

- **Cyproterone acetate**
  50 mg & 100 mg tablets

- **Flutamide** 250 mg tablet

- **Degarelix** injection 120mg vial (with diluent)

  **Notes:** Approved for first dose treatment only with a switch to Triptorelin or Goserelin 28 days later.

- **Leuprorelin**
  *(Prostap SR DCS)*
  3.75mg prefilled syringe

- **Triptorelin**
  *(Decapeptyl® SR)*
  *(I/M injection)*
  3 mg prefilled syringe

- **Goserelin** *(Zoladex ®)*
  3.6 mg Implant

  **Notes:** In-patients should be encouraged to bring in their own supply. Patients on 10.8 mg (3 monthly injections) will receive 3.6 mg & their next injection scheduled to be given in one month.

### 8.3.4.3 SOMATOSTATIN ANALOGUES

- **nPbR Octreotide (Sandostatin ®) injection**
  50 mcg/ ml, 100 mcg/ ml & 500 mcg/ ml

- **nPbR Lanreotide**
  Somatuline ® LA
  Somatuline ® Autogel
  *(For treatment of acromegaly, neuroendocrine tumours and thyroid tumours)*
  *(Refer prescriptions to Senior Principal Pharmacist, Clinical Services)*
9 NUTRITION & BLOOD

9.1 ANAEMIAS & SOME OTHER BLOOD DISORDERS

9.1.1 IRON DEFICIENCY ANAEMIAS

9.1.1.1 ORAL IRON

Table: Iron content of different salts

<table>
<thead>
<tr>
<th>Iron salt</th>
<th>Amount</th>
<th>Content of ferrous iron</th>
</tr>
</thead>
<tbody>
<tr>
<td>fumarate</td>
<td>200 mg</td>
<td>65 mg</td>
</tr>
<tr>
<td></td>
<td>140 mg</td>
<td>45 mg</td>
</tr>
<tr>
<td>sodium feredetate</td>
<td>190 mg</td>
<td>27.5 mg</td>
</tr>
<tr>
<td>glycine sulphate</td>
<td>141 mg</td>
<td>25 mg</td>
</tr>
<tr>
<td>gluconate</td>
<td>300 mg</td>
<td>35 mg</td>
</tr>
<tr>
<td>sulphate, dried</td>
<td>200 mg</td>
<td>65 mg</td>
</tr>
<tr>
<td></td>
<td>325 mg</td>
<td>105 mg</td>
</tr>
</tbody>
</table>

Ferrous sulphate
200 mg tablet,
325 mg m/r tablet (Ferrograd ®)

Ferrous fumarate (Fersamal ®)
140 mg/ 5 ml syrup

Ferrous gluconate
300 mg tablet

Sodium feredetate (Sytron ®)
190 mg/ 5 ml elixir

FERROUS SULPHATE & FOLIC ACID

Pregaday ®
Ferrous fumarate (100 mg iron) & 350 micrograms folic acid tablet

Ferric Maltol (Ferracru®) 30mg Capsules

Notes: Ferric maltol is approved as a first line alternative to IV iron for the treatment of iron deficiency anaemia in adults with inflammatory bowel disease (IBD). A course of 12 weeks treatment is required.

9.1.1.2 PARENTERAL IRON

Iron dextran (CosmoFer ®)
100 mg/ 2 ml IV/ IM injection

Notes: Parenteral Iron therapy is hazardous. Elevation of Hb is not significantly faster by this route. Parenteral iron should be reserved for patients in whom oral therapy or transfusion is inappropriate or where compliance is a problem. Oral iron therapy should be continued for at least three months to replenish iron stores.

Iron Isomaltoside 1000 (Monofer®)
100mg/ml IV injection

Iron carboxymaltose (Ferinject®)
50mg/ml injection

9.1.2 DRUGS USED IN MEGALOBLASTIC ANAEMIAS

Folic acid
5 mg tablet
2.5 mg/ 5 ml syrup

Hydroxocobalamin (Vitamin B₁₂)
1000 micrograms/ ml injection

9.1.3 DRUGS USED IN HYPOPLASTIC, HAEMOLYTIC & RENAL ANAEMIAS

ERYTHROPOIETIN

Erythropoietin beta (NeoRecormon ®)
500, 1000, 2000, 4000, 5000 & 10,000 units pre-filled syringes

IRON OVERLOAD

nPbR 1st Choice: Desferrioxamine 500 mg & 2 g injection

nPbR 2nd Choice: Deferasirox 125mg, 250mg, 500mg Dispersible tablets (Haematologists' use only- where
desferrioxamine is contraindicated or inadequate)

nPbR Alternative: Deferiprone 500 mg tablet (Haematologists only- use where desferrioxamine therapy is contraindicated, has failed or has caused serious toxicity)

9.1.4 DRUGS USED IN PLATELET DISORDERS

Romiplostim (Nplate®)
250 microgram s/c injection

9.1.6 DRUGS USED IN NEUTROPENIA

nPbR Filgrastim (G-CSF) (Zarzio®)
30 million- units (300 micrograms/0.5ml) pre-filled syringe for injection
48 million- units (480 micrograms/0.5ml) pre-filled syringe for injection

(Consultant Haematologist only, must be approved by Haematology Clinical Directorate Lead & Senior Principal Pharmacist, Technical Services)

Notes: Slow-K is generally no longer used because it has association with oesophageal or small bowel ulceration

POTASSIUM REMOVAL
Calcium polystyrene sulphonate powder (Calcium Resonium ®)
30g kit (for rectal administration)

Notes: U&E’s must be monitored daily. 300g pot

Resonium A may be used in patients who have a high calcium. However it is not recommended for use in patients with congestive heart failure as it contains sodium. These resins can be given rectally (see BNF for further advice)

Patiromer calcium (Veltassa®)
8.4g oral calcium sachets
16.8g oral powder sachets

Patiromer is to be used only by consultant nephrologists

9.2 FLUIDS & ELECTROLYTES

9.2.1.1 ORAL POTASSIUM

Potassium chloride

(Sando K ®)
12 mmol K⁺ per effervescent tablet

(Kay-Cee-L ®) 1 mmol/ ml syrup

(Slow-K ®) 600 mg or 8 mmol K⁺ per m/r tablet

(For those intolerant to Sando-K ®)

Notes: Slow-K is generally no longer used because it has association with oesophageal or small bowel ulceration

9.2.1.2 ORAL SODIUM AND WATER

Sodium chloride (Slow Sodium ®)
10 mmol or 600 mg m/r tablet

ORAL REHYDRATION SALTS

Sodium chloride & glucose oral powder (Dioralyte ® sachet)

9.2.1.3 ORAL BICARBONATE

Sodium bicarbonate
Provides 6 mmol each of Na⁺ & HCO₃⁻ per 600 mg tablet & 500mg capsules

9.2.2 PARENTERAL PREPARATIONS FOR FLUID & ELECTROLYTE IMBALANCE

nPbR = Indicates a drug excluded from HRG tariff price
9.2.2.1 ELECTROLYTES & WATER

SODIUM CHLORIDE

0.9 %
2 ml, 5 ml & 10 ml amp,
50 ml vial,
100 ml, 250 ml, 500 ml & 1000 ml bags,
500 ml polyfusor

0.45 %: 500 ml bag

0.18 %, 0.9 %, 1.8 %, 5 %:
500 ml polyfusors

SODIUM CHLORIDE & GLUCOSE

0.18 % & 4 %: 500 ml & 1000 ml bags
0.45 % & 5 %: 500 ml bags

SODIUM LACTATE INTRAVENOUS INFUSION, COMPOUND
(HARTMANN’S; RINGER-LACTATE)
500 ml & 1000 ml bags

Plasma-Lyte 1000ml bags
(In critical care areas i.e. ITU, HDU and Theartres only)

GLUCOSE

5 %: 100 ml, 250 ml, 500 ml &
1000 ml bags

10 %: 500 ml & 1000 ml bags

50 %: 50 ml vial & minijet

POTASSIUM CHLORIDE & GLUCOSE

5 % INTRAVENOUS INFUSION

10 mmol K⁺: 500 ml bag
20 mmol K⁺: 500 ml & 1000 ml bags
40 mmol K⁺: 1000 ml bag

Unlicensed preparation:
40 mmol K⁺: 500 ml bag

POTASSIUM CHLORIDE & SODIUM CHLORIDE 0.9 % INTRAVENOUS INFUSION

10 mmol K⁺: 500 ml bag
20 mmol K⁺: 500 ml & 1000 ml bags
40 mmol K⁺: 1000 ml bag

Unlicensed preparations:
40 mmol K⁺: 100 ml (used in KGH ITU)

50 mmol K⁺: 50ml
60 mmol K⁺: 1000 ml bag
80 mmol K⁺: 1000 ml bag

Notes: The above unlicensed preparations, 40 mmol K⁺ in 500 ml bag,
60 mmol & 80 mmol K⁺ in 1000 ml bags are available on consultation with a
Pharmacist. Refer to Trust Potassium Policy for further information. The Policy
is also available on the Trust Intranet

POTASSIUM CHLORIDE, SODIUM CHLORIDE 0.18 % & GLUCOSE 4 %
INTRAVENOUS INFUSION

10 mmol K⁺: 500 ml bag
20 mmol K⁺: 500 ml & 1000 ml bags
40 mmol K⁺: 1000 ml bag

POTASSIUM CHLORIDE, SODIUM CHLORIDE 0.45 % & GLUCOSE 5 %
INTRAVENOUS INFUSION

Unlicensed preparation:
20 mmol K⁺: 500 ml bag
(For paediatric DKA patients only)

POTASSIUM CHLORIDE CONCENTRATE 15 %, STERILE

20 mmol K⁺: 10 ml amp.

