## 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:

<table>
<thead>
<tr>
<th>Patient name</th>
<th>Strength and form of drug</th>
</tr>
</thead>
<tbody>
<tr>
<td>NHS Number</td>
<td>Date dispensed</td>
</tr>
<tr>
<td>Hospital number</td>
<td>Consultant code/ cost centre</td>
</tr>
<tr>
<td>Diagnosis</td>
<td>CCGs</td>
</tr>
<tr>
<td>Cost of drug</td>
<td></td>
</tr>
</tbody>
</table>
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:
Tutu Ogunsanwo, Principal Pharmacist (Formulary and Medicines Information)

REVISED: Updated July 2017
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-Nol®) 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
Loperamide
2 mg tablet, 1 mg/ 5 ml syrup
Co-phenotrope (equivalent to Lomotil®) tablet
Note: It is important to rule out infective diarrhoea before prescribing anti-diarrhoeals

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, 1g granules
(Gastroenterologists only)
(Salofalk®) 3g granules and 1g suppositories

Octasa® 400mg & 800mg M/R tablets
Balsalazide 750 mg capsule
(Gastroenterologists only)
Sulfasalazine (Salarsalazine)
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 lenses

1.5.2 CORTICOSTEROIDS
Beclometasone 5mg m/r tablet (Clipper®)
Budesonide
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®)

Adalimumab 40mg pre-filled pen/syringe (2nd line treatment of crohn’s disease)
disease if infliximab ineffective or not tolerated)

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.

PbR = Indicates a drug excluded from HRG tariff price
1.6.2 STIMULANT LAXATIVES

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

Dantron (Danthron)
Co-danthrramer
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

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
Calig® 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®)

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)

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

1.9.4 PANCREATIN
Creon® 10 000 capsule

PbR = 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 differences 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

Metolazone 5 mg tablet

**Notes:** Use metolazone 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 & 5mg/ 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/ 10ml 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

Sodium nitroprusside
50 mg/ 5 ml intravenous infusion

PbR = Indicates a drug excluded from HRG tariff price
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

1\textsuperscript{st} Choice: Lisinopril
2.5 mg, 5 mg, 10 mg & 20 mg tablets

Alternative: Ramipril (\textit{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 150mg & 300mg f/c tablets
(\textit{Consultant Cardiologists’ and Dr. Fahal’s use only}). To be used as a 4\textsuperscript{th} 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

1\textsuperscript{st} 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 1\textsuperscript{st} Choice)

Alternative: Candesartan (use when intolerant to ACE inhibitors)

PbR = 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 & 300 mg 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

**Notes:** Nifedipine capsules are not recommended by the B.N.F. for angina prophylaxis & hypertension. It should be restricted to treatment of Raynaud’s phenomenon only. For brands stocked, please ask pharmacy.

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

**Note:** Verapamil frequently causes constipation & should be prescribed with a laxative, such as senna or docusate sodium.

Nimodipine 30 mg tablet,
- 200 micrograms/ ml injection

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

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. And also for Heart Failure

(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
**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>
<th>5.0</th>
<th>6.0</th>
<th>7.0</th>
<th>8.0</th>
</tr>
</thead>
<tbody>
<tr>
<td>Patient’s Wt. (kg)</td>
<td>infusion rate in ml./hr. (100 ml syringe pump)</td>
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<tr>
<td>55</td>
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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.

PbR = Indicates a drug excluded from HRG tariff price
DOPAMINE INFUSION CHART
Concentration = 200 mg in 100 ml saline or 5% glucose = 2000 micrograms per ml.
Give through a Baxter Floguard pump

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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

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®) 100 mg/ml

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

PbR = Indicates a drug excluded from HRG tariff price
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

1st Choice: Warfarin 1 mg, 3 mg & 5 mg tablets

Alternative: Acenocoumarol (Nicoumalone)
1 mg tablet

Alternative: Phenindione 10 mg & 25 mg tablets

Rivaroxaban (Xarelto®) 10mg 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

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
risk score ≥ 140 and low risk of bleeding meeting NICE criteria).