Notes: This is available in designated areas, but ready mixed bags should be
used in the first instance. This is treated as a Controlled Drug. See Trust
Potassium Policy

Notes: Potassium Chloride Concentrate 15% has been approved for specific
indication in Obstetrics. See Fetal Medicine GFuidelines

SODIUM BICARBONATE

1.4 %: 500 ml polyfusor
4.2 %: 10 ml amp.
500ml polyfusor & 4.2 % minijet
8.4 %: 10 ml amp, 50 ml minijet &
100 ml infusion bottle
WATER FOR INJECTION
2 ml, 5 ml, 10 ml & 20 ml amps.

9.2.2.2 PLASMA & PLASMA SUBSTITUTES

Albumin solution (Human)
Isotonic solutions: 4.5 %
Concentrated solutions: 20 %

Notes: Supply obtained from:
- Pathology (KGH)
- Pharmacy (Queens)

PLASMA SUBSTITUTES

Dextran 70
In 500 ml glucose 5 % or sodium chloride 0.9 % infusion

Gelatin 4 % (Gelofusine ®)
500 ml & 1000 ml infusion bags

Succinylated gelatine (Gelaspan®)
500ml & 1L infusion bags

Etherified starch

HAEMOFILTRATION FLUIDS

Table: Fluids stocked on ITU

<table>
<thead>
<tr>
<th></th>
<th>HCO₃⁻ free, Contains 40 mmol/ L Lactate</th>
<th>HCO₃⁻ buffered, Contains 3 mmol/ L Lactate</th>
</tr>
</thead>
<tbody>
<tr>
<td>20 mmol K⁺ per 5L bag</td>
<td>Hemolactol</td>
<td>Prismasol 4</td>
</tr>
<tr>
<td>K⁺ free</td>
<td>Lactasol</td>
<td>Hemosol B0</td>
</tr>
</tbody>
</table>

Buffered Dialysis Solution

Prism0cal

Phosphate Solution for haemodialysis/haemofiltration

PHOXILIUM 1.2 mmol/l

Ready-to-use sterile solution for regional citrate anticoagulation

nPbR = Indicates a drug excluded from HRG tariff price
9.3 INTRAVENOUS NUTRITION

There is a multi-disciplinary nutrition team available to advise on any aspect of nutritional care. For information or help bleep the Nutrition Sister/Team or a Dietitian.

A Total Parenteral Nutrition compounding service is available from the Pharmacy Manufacturing unit. TPN solution formulae are based on Kabiven® range of products.

Each TPN solution must be prescribed on a TPN prescription sheet.

For advice telephone the Pharmacy Production unit on Ext. 3029 (QH) or 8272 (KGH). Adult TPN is never an emergency & need not be initiated outside normal hours.

9.4 ORAL NUTRITION

Notes: For advice & information on the products available, please consult a dietitian.

9.5 MINERALS

Notes: When using the following supplements, it is essential to monitor plasma concentrations of calcium, phosphate, potassium & other electrolytes.

9.5.1.1 CALCIUM (Ca²⁺) SUPPLEMENTS

Calcium gluconate
10 % (2.2 mmol Ca²⁺/ 10ml) injection

Calcium chloride
5 mmol/ 10 ml injection,
10 % minijet for Resus.

Calcium carbonate (Adcal®)
1.5 g chewable tablets,
600 mg or 15 mmol Ca²⁺/ tablet

Notes: Adult Patients admitted with other brands of calcium (including those with 12.6 mmol Ca²⁺/tablet), should be converted to Adcal. The DTC has approved for pharmacists to change the prescription.

Calcium carbonate (Cacit®)
1.25 g effervescent tablets,
500 mg or 12.6 mmol Ca²⁺/ tablet (Paediatric patients)

Notes: If patients are on Cacit® tubes, as part of Didronel PMO®, they should use their own supply. If this is impossible, then a Cacit tube may be supplied. Ensure the in-patient chart states ‘as part of Didronel PMO®’, but on discharge ensure the TTA states patient has OWN supply. If they are on last Cacit tube & do not have another box for discharge, a supply of Didronel PMO may be made.

Calcium-Sandoz®
2.7 mmol (108.3 mg) Ca²⁺/ 5 ml syrup (Paediatrics only)

Cinacalcet 30 mg & 60 mg tablets (Approved for Renal physicians only in dialysis patients for the treatment of secondary hyperparathyroidism associated with chronic renal failure)

9.5.2.2 HYPERCALCAEMIA (See section 6.6.2 for preparations)

9.5.1.3 MAGNESIUM (Mg²⁺)

Magnesium aspartate anhydrate 6.5g sachet containing 10mmol of Mg²⁺ (Magnaspartate®)

Magnesium sulphate
50 % (2 mmol Mg²⁺/ ml) injection
2 ml & 10 ml amps.
Pre-filled syringes for Resus.

Magnesium glycerophosphate
4mmol tablet (Unlicensed, named patient only)

Magnesium oxide
4 mmol (160 mg) capsule
9.5.2.1 PHOSPHATE (PO$_4^{3-}$) SUPPLEMENTS

**Phosphate-Sandoz ®**
16.1 mmol (500 mg) PO$_4^{3-}$ effervescent tablet

**Phosphates polyfusor**
50 mmol PO$_4^{3-}$ / 500 ml infusion

**Addiphos ®**
40 mmol PO$_4^{3-}$ / 20ml solution

Refer to Guidelines for correcting Hypophosphataemia prior to the introduction of large volumes of feed (IV)

**Notes:** 20 ml solution of addiphos contains 30 mmol potassium. This is treated as a Controlled Drug & kept in designated areas. See Trust Potassium policy

9.5.2.2 PHOSPHATE (PO$_4^{3-}$) BINDING AGENTS

**Calcium carbonate** (Adcal ®)
1.5 g chewable tablets, 600 mg or 15 mmol Ca$^{2+}$/ tablet

**Calcium carbonate** (Cacit ®)
1.25 g effervescent tablets, 500 mg or 12.6 mmol Ca$^{2+}$/ tablet

9.5.4 ZINC (Zn$^{2+}$) SUPPLEMENTS

**Zinc sulphate** (Zincomed ®)
220 mg (50 mg Zn$^{2+}$/ capsule)

9.6 VITAMINS

9.6.2 VITAMIN B GROUP

**Thiamine** (Vitamin B1)
50 mg & 100 mg tablets

**Vitamins B & C** (Pabrinex ®)
High potency IV and IM injections

**Notes:** The CSM warns of potentially serious allergic adverse reactions, which may occur during, or shortly after, administration of Intravenous injection of Vitamins B & C (Pabrinex ®), See B.N.F
Pyridoxine (Vitamin B6)  
10mg, 20 mg & 50 mg tablets,  
50 mg/ ml injection

**VITAMIN B COMPLEX PREPARATIONS**

Vitamin B compound strong tablet

**Notes:** The term Vitamin B complex is a generic one, which embraces various brand & generic compound formulations of Vitamin B

9.6.3 **VITAMIN C**

Ascorbic acid  
100 mg, 200 mg & 500 mg tablets  
1g soluble tablets

9.6.4 **VITAMIN D**

Calcium (2.4 mmol) & ergocalciferol  
(Vitamin D₂, Calciferol) (400 units) tablets

Ergocalciferol 3000 units/ ml solution  
(Unlicensed product)

Alfacalcidol (1α-Hydroxycholecalciferol)  
(One-Alpha ®)  
0.25 & 1 micrograms capsules

Calcitriol (1,25-Dihydroxycholecalciferol)  
0.25 micrograms capsule

Calcium 600 mg or 15.1 mmol & Colecalciferol (Vitamin D₃)  
10 micrograms (400 units) tablet

Colecalciferol Capsule 20 micrograms/800 units

Colecalciferol tablet 20 micrograms/800 units

**High dose oral vitamin D**  
50,000 units tablets (Unlicensed)

**Adcal-D₃® and Adcal-D3 Dissolve®**  
(Adcal-D3 soluble for those with swallowing difficulties)

9.6.5 **VITAMIN E**

Alpha tocopheryl acetate (Vitamin E)  
500 mg/ 5 ml suspension

9.6.6 **VITAMIN K**

Menadiol sodium phosphate  
10 mg tablet (Water-soluble)

Phytomenadione (Vitamin K₁)  
(See under Konakion brands below)

Phytomenadione 10 mg tablet  
(unlicensed)

Konakion MM ® 10 mg/ ml injection  
(Slow IV or IV infusion in glucose 5 % only) NOT FOR IM injection

Konakion MM Paediatric ®  
2 mg/ 0.2 ml injection  
(May be administered by mouth, IM or IV injection)

**Notes:** When Vitamin K is required, prescribe by brand name to avoid confusion.  
For prevention of Vitamin K deficiency in malabsorption states, such as biliary obstruction or hepatic disease, the water-soluble Vitamin K preparation, menadiol, must be used.  
IM injections are generally inappropriate in patients with bleeding disorders

9.6.7 **Multivitamin preparations**

Multivitamin tablet & capsule  
Abidec ® drops  
Forceval ® capsule  
(Dietitian recommendation only)  
Ketovite tablet & liquid

9.8 **METABOLIC DISORDERS**

9.8.1 **WILSON’S DISEASE**

Penicillamine 125 mg & 250 mg tablets

**Notes:** Patients who are penicillin-allergic, may react rarely to penicillamine
Other metabolic disorders.

**Biotin** 5mg tablet and 5mg/ml injection

nPbR = Indicates a drug excluded from HRG tariff price
10 MUSCULOSKELETAL & JOINT DISEASE

10.1 DRUGS USED IN RHEUMATIC DISEASES & GOUT

10.1.1 NON-STEROIDAL ANTI-INFLAMMATORY DRUGS

**Ibuprofen**
200 mg & 400 mg tablets, 100 mg/5 ml suspension, 800 mg Retard tablets (Rheumatologists only) 5 mg/ml injection (Paediatricians only, for closure of PDA)

**Diclofenac**
25mg & 50 mg e/c tablets, 50 mg dispersible tablets, 12.5 mg, 25 mg, 50 mg & 100 mg suppositories, 100mg SR tablets (Rheumatologists only)

*Note:* E/c tablets should not be used PRN, as this has a delayed onset of action

**Arthrotec ® 50** (Diclofenac 50 mg & Misoprostol 200 micrograms) tablet (Rheumatologists, Gastroenterologists & Geriatricians only)

**Arthrotec ® 75** (Diclofenac 75 mg & Misoprostol 200 micrograms) tablet (Rheumatologists, Gastroenterologists & Geriatricians only)

**Celecoxib**
100 mg & 200 mg capsules (Consultant Rheumatologist, 2nd line within set criteria)

**Flurbiprofen**
50 mg & 100 mg tablets (Ophthalmologists only)

**Indometacin** (Indomethacin) 25 mg & 50 mg capsules, 75 mg m/r capsule, 100 mg suppositories

**Ketoprofen**
50 mg & 100 mg capsules, 100 mg m/r capsule

**Mefenamic acid**
250 mg capsule, 500 mg tablet, (Menorrhagia & Dysmenorrhoea only)

**Meloxicam**
7.5 mg & 15 mg tablets (Rheumatologists only)

**Nabumetone**
500 mg tablet (Rheumatologists only)

**Naproxen**
250 mg tablet & e/c tablet, 25 mg/ml suspension

**Diclofenac** solution for injection 75mg/ml (Theatres only)

**Piroxicam**
10 mg & 20 mg capsules, 20mg (Feldene Melt) tablet

**ASPIRIN & THE SALICYLATES**

**Aspirin**
300 mg tablet & suppository

10.1.2 CORTICOSTEROIDS

10.1.2.1 SYSTEMIC CORTICOSTEROIDS

*See section 6.3 for preparations*

10.1.2.2 LOCAL CORTICOSTEROID INJECTIONS (Specialist use only)

**Hydrocortisone acetate** (Hydrocortistab ®) 25 mg/ml injection

**Methylprednisolone acetate** (Depo-Medrone ®) 40 mg/ml and 80 mg/2 ml injection
Methyprednisolone acetate (Depo-Medrone®) with Lidocaine
40 mg (Methyprednisolone) & 10 mg (Lidocaine)/ml
1ml and 2ml vials

Prednisolone acetate (Deltastab®)
25 mg/ml injection

Triamcinolone acetonide (Adcortyl®) 10mg/ml injection
1ml and 5ml vials
(Intra-articular or Intradermal administration only)

(Kenalog®) 40mg/ml injection
1ml vial and 1ml prefilled syringe
(Intra-articular or Intramuscular administration only)

10.1.3 DRUGS WHICH SUPPRESS THE RHEUMATIC DISEASE PROCESS

Sodium Aurothiomalate (Gold)
10 mg, 20 mg & 50 mg in 0.5 ml injection
(Consultant Rheumatologists only)

Auranofin 3 mg tablet

Penicillamine 125 mg & 250 mg tablets

Notes: Patients who are hypersensitive to penicillin may react rarely to penicillamine

ANTI-MALARIALS

Chloroquine (see section 5.4.1 for preparations)

Hydroxychloroquine sulphate
200 mg tablet

CYTOKINE INHIBITORS

nPbR Adalimumab
(Consultant Rheumatologists only) See below.
Biosimilars:
1st line choice Hyrimoz®
2nd line choice Amgevita®

nPbR Certolizumab Pegol 200mg/ml solution for injection pre-filled syringes

nPbR Etanercept 25 mg injection Enbrel®

nPbR Etanercept Biosimilars 25 mg injection Benepali®

nPbR Golimumab 50mg & 100mg solution for injection pre-filled syringes

nPbR = Indicates a drug excluded from HRG tariff price
**nPbR Infliximab** 100 mg IV infusion  
(Refer to a Senior Principal Pharmacist)

**nPbR Secukinumab** 150mg/ml solution for injection pre-filled pens/syringes  
(Refer to a Senior Principal Pharmacist)

**nPbR Tocilizumab** 80, 200 and 400mg IV infusion  
(Refer to a Senior Principal Pharmacist)

**Notes:** Adalimumab is an alternative for etanercept failures or if patient cannot self-inject. Usual starting dose frequency is every two weeks

**PHOSPHODIESTERASE TYPE-4 INHIBITORS**

**nPbR Apremilast** 10mg, 20mg and 30mg tablets

**PROTEIN KINASE INHIBITORS**

**NPbR Baricitinib** (Olumiant®) 2mg and 4mg tablets

**JANUS KINASE (JAK) INHIBITORS**

**NPbR Tofacitinib** (Xeljanz®) 5mg, 10mg tablets

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**10.1.4 GOUT & CYTOTOXIC-INDUCED HYPERURICAEMIA**

**ACUTE ATTACKS OF GOUT**

**High dose NSAIDs:**  
Aspirin is *not* indicated in gout  
**Colchicine** 500 micrograms tablet

**Notes:** Maximum total dose of colchicine for treatment of gout is 6 mg

**Etoricoxib**  
60 mg, 90mg & 120 mg tablets  
(Consultant Rheumatologists only for acute gouty arthritis and pseudo gout)

**LONG-TERM CONTROL OF GOUT**

1st Choice: **Allopurinol**  
100 mg & 300 mg tablets

2nd Choice: **Febuxostat 80mg** and 120mg tablets

**Benzbromarone** 100mg e.c tablets  
(Consultant Rheumatologists use only)  
*Unlicensed*

**HYPERURICAEMIA ASSOCIATED WITH CYTOTOXIC DRUGS**

**nPbR Rasburicase**  
(Fasturtec®) 1.5mg and 7.5mg vial for intravenous infusion. Store in the refrigerator.

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**10.2 DRUGS USED IN NEUROMUSCULAR DISORDERS**

**10.2.1 DRUGS WHICH ENHANCE NEUROMUSCULAR TRANSMISSION ANTICHOLINESTERASES**

**Neostigmine** 2.5 mg/ ml injection  
**Edrophonium** 10 mg/ ml injection  
**Pyridostigmine** 60 mg tablet

**10.2.2 SKELETAL MUSCLE RELAXANTS**

**Baclofen**  
10 mg tablet, 5 mg/ 5 ml liquid,  
50 micrograms/ ml intrathecal injection  
(*Injection:* Dr. Ather only.)