**Ticagrelor 90mg tablets**

**Notes:** To be used according to NICE TAG 236 for up to 12 months as a treatment option in adults with acute coronary syndrome (ACS).

**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

**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**

**1st Choice:** Simvastatin (exceptions: see below)

10mg, 20mg & 40mg tablets

Renal insufficiency: If creatinine clearance is less than 30ml/min,

**PbR = Indicates a drug excluded from HRG tariff price**
Simvastatin dosages above 10mg should be used with caution or switch to atorvastatin.

**Alternative: Pravastatin**
10 mg, 20 mg & 40 mg tablets
For certain drugs which interact with Simvastatin this could be used instead. See table below.

**2nd Choice: Atorvastatin**
10 mg, 20 mg, 40 mg & 80 mg tablets
Initiate where total cholesterol is more than 6.5mmol/litre up to a dose of 80mg daily.

*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>
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</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>
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<tr>
<td>Amiodarone</td>
<td>Maximum 20mg daily</td>
</tr>
<tr>
<td>Verapamil</td>
<td>Maximum 20mg daily</td>
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<tr>
<td>Diltiazem</td>
<td>Maximum 40mg daily</td>
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<tr>
<td>Warfarin</td>
<td>Caution: monitor INR</td>
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<tr>
<td>HIV protease inhibitors</td>
<td>Use Pravastatin</td>
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<tr>
<td>Grapefruit juice</td>
<td>AVOID</td>
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</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)

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**2.13 LOCAL SCLEROSANTS**

*Absolute alcohol* injection
*Ethanolamine oleate* injection
*Sodium tetradecyl sulphate* injection 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 prednisolone 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.
3 RESPIRATORY SYSTEM

3.1 BRONCHODILATORS

3.1.1 ADRENOCEPTOR AGONISTS

3.1.1.1 SELECTIVE BETA₂ AGONISTS

1st Choice: Salbutamol
100 micrograms/dose inhaler (CFC Free), 100 micrograms Easibreathe (md), 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 BETA₂ AGONISTS

1st Choice: Salmeterol
25 micrograms/dose inhaler and 50 micrograms/blist 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 (Spiolt 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

PbR = Indicates a drug excluded from HRG tariff price
(Phyllocontin Continus ®)
225 mg m/r tablet,
250 mg/ 10 ml injection

Theophylline
(Uniphyl 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
1st 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)

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

3.4 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

PbR = Indicates a drug excluded from HRG tariff price
3.9 COUGH PREPARATIONS

COUGH SUPPRESSANTS

DEMULCENTS

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

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)
4 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,

PbR = Indicates a drug excluded from HRG tariff price
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,15mg, 20mg oro-dispersible tablets, 
5 mg/ ml injection  
(see notes below on tablets & injection)

**tablets:** Neurologists for Parkinson’s psychosis, unlicensed use & Psychiatrists only,  
**injection:**Psychiatrists only

**Amisulpride**
50 mg & 200 mg tablets,  
100 mg/ ml oral solution  
(Psychiatrists only)

**Clozapine**
25 mg & 100 mg tablets  
(Psychiatrists only)

**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

**Quetiapine**
25 mg, 100 mg, 150 mg & 200 mg tablets  
(Neurologists for Parkinson’s psychosis (unlicensed use) & Psychiatrists only)

**Risperidone**
1 mg/ ml liquid, 
0.5 mg, 1 mg, 2 mg, 3 mg & 4 mg & 6 mg tablets, 1mg and 2mg 
Orodispensible 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**
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

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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
10 mg & 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 30 mg & 60 mg 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 30 mg and 45 mg tablets, 15 mg, 30 mg & 45 mg orodispersible 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 teoclante 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)

Co-dydramol (dihydrocodeine/ paracetamol) 10/ 500 tablet

Co-codamol (codeine/ paracetamol)
8/ 500 tablet
8/ 500 effervescent tablet
Co-codamol (codeine/paracetamol)
30/500 capsule or 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/5ml oral solution
100 mg/5ml oral concentrated oral solution,
10 mg/5ml 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
25 mg/5 ml syrup
15 mg/5 ml linctus
30 mg/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®”)
(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

PbR = Indicates a drug excluded from HRG tariff price
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)