*Tablets are also for pain management in severe chronic fatigue syndrome grade 4, unlicensed use (Prof. Findley only)*
**Dantrolene** 25 mg & 100 mg capsules

**Diazepam**
(See section 4.1.2 for formulations)

**Tizanidine**
2 mg & 4 mg tablets
((Consultant Neurologists & Rehabilitation Medicine Consultant only. Last line after baclofen and diazepam)

**NOCTURNAL LEG CRAMPS**
**Quinine sulphate**
200 mg & 300 mg tablet

**10.3 DRUGS FOR THE RELIEF OF SOFT-TISSUE INFLAMMATION**

**10.3.1 ENZYMES**
**Hyaluronidase** 1500 units injection

**10.3.2 RUBEFACTION & OTHER TOPICAL ANTIRHEUMATICS**
**Movelat ®** cream & gel
**Balmosa ®** cream
**PR Freeze Spray ®**
**Kaolin Poultice** 100g, 200g

**TOPICAL NSAIDS**

**Notes:** In line with local policy. Restricted to patients with local soft tissue injury or single arthritic joints, in whom oral NSAIDs are not appropriate & paracetamol-based drugs are ineffective

**Ibuprofen** 5% gel
**Ketoprofen** 2.5 % gel

**nPbR = Indicates a drug excluded from HRG tariff price**
## 11 EYE

### 11.3 ANTI-INFECTIVE EYE PREPARATIONS

#### 11.3.1 ANTIBACTERIALS

**Azithromycin (Azyter®)**
15mg/g eye drops

**Cefuroxime sodium (Aprokam)**
50mg powder for solution for injection vials

**Chloramphenicol**
0.5% eye drops and TTA pack
1% eye ointment and TTA pack
0.5% Minims®

**Ciprofloxacin 0.3% eye drops** *(Ophthalmologists)*

**Fusidic acid 1% m/r eye drops and TTA pack (Fucithalmic ®)** *(Ophthalmologists only)*

**Gentamicin 0.3% ear/eye drops & Minims ®**

**Neomycin sulphate 0.5 % eye drops, eye ointment**

**Ofloxacin 0.3% eye drops and TTA pack** *(Ophthalmologists only)*

**Notes:** Ofloxacin is licensed for external

**Polymyxin B sulphate (Polyfax ®)**
Polymyxin B sulphate 10,000 units, bacitracin zinc 500 units/gram eye ointment

**Notes:**
- Ciprofloxacin licensed for corneal ulcers & superficial bacterial infections.
- Licensed for otitis media in patients with tympanostomy tubes & acute otitis externa

### 11.3.3 ANTIVIRALS

**Aciclovir 3% eye ointment and TTA pack**

**Ganciclovir 0.15% eye gel**

**PREPARATIONS FOR THE TREATMENT OF KERATITIS**

**Polyhexamethylene biguanide (PHMB)**
0.02% eye drops

**Natamycin 5% Eye drops**

### 11.4 CORTICOSTEROIDS & OTHER ANTI-INFLAMMATORY PREPARATIONS

#### 11.4.1 CORTICOSTEROIDS

**Betamethasone (Betnesol ®)**
0.1% ear/eye/nose drops
0.1% eye ointment

**Betamethasone 0.1% with neomycin 0.5% (Vista-Methasone N ®) ear/eye/nose drop** *(Maxidex ®)* Dexamethasone 0.1% & Hypromellose 0.5% eye drops and TTA pack

**Notes:**
- Ocular infections, e.g. Conjunctivitis & keratoconjunctivitis, not corneal ulcers
& Minims

(Maxitrol ®) Dexamethasone 0.1%, neomycin 0.35% & polymyxin B sulphate 6000 units/ml eye drops & eye ointment

(Sofradex ®) Dexamethasone 0.05%, framycetin 0.5% & gramicidin 0.005% ear/eye drops and TTA pack

Fluorometholone (FML ®)
Fluorometholone 0.1%, polyvinyl alcohol (Liquifilm®) 1.4% eye drops

Prednisolone sodium phosphate (Predsol ®)
0.5% ear/eye drops & Minims®

Prednisolone acetate (Pred Forte ®)
1% eye drops

(Predsol N ®) Prednisolone 0.5% & neomycin 0.5% ear/eye drops

Rimexolone 1% eye drops (Ophthalmologists only)

Hydrocortisone 3.35mg/ml eye drops, solution in single-dose container (Softacort®)

11.5 MYDRIATICS & CYCLOPLEGICS

Atropine sulphate 0.5% eye drops 1% eye drops, ointment & Minims®

Cyclopentolate
0.5% and 1% eye drops 0.5% and 1% Minims®

Homatropine 1% & 2% eye drops

Tropicamide 0.5% & 1% eye drops & Minims®

SYMPATHOMIMETICS

Phenylephrine
2.5% and 10% Minims®

Phenylephrine hydrochloride 5.4mg & Tropicamide 280 micrograms (Mydriasure® ophthalmic insert)

11.6 DRUGS FOR THE TREATMENT OF GLAUCOMA

1st LINE EYE DROPS
a. * Lumigan ® (Bimatoprost 100 & 300 micrograms/ml)

b. *Xalacom ® (Latanoprost & Timolol)

c. * Timolol LA ® (Timolol) 0.25%, 0.5%

2nd LINE EYE DROPS
a. * Xalatan ® (Latanoprost) 0.005%

b. * Xalacom ® (Latanoprostone & Timolol)

c. * Cosopt ® (Dorzolamide 2 % & Timolol 0.5%)

d. * Trusopt ® (Dorzolamide) 2%

e. * Alphagan ® (Brimonidine) 0.2%

f. *Combigan ® (Brimonidine 0.2% & timolol 0.5%)

f. *Pilocarpine ® 1%, 2%, 4%

ORAL TREATMENTS

* Diamox ® & * Diamox SR ® (Acetazolamide) 250 mg tablet & SR capsule

nPbR = Indicates a drug excluded from HRG tariff price
*(Ophthalmologists only)*

**3rd LINE EYE DROPS**

Travatan® (Travaprost 40 micrograms/ml) 2.5ml eye drops

Azopt® (Brinzolamide) 10mg/ml eye drops

Azarga® (Brinzolamide 10mg, timolol 5mg/ml)

**BETA-BLOCKERS**

Betaxolol (Betoptic ®) 0.25% m/r & 0.5% eye drops

Levobunolol (Betagan ®) and 0.5% polyvinyl alcohol (Liquifilm®) eye drops and Minims

**Note:** Use dorzolamide drops (Trusopt ®) where beta blockers are contra-indicated or not effective alone

**11.7  LOCAL ANAESTHETICS**

Oxybuprocaine 0.4% Minims ®

Proxymetacaine 0.5% Minims ®

Proxymetacaine 0.5% & Fluorescein 0.25% Minims ®

Tetracaine hydrochloride (Amethocaine hydrochloride) 0.5% & 1% Minims ®

**11.8  MISCELLANEOUS OPHTHALMIC PREPARATIONS**

**11.8.1  TEAR DEFICIENCY, OCULAR LUBRICANTS & ASTRINGENTS**

Hypromellose 0.3%, 0.5% eye drops, 0.3% preservative free eye drops (Unlicensed)
2% eye drops (Unlicensed)

Carbomers (Viscotears ®) 0.2% liquid gel & Preservative-free dose units (Ophthalmologists only)

Carmellose Sodium 1% eye drops in dose units (Celluvisc®)

0.5% eye drops + glycerol (Optive®)

Hydroxypropyl guar, Polyethylene glycol 400 propylene glycol 0.3% (Systane®) 10ml bottle and 0.8ml minims

Liquid paraffin (Lacri-Lube ®) eye ointment

Polyvinyl alcohol (Liquifilm®) eye drops

Potassium ascorbate 10% eye drops (unlicensed) RUM drug

Sodium chloride 0.9% eye drops (Minims ®)

Balanced salt solution

**11.8.2  OCULAR DIAGNOSTIC & PERI-OPERATIVE PREPARATIONS & PHOTODYNAMIC TREATMENT**

**OCULAR DIAGNOSTIC PREPARATIONS**

Fluorescein sodium 1% & 2% Minims ® & 1 mg strips

**OCULAR PERI-OPERATIVE DRUGS**

Acetylcholine chloride (Miochol-E ®) 1% Intra-ocular irrigation (Ophthalmologists only)

Apraclonidine (Iopidine ®) 0.5% & 1% ophthalmic solution (Ophthalmologists only)

Diclofenac sodium 0.1% unit dose eye drops (single use) (Ophthalmologists only)

Ketorolac 0.5% eye drops (Ophthalmologists only)

Nepafenac 1mg/ml eye drops (for reducing the risk of postoperative macular oedema in diabetic patients undergoing cataract surgery)

**OPHTHALMIC VISCOELASTIC DEVICE**

Healon® Sodium Hyaluronate 1%
Healon 5® Sodium Hyaluronate 2.3%
Healon GV® Sodium Hyaluronate 1.4%
(Ophthalmologists only)

SUBFOVEAL CHOROIDAL NEOVASCULARISATION

Ranibizumab (Lucentis®)
Aflibercept (Eylea®)
Bevacizumab (Avastin®) (unlicensed)
(Cons. Ophthalmologist only for treatment of age-related macular degeneration in patients that meet NICE criteria)

Indocyanine Green (ICG) injection
(Approved for Consultant Ophthalmologist’s use for choroid related diagnosis and Vascular Neurosurgeons for Intracranial Aneurysms)

nPbR = Indicates a drug excluded from HRG tariff price
12 EAR, NOSE & OROPHARYNX

12.1 DRUGS ACTING ON THE EAR

12.1.1 OTITIS EXTERNA

ANTI-INFLAMMATORY PREPARATION

Betamethasone (Betnesol ®)
0.1% ear/ eye/ nose drops

Prednisolone (Predsol ®)
0.5% ear drops

ANTI-INFLAMMATORY PREPARATION WITH ANTIBACTERIAL

Betamethasone 0.1% & neomycin
0.5% ear/ eye/ nose drops
(Vista-Methasone N ®)

Dexamethasone 0.05%, framycetin
0.5% & gramicidin 0.005% ear/ eye drops
(Sofradex ®)

Dexamethasone 0.1% & neomycin 3250 units/ml ear spray (Otomize ®)

Flumetasone 0.02% & clioquinol 1% ear drops (Locorten-Vioform ®)

Hydrocortisone 1% & gentamicin 0.3% ear drops (Gentisone HC ®)

Hydrocortisone 1%, neomycin 3400 units & polymyxin B 10000 units/ ml
(Otosporin ®)

Prednisolone 0.5% & neomycin 0.5%
(Predsol-N ®)

ANTI-INFECTIVE PREPARATIONS

Chloramphenicol 5%
Ear drops

Clioquinol (Locorten-Vioform ®)
Ear drops

Clotrimazole (Canesten)
1% solution
(Sofradex ®)

Dexamethasone 0.05%, framycetin 0.5%
& gramicidin 0.005% ear/ eye drops

Gentamicin (Genticin) 0.3% eye/ ear drops

(Gentisone HC ®) Gentamicin 0.3 % & Hydrocortisone 1 % ear drops

Neomycin
(Predsol-N ®) ear/ eye drops,
(Otosporin ®) ear drops,
(Vista-Methasone N ®) ear/ eye/ nose drops,
(Otomize ®) ear spray

12.1.2 OTITIS MEDIA

Boric acid powder – not from pharmacy
(for chronic discharge from ear secondary to chronic otitis media,
ENT Surgeons only, unlicensed)

12.1.3 REMOVAL OF EAR WAX

Sodium bicarbonate BPC ear drops

Cerumol ® ear drops- unsuitable for patients with nut allergy
(2nd line after sodium bicarbonate ear drops have failed. Contains arachis
(peanut) oil)

12.2 DRUGS ACTING ON THE NOSE

12.2.1 DRUGS USED IN NASAL ALLERGY

Beclolemasone dipropionate
50 mcg/ dose nasal spray
(First line)

Betamethasone (Betnesol ®)
0.1 % ear/ eye/ nose drops

Fluticasone furoate (Avamys®)
27.5mcg/dose/dose nasal spray

Mometasone (Nasonex ®)
50 mcg/ dose nasal spray

Triamcinolone acetonide
BHRUT NHS Trust Drug Formulary, Updated October 2019

**DRUGS USED FOR NASAL CRUSTING**

**(Nasacort ®) 55 mcg/ dose nasal spray**

**Dexamethasone isonicotinate**
(Dexa-Rhinaspray Duo ®)
20mcg/ dose nasal spray

**Sodium cromoglicate**
(Rynacrom ®) 4 % nasal spray

**DRUGS ACTING ON THE OROPHARYNX**

12.3 DRUGS FOR ORAL ULCERATION & INFLAMMATION

Benzydamine hydrochloride 0.15%
Difflam ® oral rinse
Difflam ® spray (Paediatrics only)

**CORTICOSTEROIDS**

Hydrocortisone
2.5 mg pellets

**SALICYLATES**

Choline Salicylate Dental Gel, BP
(Bonjela ®) Not for children <16 years

12.3.4 MOUTHWASHES, GARGLES & DENTIFRICES

Chlorhexidine gluconate
0.2% mouthwash (From general stores, not pharmacy)
1% dental gel

Hydrogen Peroxide Solution 3% (10 vol)

**EPISTAXIS**

Chlorhexidine 0.1% & Neomycin 0.5%
cream (Naseptin ®)- Contains Arachis (Peanut Oil.) Unsuitable for nut allergy sufferers

Bismuth Subnitrate & Iodoform Paste

**NASAL STAPHYLOCOCCI**

Mupirocin 2% (Bactroban Nasal ®) ointment
As per MRSA Policy (May 2007)
If MRSA positive:

1st Choice: Apply to both nostrils three times daily for one week and re-swab 48 hours post-treatment.
Negative screen result- stop treatment
Positive screen result- continues treatment until 7th day then rescreen 48 hours post-treatment.

Alternative: Polyfax (Polymixin Sulphate and Bacitracin) if Mupiricin (Bactroban) resistant.

**Note:** 2nd line treatment of nasal crusting in patients with vasculitis after saline douche in combination with steroid inhalers

12.2 TOPICAL NASAL DECONGESTANTS

Ephedrine hydrochloride
0.5% & 1% drops

Sodium chloride 0.9 % drops

Xylometazoline
0.05% paediatric drops, 0.1% drops & spray (adult)

Ipratropium bromide
(Rinatec ®) 0.03% nasal spray

**NASAL STAPHYLOCOCCI**

Mupirocin 2% (Bactroban Nasal ®) ointment
As per MRSA Policy (May 2007)
If MRSA positive:

1st Choice: Apply to both nostrils three times daily for one week and re-swab 48 hours post-treatment.
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Alternative: Polyfax (Polymixin Sulphate and Bacitracin) if Mupiricin (Bactroban) resistant.

**EPISTAXIS**

Chlorhexidine 0.1% & Neomycin 0.5%
cream (Naseptin ®)- Contains Arachis (Peanut Oil.) Unsuitable for nut allergy sufferers

Bismuth Subnitrate & Iodoform Paste

12.3 DRUGS ACTING ON THE OROPHARYNX

12.3.1 DRUGS FOR ORAL ULCERATION & INFLAMMATION

Benzydamine hydrochloride 0.15%
Difflam ® oral rinse
Difflam ® spray (Paediatrics only)

Carmellose (Orabase ®) paste

CORTICOSTEROIDS

Hydrocortisone
2.5 mg pellets

SALICYLATES

Choline Salicylate Dental Gel, BP
(Bonjela ®) Not for children <16 years

12.3.2 OROPHARYNGEAL ANTI-INFECTIVE DRUGS

Amphotericin (Fungilin ®)
10 mg lozenges

Miconazole (Daktarin ®)
20mg/g oral gel

Nystatin
100,000 units/ml oral suspension

12.3.4 MOUTHWASHES, GARGLES & DENTIFRICES

Chlorhexidine gluconate
0.2% mouthwash (From general stores, not pharmacy)
1% dental gel

Hydrogen Peroxide Solution 3% (10 vol)

nPbR = Indicates a drug excluded from HRG tariff price
Mouthwash effervescent tablets

12.3.5 TREATMENT OF DRY MOUTH

Artificial saliva oral spray

Treatment of bony cavities post removal of odontogenic keratocyst.

Carnoy’s solution (unlicensed product)
(For use by Oral and Maxillofacial Consultants only)
13 SKIN

13.2 EMOLLIENT & BARRIER PREPARATIONS

Note: please check availability of pack sizes with the pharmacy

Aquamax™ cream
Cetraben ® cream
Hydromol ® ointment
Emulsifying ointment, BP
Liquid & white soft paraffin 50%
Unguentum M ® cream
White soft paraffin
Yellow soft paraffin

Urea 10 % & lactic acid 5 % cream (Calmurid ®)

Note: Aqueous cream and emulsifying ointment are useful as soap substitutes

13.2.1.1 EMOLLIENT BATH ADDITIVES

Balneum Plus ® bath treatment
Emulsiderm ®
Dermol 200 ® shower emollient (Dermatologists only)
Dermol 600 ® bath emollient (Dermatologists only)

Dermol 500® Lotion (Occupational Health use only)

Oilatum ® emollient
Baby bath

13.2.2 BARRIER PREPARATIONS

Zinc & castor oil ointment, BP
Metanium ® ointment
Sudocrem ® cream

Conotrame ® cream
Drapolene ® cream
Sprilon ® spray

13.3 TOPICAL LOCAL ANAESTHETICS & ANTIPRURITICS

Calamine lotion (from general stores)
Crotamiton 10% cream (Eurax ®)
Doxepin 5% cream (Dermatologists only)

13.4 TOPICAL CORTICOSTEROIDS

Note: Relative potencies of topical corticosteroids:
Mild: hydrocortisone 0.1-2.5%
Moderate: clobetasone butyrate 0.05%
Potent: betamethasone valerate 0.1% & hydrocortisone butyrate
Very potent: clobetasol propionate 0.05%

Hydrocortisone 0.5%, 1% & 2.5% cream & ointment

HYDROCORTISONE COMPOUND PREPARATIONS

Alphaderm ® (hydrocortisone 1% & urea 10%) cream
Calmurid HC ® (hydrocortisone 1%, urea 10% & lactic acid 5%) cream
Canesten HC ® (hydrocortisone 1% & clotrimazole 1%) cream
Daktacort® (hydrocortisone 1% & micnazole 2%) cream-store in fridge
ointment-store at room temperature
Eurax-Hydrocortisone ®
(hydrocortisone 0.25% & crotamiton 10%) cream