Oxycodone injection (CD) (Oxynorm)
50mg in 1ml ampoule
[Approved for second line use for intravenous patient-controlled analgesia (PCA) and restricted to the Paim team]

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

Clonidine 25 micrograms tablet

Methysergide 1 mg tablet
(Neurologists only)

Propranolol
(see section 2.4 for formulations)
4.8  ANTIPEPLEPTICS

4.8.1  CONTROL OF 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 contra-
indications, 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)

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, 30mg/ 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

PbR = Indicates a drug excluded from HRG tariff price
**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)

**Rasagiline** 1mg tablet  
(*2nd line in patients who cannot tolerate Selegiline*)

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

Benzatropine (Benztropine) 2 mg/2 ml injection

Orphenadrine 50 mg tablet, 25 mg/5 ml liquid

Trihexyphenidyl (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)

Dr Gupta for relief of spasticity in stroke patients as second line therapy (unlicensed use, needs patient consent)

Consultant Surgeons & Dermatologists for Hyperhidrosis (N.B. Dysport is unlicensed for hyperhidrosis, needs patient consent)

nPbR 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 10 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 (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 & Phenoxymethylpenicillin (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** 200mg tablets

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

5.1.1.4 Antipseudomonal penicillins

Piperacillin & tazobactam *(Tazocin ®)*

2.25 g & 4.5 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

**Ceftazidime**

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

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

**OTHER BETA-LACTAM ANTIBIOTICS**

**Meropenem** 500 mg & 1 g injection

**Ertapenem** 1 g injection

PbR = 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 (Efracera®) 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 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)

PbR = 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 250mg & 500mg tablets
500mg/ 100ml injection

Moxifloxacin 400mg 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

**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** 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 80mg/ml oral solution

PbR = Indicates a drug excluded from HRG tariff price
Saquinavir
200 mg capsule
500 mg tablet

HIV — NON-NUCLEOSIDE REVERSE TRANSCRIPTASE INHIBITORS

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

Nevirapine
200 mg tablet
50 mg/5 ml oral suspension

HIV — OTHER ANTIRETROVIRALS

Etravirine
100 mg tablets
Maraviroc
150 mg and 300 mg tablets

Raltegravir
400 mg tablet

5.3.2 HERPES VIRUS INFECTION

HERPES SIMPLEX AND VARICELLA ZOSTER

Aciclovir
200 mg 400 mg & 800 mg tablets
200 mg/5 ml suspension
250 mg & 500 mg injection
Famciclovir
125 mg 250 mg tablets

CYTOMEGALOVIRUS (CMV)

Foscarnet
24 mg/ml intravenous infusion
Ganciclovir
500 mg intravenous infusion
Valganciclovir
450 mg tablets

5.3.3 VIRAL HEPATITIS

5.3.3.1 Chronic Hepatitis B

Adefovir
10 mg tablet

Lamivudine
100 mg tablet

Entecavir
500 micrograms and 1 mg tablet
Oral Solution 50 micrograms/ml

5.3.3.2 Chronic Hepatitis C

Simeprevir
150 mg capsules

5.3.4 INFLUENZA

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

5.3.5 RESPIRATORY SYNCTIYAL VIRUS

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

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

Pyrimetamine
25 mg tablet

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

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

(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

PbR = 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

Hypurine Porcine Neutral ®
3 ml Cartridges
10 ml vial

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

Insulin Glulisine
Apidra® 100 units/ml injection
10 ml vial, 3 ml cartridge, Solostar

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

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

Hypurin Porcine Isophane ®
3 ml Cartridges
10 ml vial

Insulin Detemir
Levemir® 100 units/ml injection
3 ml cartridge, 3 ml FlexpenFF

Insulin Glargine
Lantus ® 100 units/ml injection
10 ml vial, 3 ml cartridge & Solostar

3 ml OptiSet pen
(Endocrinologists only in accordance with protocol)

BIPHASIC INSULINS

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

Biphasic Isophane Insulin
Human Mixtard ® 30
100 units/ml injection
10 ml vial, 3 ml cartridge
3 ml Novolet pen,
Innolet device- Initiation by Diabetes team only

Human Mixtard ® 10
Human Mixtard ® 20
Human Mixtard ® 40
Human Mixtard ® 50
Please contact Pharmacy for devices available.