Fucidin H ® (hydrocortisone 1% & fusidic acid 2%) cream & ointment

Nystaform-HC ® (hydrocortisone 0.5%, nystatin 100,000 units/g & chlorhexidine hydrochloride 1%) cream & ointment

Timodine ® (hydrocortisone 0.5%, nystatin 100,000 units/g, benzalkonium chloride 0.2% & dimethicone ‘350’ 10%) cream

Vioform-Hydrocortisone ®
(hydrocortisone 1% & clioquinol 3%) cream & ointment

Notes: Corticosteroids should be applied once or twice daily & should be used for not more than 5-7 days, unless advised. The more potent the preparation the more sparingly it should be applied

HYDROCORTISONE BUTYRATE 0.1 %
Locoid ® lipocream, ointment & scalp application (Dermatologists only)
Locoid C ® (with chlorquinaldol 3 %) cream & ointment (Dermatologists only)

ALCLOMETASONE DIPROPRIONATE
Modrasone ® (alclometasone dipropionate 0.05 %) cream & ointment (Dermatologists only)

BETAMETHASONE ESTERS
Betnovate ®
(betamethasone valerate 0.1%) cream, ointment & scalp application
Betnovate-RD ® (betamethasone valerate 0.025%) cream & ointment
Betnovate-C ® (betamethasone valerate 0.1% & clioquinol 3%) cream & ointment
Diprosalic ® (betamethasone dipropionate 0.05 %)
with salicylic acid 2 % scalp application

Lotriderm ® (betamethasone dipropionate 0.05% & clotrimazole 1%) cream (Dermatologists only)
FuciBET ® (betamethasone valerate 0.1% & fusidic acid 2%) cream (Dermatologists only)

CLOBETASONE PROPIONATE 0.05%
Dermovate ® cream, ointment & scalp application
Etrivex® shampoo (for psoriasis)

CLOBETASONE BUTYRATE 0.05%
Eumovate ® cream & ointment
Trimovate ® (with oxytetracycline 3% & nystatin 100,000 units/g) cream (Dermatologists only)

Note: Trimovate ® stains clothing

FLUDROXYCORTIDE
(FLURANDRENOLONE)
Haelan ® tape (Dermatologists only)

FLUOCINOLONE ACETONIDE
Synalar ® 0.025% cream & gel

FLUOCINONIDE 0.05%
Metosyn ® cream & ointment

MOMETASONE FUROATE
Elocon ® 0.1% cream & ointment (Dermatologists only)

TRIAMCINOLONE ACETONIDE 0.1%
Aureocort ® (with chlortetracycline 3%) Ointment (Dermatologists only)
Tri-Adcortyl ® (with gramicidin 0.025%, neomycin 0.25% & nystatin 100,000 units/g) ointment & cream

nPbR = Indicates a drug excluded from HRG tariff price
**Notes:** The use of topical antimicrobial agents is to be discouraged as this can cause sensitisation & contribute towards bacterial resistance

### 13.5 PREPARATIONS FOR ECZEMA AND PSORIASIS

#### 13.5.1 PREPARATIONS FOR ECZEMA

**Glycerin of Ichthammol liquid**  
*(Unlicensed)*

Oral retinoid for eczema

**Alitretinoin** *(Toctino®)* 10mg & 30mg capsules  
*(Dermatologists only as per NICE, it is recommended for the treatment of severe chronic hand eczema that has not responded to potent topical corticosteroids TA 177)*

#### 13.5.2 PREPARATIONS FOR PSORIASIS

**5-Methoxypsoralen**  
20 mg tablet- not in the BNF  
*(Dermatologists only)*

**8-Methoxypsoralen**  
10 mg tablet, 0.15 % emulsion (paint) & 1.2 % bath lotion- not in the BNF

**Notes:** Methoxypsoralen preparations are unlicensed preparations, which are in the exempt list of the Trust Unlicensed Medicines Policy. They are treated as named patient items. *(For use with PUVA by Dermatologists only)*

**Calcitriol** 3micrograms/g ointment  
**Silkis®** *(Dermatologists only)*

**Dovobet®** ointment and gel  
(betamethasone as dipropionate 0.05% and Calcipotriol 50micrograms/g)

**Enstilar®** cutaneous foam  
(betamethasone dipropionate 500micrograms/g and Calcipotriol 50micrograms/g)

**TAZAROTENE**  
**Tazarotene** 0.05% gel  
*(Dermatologists only, 2nd line)*

**COAL TAR**  
**Sebco®** scalp ointment *(Compound Coconut ointment)*  
**Polytar Emollient®** bath additive

**Notes:** Polytar Emollient® contains arachis (peanut) oil

**Alphosyl HC®**  
(with hydrocortisone 0.5%) cream

**DITHRANOL**  
**Dithranol** *(Dithrocream®)*  
0.1%, 0.25% & 2% cream  
*(Dermatologists only)*

**ACITRETIN**  
**Acitretin** *(Neotigason®)*  
10 mg & 25 mg capsules  
*(Hospital only medicine, Dermatologists only)*

#### 13.5.3 DRUGS AFFECTING THE IMMUNE RESPONSE

**Ciclosporin** *(Cyclosporin)* *(Neoral®)*  
25 mg, 50 mg & 100 mg capsules  
*(Dermatologists only)*

**Methotrexate** 2.5 mg tablets  
*(Dermatologists only)*

**Warning:** Methotrexate is given once weekly for this indication. Follow Trust Methotrexate policy

**Tacrolimus** *(Protopic)*  
0.03% & 0.1% ointment  
*(Dermatologists only)*

nPbR Adalimumab

nPbR Brodalumab

nPbR Dupilumab

nPbR Etanercept
nPbR Guselkumab
nPbR Infliximab
nPbR Ixekizumab (Rheumatology & Dermatology use)
PbR Tildrakizumab
nPbR Ustekinumab 90mg/ml injection 0.5ml (45mg) vial

13.6 ACNE & ROSacea

Azelaic acid 25% cream (Consultant Dermatologist only for melasma. Unlicensed indication)
Benzoyl peroxide 2.5% & 5% gel
Clindamycin phosphate (Dalacin T ®) 1% lotion
Clindamycin 1% & benzoyl peroxide 5% (Duac ®) topical gel
Zineryt ® (erythromycin 40 mg/ml & zinc acetate 12 mg/ml) topical lotion
Adapaline 0.1% gel (Differin®)
Adapaline 0.1% & benzyl peroxide 2.5% gel (Epiduo®) (Dermatologists only)
Tretinoin (Retin-A ®) 0.025% cream & 0.01% gel (Dermatologists only)

13.6.2 ORAL PREPARATIONS FOR ACNE

Cyproterone 2 mg & ethinyloestradiol 35 micrograms tablets (Dianette ®) (Dermatologists only)

Isotretinoin 5 mg & 20 mg capsules (Roaccutane ®) (Hospital only medicine) (Dermatologists only)

13.7 PREPARATIONS FOR WARTS & CALLUSES

SALICYLIC ACID
Cuplex ® 11% gel
Occlusal ® 26% application
Duofilm ® 16.7% paint
Verrugon ® 50% ointment (GUM clinic only)

FORMALDEHYDE
Notes: Formaldehyde foot wash is extemporaneously prepared in pharmacy

SILVER NITRATE 75% sticks

ANOGENITAL WARTS
Imiquimod (Aldara ®) 5% cream (GUM clinic for genital & perianal warts when all other drug treatments have failed. Dermatologists for last line treatment for anogenital warts only)

PODOPHYLLUM
Condylene ® 0.5% solution TTA pack available (GUM only)
Warticon ® 0.15% cream TTA pack available (GUM only)
Warticon ® 0.5% solution for men (with mirror for women- Warticon Fem®) (GUM only)

13.8 SUNSCREENS & CAMOUFLAGERS

13.8.1 SUNSCREEN PREPARATIONS
RoC Total Sunblock ®
Ingenol mebutate (Picato®) 150 micrograms/g & 500 micrograms/g gel

CAMOUFLAGERS

Hydroquinone 2% and 5% cream
Unlicensed product and short expiry date (Dermatologists only)

13.9 SHAMPOOS & OTHER PREPARATIONS FOR SCALP

Selsun® shampoo
Capasal® shampoo
Polytar® liquid

Notes: Polytar® contains arachis (peanut) oil

Nizoral® (Ketoconazole) shampoo (Dermatologists only)

13.10 ANTI-INFECTIVE SKIN PREPARATIONS

13.10.1 ANTIBACTERIAL PREPARATIONS

Fusidic acid (Fucidin®) 2% cream & ointment (Dermatologists or Microbiologists only)

Metronidazole (Metrogel® 0.75% gel (For acne rosacea, Dermatologists only)
(Metrotop® 0.8% gel (Malodorous tumours & skin ulcers)

Mupirocin (Bactroban®) 2% ointment

Notes: Bactroban ointment contains macrogol. Manufacturers advise caution in renal impairment, may sting

Polymyxin B sulphate (Polyfax®) ointment (Microbiologists only)

Silver sulfadiazine (Flamazine®) 1% cream

13.10.2 ANTIFUNGAL PREPARATIONS

Clotrimazole 1%

Ketoconazole 2% cream (Dermatologists only)
Miconazole (Daktarin®) 2% cream

Terbinafine 1% cream (Dermatologists only)

13.10.3 ANTIVIRAL PREPARATIONS

Aciclovir 5% cream

Notes: Aciclovir cream should be used five times a day at the first sign of any symptoms for 5 to 10 days. It is not very effective once vesicles have appeared. Confirm whether systemic treatment is more appropriate

13.10.4 PARASITICIDAL PREPARATIONS

For treatment of scabies - refer to infection control policy

1st Choice: Malathion (Derbac-M®) 0.5% liquid (in aqueous base) (First line)

Alternative: Permethrin (Lyclear®) 1% cream rinse & 5% dermal cream (Dermatologists & Microbiologists only)

Alternative: Ivermectin 3 mg tablet (Unlicensed medicine, named patient. Dermatologists & Microbiologists for resistant scabies only)

Notes: There is a Regional policy for the treatment and prevention of head lice. Compliance with manufacturers' instructions for these preparations is especially important

13.10.5 PREPARATIONS FOR MINOR CUTS & ABRASIONS

Proflavine cream, BPC

Magnesium sulphate paste, BP

Flexible Collodion, BP-
Contraindications: allergy to colophony in elastic adhesive plaster and tape
13.11 SKIN CLEANSERS & ANTISEPTICS
13.11.1 ALCOHOLS & SALINE
Sodium Chloride 0.9 %
25 ml sterile sachets

13.11.2 CHLORHEXIDINE SALTS
Hydrex ®

13.11.4 IODINE COMPOUNDS
Videne ®

13.11.5 PHENOLICS (TRICLOSAN)
Aquasept ® 2 % skin cleanser
Octenisan ®

13.11.6 ASTRINGENTS, OXIDISERS & DYES
Hydrogen peroxide
3 % w/ v (10 vols) solution
Hydrogen peroxide 1% cream
Potassium permanganate
400 mg solution tablets

*(Dermatology Use Only)*

13.11.7 DESLOUGHING AGENTS
Sterile Larvae (maggots) therapy

13.12 ANTIPERSPIRANTS
Aluminium chloride hexahydrate
(Driclor ®) 20 % application

nPbR = Indicates a drug excluded from HRG tariff price
13.13 WOUND MANAGEMENT PRODUCTS

Notes: In line with local policy. Products are sourced differently across the sites. Other dressings may be available from clinical supplies (Havering) or central stores (KGH).

13.13.1 ALGINATE DRESSINGS

Kaltostat ® dressing
Kaltostat ® wound packing
Sorbsan ®
Sorbsan ® ribbon
Sorbsan ® packing

13.13.2 FOAM DRESSINGS

Allevyn ®
adhesive, cavity, sacral, thin & heel
Lyfoam ® dressing
Tielle ® dressing

Cavi-Care ®

13.13.3 HYDROGEL DRESSINGS

Granugel ®
Intrasite ® gel

13.13.4 HYDROCOLLOID DRESSING

Granuflex ® bordered dressing & paste

13.13.6 LOW ADHERENCE DRESSING & WOUND CONTACT MATERIALS

Povidone-iodine fabric dressing

13.13.7 ODOR ADSORBENT DRESSING

Denidor ® (Charcoal) dressing

13.13.9 MEDICATED BANDAGES

Zipzoc ® tubular bandage
(Dermatologists only)

13.13.10 OTHER WOUND MANAGEMENT PRODUCTS

Opsite ® plastic spray
Bactigras ® (chlorhexidine acetate tulle)

13.13.11 THEATRE PRODUCTS

Palacos LV with gentamicin ®
Palacos R with gentamicin ®
Collatamp G ®
Geliperm ® wet dressing
Haemostatic Adsorbant Gauze
Horsley’s Bone wax
(Unlicensed)

13.14 TOPICAL CIRCULATORY PREPARATIONS

Hirudoid ®
0.3 % cream
14 IMMUNOLOGICAL PRODUCTS & VACCINES

14.4 VACCINES & ANTISERA

**Notes:** For up to date vaccine information, please refer to www.dh.gov.uk/ “Green Book” (search for immunisation)

**BCG (Bacillus Calmette-Guerin)**
Vaccine (for chest clinic and occ. Health use only)

**Notes:** It is essential to use the supplied diluent to reconstitute

**Diphtheria, tetanus, pertussis (acellular) and inactivated polio**
(DtaP/IPV) vaccine (Infanrix IPV ®)

**Notes:** These are interchangeable in the childhood immunisation scheme. Use for children aged 3 to 10.

**Diphtheria, tetanus and inactivated polio**

**Haemophilus influenzae type B (Hib)**
Vaccine

**Haemophilus influenzae type b conjugate vaccine and Meningoccocal Group C Conjugate vaccine**
(Menitorix®)

**Hepatitis A** vaccine (Havrix Monodose® for Occ. Health use only)

**Hepatitis A and B** vaccine

**Hepatitis B** vaccine (Engerix B®)

**Hepatitis B paediatric** vaccine

**Influenza** vaccine

**Measles, Mumps & Rubella (MMR)**
Vaccine (LIVE) MMRvaxPro® Priorix®

**Meningitis C conjugate** vaccine
Meningitec®, Menjugate Kit®, NeisVac C®

**Meningococcal groups A CWY vaccine**

**Pneumococcal polysaccharide** vaccine
(Pneumovax II ® vaccine)

**Notes:** Pneumovax II ® is for children over 2 years of age

**Pneumococcal polysaccharide conjugated vaccine**
(Prevenar ®)

**Notes:** Prevenar ® is for children under 2 years of age

**Typhoid** vaccine

**Varicella-zoster** vaccine (Varilix®▼, Varivax®▼

**Anti-tetanus Immunoglobulin**
(available from Public Health Laboratory)

**Anti-hepatitis Immunoglobulin**
(Available from Public Health Laboratory)

**Anti-D Immunoglobulin** 500 & 1500 units injection

**DIAGNOSTIC TESTS**
Tuberculin PPD 2TU injection

nPbR = Indicates a drug excluded from HRG tariff price
There is no licensed preparation currently available. Contact Chest Clinic for advice. For chest clinic and occ. Health use only

**Notes:** * used for Mantoux test

### 14.5 IMMUNOGLOBULINS

nPbR Normal **Immunoglobulin**

For intravenous use

*(Please refer to pharmacy for brands & strengths stocked)*

**Notes:** Please refer to BHRUT Demand management Plan for Immunoglobulin Use (link)

Immunoglobulin request form and Immunoglobulin Follow Up form available on the intranet (link)

Use must be approved by Panel before supply from Pharmacy.

**Specific Immunoglobulins**

Consult Microbiologist to arrange if indicated.

Tetanus Immunoglobulin (Antitetanus Immunoglobulin Injection)

Hepatitis B immunoglobulin
15 ANAESTHESIA

15.1 GENERAL ANAESTHESIA

15.1.1 INTRAVENOUS ANAESTHETICS

Thiopental sodium 500 mg injection
Etomidate 20 mg/10 ml injection
Ketamine injection
10 mg/ml, 100 mg/ml, 50 mg/ml
Propofol injection
10mg/ml, 500 mg/50ml, 200mg/20ml
Propofol 1% injection (Diprifusor ® TCI System)
(for endarterectomies anaesthetised by Dr. Igielman & Dr. Khalil only)

15.1.2 INHALATIONAL ANAESTHETICS

Isoflurane
Sevoflurane
Enflurane
Halothane

15.1.3 ANTIMUSCARINIC DRUGS

Atropine sulphate
600 micrograms/ml injection
Glycopyrronium bromide
200 micrograms/ml & 600 micrograms/3ml injection
Hyoscine hydrobromide
400 micrograms/ml injection

15.1.4 SEDATIVE & ANALGESIC PERI-OPERATIVE DRUGS

15.1.4.1 ANXIOLYTTICS & NEUROLEPTICS

Diazepam
(See section 4.1.2 for preparations)
Lorazepam 4 mg/ml injection
Midazolam
10 mg/2ml & 10 mg/5ml injection

Clonidine
150 micrograms/ml injection
(Anaesthetists for inadequate sedation in ITU, with high dose midazolam and opioids, unlicensed use)

15.1.4.2 NON-OPIOID ANALGESIC

Diclofenac
12.5 mg, 25 mg, 50 mg & 100 mg suppositories,
75 mg/ 2ml injection (Maximum treatment for 2 days)

15.1.4.3 OPIOID ANALGESICS

Alfentanil (CD)
1 mg/ 2 ml, 5 mg/ ml & 500 micrograms/ ml injection
Fentanyl (CD)
100 micrograms/ 2 ml & 500 micrograms/ 10 ml injection
Remifentanil (CD)
1 mg & 2 mg injection
(For Neurosurgery in accordance with protocol)
Morphine sulphate (CD)
2 mg/ ml injection (50 ml vials for PCA)