Hypurin Porcine 30/70 Mix ®
3 ml Cartridges
10 ml vial

Biphasic Insulin Lispro
Humalog ® Mix 25
3 ml cartridge, 3 ml Kwikpen prefilled
disposable injection devices

Humalog ® Mix 50
3 ml disposable Kwikpen prefilled
disposable injection devices

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 500mg & 1g sachets
Gucophage SR (Metformin) 500mg, 750mg & 1g tablets

6.1.2.3 Other Antidiabetics
Acarbose 50 mg tablet
Canagliflozin (Invokana®) 100mg & 300mg f/c tablets
Dapagliflozin (Forxiga®) 5 mg & 10mg f/c tablets
Empagliflozin (Jardiance®) 10mg & 25mgf/c tablets
Exenatide (Byetta®) 250micrograms/ml injection
Bydureon® 2 mg powder and solvent for prolonged-release suspension for injection
Liraglutide 6mg/ml injection 2 x 3ml prefilled pens
(For Consultant Endocrinologists’ use only as per NICE recommendations)
Repaglinide 500 micrograms, 1 mg & 2 mg tablets
Pioglitazone 15 mg tablet

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

Linagliptin 5mg tablets (Can be used in severe renal impairment)
Saxagliptin 2.5mg & 5mg tablets (For diabetic patients with renal impairment)
Sitagliptin 25mg, 50mg & 100mg tablets

6.1.4 Treatment of Hypoglycaemia
Glucagon 1 mg injection

GlucoGel (23 g) glucose gel

6.1.5 Treatment of Diabetic Nephropathy and Neuropathy
Pregabalin 25mg, 50mg, 75mg etc. (to be used second line after 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
Aqueous Iodine Oral Solution

PbR = Indicates a drug excluded from HRG tariff price
(Lugol’s Solution)

**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

**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
  *(Lower strength HRT. For menopausal symptoms in patients unable to tolerate Climesse ®)*

**Oestrogen & progestogen (patches)**

- **Women with uterus**

  **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
- Medroxyprogesterone acetate
  - 5 mg & 10 mg tablets
- Norethisterone 5 mg tablet

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

**Progesterone 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

**PbR = Indicates a drug excluded from HRG tariff price**
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 Argipressin)
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)
70mg 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
30mg tablet licensed for treatment of Paget’s disease of bone 30mg daily for 2 months; maybe repeated if necessary after at least 2 months

Pamidronate disodium 15 mg injection
Etidronate disodium 200 mg tablet
(For Paget’s disease of the bone)

Ibandronic acid 50mg tablets and concentrate for IV infusion
(Bondronat®)
Sodium clodronate
400 mg capsule,
520 mg & 800 mg tablets
(Haematologists & Radiotherapists only)

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

Notes: Zoledronic acid is indicated in postmenopausal osteoporotic patients 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 etidronate, 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.

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®)

PbR = Indicates a drug excluded from HRG tariff price
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)

7.1.1.1. 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 MYOMETRICAL 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

Conjugated oestrogens (equine)
(Premarin ®) vaginal cream

Estradiol (Vagifem ®)
25 micrograms vaginal tablets

Estradiol (Estring ®)

PbR = Indicates a drug excluded from HRG tariff price
7.5 micrograms/24 hours vaginal ring
(Use only when creams or vaginal tablets & systemic administration are inappropriate, Consultant Gynaecologists only)

7.2.2 ANTI-INFECTIVE 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 (Zidovam®)
(alternative to oral metronidazole for the treatment of bacterial vaginosis)

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

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
**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)

**7.3.2.3 INTRA-UTERINE PROGESTOGEN-ONLY CONTRACEPTIVES**
Mirena ® Intrauterine system
Jaydess ® Intrauterine system

**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.

**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

PbR = Indicates a drug excluded from HRG tariff price
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

7.4.4 BLADDER INSTILLATIONS & UROLOGICAL SURGERY

- **Sodium Chloride 0.9 %** (Uro-tainer®)
- **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.
8 MALIGNANT DISEASE & IMMUNOSUPPRESSION

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
(Gram: Dermatologists only)

Gemcitabine injection
Mercaptopurine injection
Methotrexate tablets, injection
Pemetrexed injection
Tegafur With capsules
Uracil
Tioguanine tablets

PbR = 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
Amsacrine infusion
Altretamine capsules (Radiotherapists only)

nPbR Anagrelide tablets
nPbR Bortezomib injection
nPbR Cetuximab infusion
nPbR Crizotinib capsules
nPbR Dacarbazine injection
nPbR Eribulin capsules
Hydroxycarbamide (Hydroxyurea) capsules
nPbR Axitinib tablets
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 Lapatinib tablets

Notes: CCGs funding is required for Lapatinib

nPbR Nilotinib capsules
nPbR Nintedanib capsules
nPbR Pomalidomide capsules
nPbR Sorafenib tablets
nPbR Sunitinib capsules

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

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
Cabazitaxel intravenous infusion 40mg/ml

ANTINEOPLASTIC DRUGS – Monoclonal Antibodies
Trastuzumab injection
nPbR Obintuzumab injection
nPbR Ofatumumab injection
nPbR Nivolumab injection
nPbR Pembrolizumab injection
nPbR Pertuzumab injection
nPbR Ramucirumab injection

TOPOISOMERASE I INHIBITORS
Irinotecan hydrochloride infusion
Topotecan infusion

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

ONCOYTIC VIRAL THERAPY
nPbR Talimogene laherparepvec injection

TARGETED THERAPY
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, Dr Chakravarty only: 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)

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®)

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

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)

IMMUNOSUPPRESSANTS > MONOCLONAL ANTIBODIES > ANTI-LYMPHOCYTE

Anti-lymphocyte monoclonal antibodies

nPbR Alemtuzumab 10mg/ml 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

nPbR = Indicates a drug excluded from HRG tariff price
BHRUT NHS Trust Drug Formulary, Updated July 2017

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

**Anastrozole**
1 mg tablet

**Exemestane**
25 mg tablet  
*(2nd line after 2 – 3yrs of tamoxifen therapy)*

**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

**Leuprolelin**
*(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

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

**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

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

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: Desferioxamine 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

PbR = Indicates a drug excluded from HRG tariff price
**Romiplostim** (Nplate®)
250 microgram s/c injection

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**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)

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**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

**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)

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**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)

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**9.2.1.3 ORAL BICARBONATE**

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

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**9.2.2 PARENTERAL PREPARATIONS FOR FLUID & ELECTROLYTE IMBALANCE**

**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) & 500 ml bags
50 mmol K⁺: 50 ml
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

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

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

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

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

PbR = Indicates a drug excluded from HRG tariff price
Buffered Dialysis Solution

Prism0cal

Phosphate Solution for haemodialysis/haemofiltration

PHOXILUM 1.2 mmol/l

Ready-to-use sterile solution for regional citrate anticoagulation
Prismocitrate 10/2 solution

Note: Liaise with the ITU pharmacist if there are any queries on the above haemofiltration fluids
9.3 INTRAVENTOUS 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)

9.5.1.2 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

PbR = Indicates a drug excluded from HRG tariff price
4 mmol (160 mg) capsule  
*Unlicensed, named patient only*

**Note:** Absorption of magnesium is poor when given orally

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)

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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 D$_2$, 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 D$_3$)
10 micrograms (400 units) tablet

**Colecalciferol Capsule** 20 micrograms/800 units (Fultium-D3)

**Colecalciferol tablet** 20 micrograms/800 units (Desunin)

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

**Adcal-D$_3$® 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 K$_1$)
*(See under Konakion brands below)*

**Phytomenadione 10 mg tablet**
(licensed)

**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

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**PbR = Indicates a drug excluded from HRG tariff price**
Other metabolic disorders.