15.1.5 MUSCLE RELAXANTS

NON-DEPOLARISING MUSCLE RELAXANTS

Atracurium
25mg/ 2.5 ml & 50mg/ 5 ml injection
Pancuronium 4mg/ 2 ml injection
Rocuronium 50mg/ 5 ml injection
(Theatres only, Critical areas and A&E)
Vecuronium 10 mg injection

DEPOLARISING MUSCLE RELAXANTS

Suxamethonium 50 mg/ml injection

nPbR = Indicates a drug excluded from HRG tariff price
15.1.6 DRUGS FOR REVERSAL OF NEUROMUSCULAR BLOCKADE

**Neostigmine** 2.5 mg/ml injection

**Robinul-Neostigmine ®** 1 ml injection
(Neostigmine 2.5 mg & glycopyrronium 500 micrograms)

Other drugs for reversal of neuromuscular blockade

**Sugammadex** 100mg/ml injection

15.1.7 ANTAGONISTS FOR CENTRAL & RESPIRATORY DEPRESSION

**Doxapram**
2mg/ ml infusion, 100 mg/5ml injection,

**Notes:** Only the injection is licensed for post-operative respiratory depression

**Flumazenil**
500 micrograms/5ml injection

**Naloxone**
400 micrograms/ml injection, 40 micrograms/ 2ml injection
*(Check availability of neonatal, 40 micrograms/ 2ml injection with the Pharmacy)*

15.1.8 DRUGS FOR MALIGNANT HYPERThERMIA

**Dantrolene** 20 mg injection

15.2 LOCAL ANAESTHESIA

**Cocaine hydrochloride** 10 % solution *(Unlicensed)*

**Lidocaine (Lignocaine)**
0.5 % injection (20 ml)
1 % injection (2 ml, 5 ml, 10 ml & 20 ml)
2 % injection (2 ml, 5 ml & 20 ml)
4% topical solution,
4% jet spray *(for anaesthesia of vocal cords for patients undergoing ENT/Maxillo-facial surgery)*,
10% spray,
2% gel

700mg (5%) medicated plaster (Palliative care use only)

*(Please check sizes stocked on hospital site)*

**Lidocaine 4%, Adrenaline 0.1%, Tetracaine 0.5% (LAT) gel (unlicensed)*

**Lidocaine 1 % (10 mg/ ml) with adrenaline 1 in 200,000**
(5 micrograms/ ml) *(Xylocaine ®)*
20 ml injection

**Lidocaine 2 % (20 mg/ ml) with adrenaline 1 in 200,000**
(5 micrograms/ ml) *(Xylocaine ®)*
20 ml injection

**Lidocaine 5 % with phenylephrine 0.5 % solution** *(ENT only)*

**Lidocaine with prilocaine** *(Emla ®)*

**Bupivacaine**
0.1 % infusion (100 ml)
0.25 % & 0.5 % injection (10 ml)
*(Marcain ®) 0.25 % & 0.5 % injection (Marcain Heavy ®) 0.5 % injection*

**Bupivacaine with adrenaline**

**Bupivacaine 0.125 % with fentanyl 2 micrograms/ml** *(Unlicensed)*

**Levobupivacaine**

Injections:
2.5mg/ml, 5mg/ml & 7.5mg/ml (10ml amp)

Epidural infusion:
1.25mg/ml (100ml and 200ml)

*Unlicensed formulations:*
Levobupivacaine 0.1% with Fentanyl
2mcg in 1 ml (500ml infusion)
Levobupivacaine 0.1% with Fentanyl
4mcg in 1 ml (500ml infusion)
Levobupivacaine 0.1% with Fentanyl
5mcg in 1 ml (200ml infusion)

Prilocaine 1 % injection
Prilocaine 30mg/ml with octapressin
(felypressin) 0.03 units/ml injection
Mepivacaine 3 % injection
(Chiroprody)
Tetracaine (Amethocaine) 4 %
Ametop ® gel

Ethyl chloride BP spray

ABLATIVE NERVE BLOCK
(Unlicensed products)

6 % phenol in water
5 % phenol in glycerin
6 % phenol, Niopam 300 40 %, in sodium
chloride 0.9 %

BARKING, HAVERING & REDBRIDGE HOSPITALS NHS TRUST

POLICY AND GUIDELINES FOR PRESCRIBING FOR SELF, FAMILY,
COLLEAGUES AND FRIENDS

Under normal circumstances, prescribers should not prescribe for themselves or family,
but it is recognised that there are occasions when it may be necessary to prescribe for
yourself or immediate family in order to remain at work. In which case the following
guidance should be followed:

1. EMERGENCY PRESCRIBING FOR SELF AND FAMILY

1.1 GMC Standard (April 1998)
Doctors should not treat themselves or their families

It is good practice for doctors and their families to be registered with a general
practitioner outside the family, who takes responsibility for their health care.

This gives the doctor and family members ready access to objective advice and
avoid the conflicts of interest that can arise when doctors treat themselves or those
close to them.

From time to time, sad cases occur where a doctor’s loss of objectivity in treating a
family member results in misconduct; or where self-medication – for example, with
Controlled Drugs – leads to drug misuse.

It is hard to lay down an absolute rule: it makes sense for a doctor to treat minor
ailments, or take emergency action where necessary.

But doctors should avoid treating themselves or close family members wherever
possible. This is a matter of common sense as well as good medical practice.

1.2 Prescribing should only be for immediate family, i.e. self, spouse, children, directly
from the hospital pharmacy and not on FP10 (HP) forms.

nPbR = Indicates a drug excluded from HRG tariff price
1.3 Prescribing should normally be for acute illness only, not regular medication e.g. infections, acute pain, headache, hayfever etc. In emergency other medication e.g. insulin, inhalers may be prescribed, but this should not be a regular occurrence.

1.4 Prescribing should be short-term i.e. a maximum of 7 days treatment.

1.5 Prescribing should follow Barking, Havering & Redbridge Trust Formulary guidelines i.e. non-Formulary medicines will not be ordered for personal use by medical staff.

1.6 Controlled drugs may not be prescribed.

1.7 Drugs with potential for misuse may not be prescribed e.g. hypnotics, sedatives.

1.8 In an emergency, prescribers ideally should be seen in A/E and obtain a prescription with an A/E record number.

1.9 Charges: Normal prescription charges per item with no exemption.

2. **PRESCRIBING FOR COLLEAGUES AND STAFF**

2.1 Prescribing for colleagues and staff without a consultation and examination is not deemed good practice and is not in accordance with GMC advice on Good Clinical Practice. Such prescribing should not take place except as part of a regular consultation and follow-up.

3. **PRESCRIBING FOR FRIENDS**

3.1 Such prescribing is not allowed unless that person is a bona-fida patient seen at a normal consultation.

4. **FP10(HP) FORMS**

4.1 The costs of all items dispensed are charged to the Trust.

4.2 FP10(HP) forms are returned to the Trust and audited.

4.3 If doctors are found to have prescribed for themselves for an un-registered person outside these guidelines, they may be charged the cost of the prescription.

4.4 Consistent abuse of these guidelines will be a disciplinary matter.

5. **NON-EMERGENCY PRESCRIBING**

Non-emergency prescribing for regular medication for self and family is not permitted within the Trust.
Approved by MOG: Via Monthly Medicines Optimisation Group Meetings
Review Date: Ongoing review

nPbR = Indicates a drug excluded from HRG tariff price
16 Unlicensed & Specialists Use Drugs Approved by MOG

**Ruxolitinib (INC424)“Incyte®” 5mg tablets**

(Approved for 2nd line compassionate treatment in patients with high risk myelofibrosis)
Requested by Dr. K Saja (Cons. Haematologist)

**Sativex “Cannabis Extract” Oromucosal Spray**

(For muscle spasticity, to be funded by Neurosciences directorate)
(For Dr. A Chaudhuri’s use only)

**Thalidomide tablets**

(Haematologists only for multiple myeloma and myelofibrosis with cytopenias +/- splenomegaly)

**Peginterferon alfa-2a (Pegasys®)**

(Consultant Haematology for patients with polycythaemia vera or essential thrombocythaemia)

**nPbR Bevacizumab (Avastin®)**

(For the treatment of neovascular glaucoma and non-NICE indicated choroidal neovascular membranes in non-wet age related macular oedema or non-myopia for patients under the age of 50 years)
Ophthalmologists Only

**Diphenylcyclopropenone/diphencypro ne (DPCP/DCP)**

(For alopecia areata after topical and lesional steroids) Dr. Wade’s use only

**Idarucizumab 2.5g/50ml solution for injection/infusion (Praxbind®)**

**5-aminolevulinic acid 30mg/ml powder for oeral solution (5-ALA) (Gliolan®)**

**Intrathecal Fluorescein Sodium**

(For diagnosis of CSF leak by Dr. P Chatrath Consultant ENT surgeon)