**Biotin** 5mg tablet and 5mg/ml injection
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,
75 mg/ 2 ml injection (Dyloject®)
(Maximum treatment for 2 days),
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

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

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

PbR = Indicates a drug excluded from HRG tariff price
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

ANTIMALARIALS

Chloroquine (see section 5.4.1 for preparations)

Hydroxychloroquine sulphate 200 mg tablet

DRUGS AFFECTING THE IMMUNE RESPONSE

Azathioprine  
25 mg & 50 mg tablets

Ciclosporin (Cyclosporin)  
(Neoral®) 25 mg, 50 mg & 100 mg tablets  
(Specialist use only)

Cyclophosphamide  
50 mg tablet  
(Specialist use only)

Leflunomide  
10 mg, 20 mg & 100 mg tablets  
(RA in patients unresponsive to other DMARDs, Consultant Rheumatologists only)

Methotrexate  
2.5 mg tablets (Specialist use only) injection  
(Contact the Production unit for advice)

Notes: Methotrexate for Rheumatoid Arthritis is a ONCE WEEKLY DOSE only. Refer to Methotrexate policy

SULFASALAZINE (SULPHASALAZINE)

Sulfasalazine (Sulphasalazine)  
500 mg e/c tablet, 250 mg/ 5 ml suspension

CYTOKINE INHIBITORS

nPbR Adalimumab  
40 mg pre-filled syringe (Consultant Rheumatologists only) See below.

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

nPbR Etanercept 25 mg injection  
Remicade®

nPbR Etanercept Biosimilars 25 mg injection  
Beneplali®

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

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
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

**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**

1* Choice: Allopurinol
100 mg & 300 mg tablets

2* 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.

**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 RUBEFAECIENTS & OTHER TOPICAL ANTIRHEUMATICS**

**Movelat®** cream & gel

**Balmosa®** cream

PbR = Indicates a drug excluded from HRG tariff price
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
# 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)*

**Notes:** Ciprofloxacin licensed for corneal ulcers & superficial bacterial infections.

**Ciprofloxacin 3mg/ml & Dexametasone**
1mg/ml ear drops

**Notes:** Licensed for aotitis media in patients with tympanostomy tubes & acute otitis externa

**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 Ocular infections, e.g. Conjunctivitis & keratoconjunctivitis, not corneal ulcers

**Polymyxin B sulphate (Polyfax ®)**

Polymixin B sulphate 10,000units, bacitracin zinc 500 units/ gram eye ointment

### 11.3.3 ANTIVIRALS

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

**Notes:** Apply five times daily & continue for at least three days after complete healing

**Preparations for treating Keratitis**

**Polyhexamethylene biguanide (PHMB)**
0.02% eye drops

**Natamycin 5% Eye drops**

### 11.4

## 11.5 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 & 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)

INTRAVITREAL CORTICOSTEROIDS

Ozurdex® Dexamethasone intravitreal implant 700 micrograms (Ophthalmologists only)

11.4.2 OTHER ANTI-INFLAMMATORY PREPARATIONS

(Otrivine-Antistin ®) Antazoline sulphate 0.5% & Xylometazoline 0.05% eye drops and TTA pack

Lodoxamide 0.1% eye drops (Ophthalmologists only)

Sodium cromoglicate 2% eye drops

Nedocromil 2% eye drops

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 (Mydriaser® ophthalmic insert)

11.6 DRUGS FOR THE TREATMENT OF GLAUCOMA

1st LINE EYES DROPS

a. * Lumigan ® (Bimatoprost 100 & 300 micrograms/ml)
b. * Ganfort® (Bimatoprost 300 micrograms/ml & Timolol 5mg/ml)
c. * Timolol LA ® (Timolol) 0.25%, 0.5%

2nd LINE EYES DROPS

a. * Xalatan ® (Latanoprost) 0.005%
b. * Xalacom ® (Latanoprost & 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 *(Ophthalmologists only)

3rd LINE EYES DROPS

Travatan® (Travaprost)
40micrograms/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

Levocabunolol (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)

SUBFOVEAL CHOROIDAL
NEOVASCULARISATION

Ranibizumab (Lucentis®)
Afibercept (Eylea®)
Bevascizumab (Avastin®) (unlicensed)
( Cons. Ophthalmologist only for
treatment of age-related macular
degeneration in patients that meet NICE
criteria)
Indocyanine Green (ICG) injection
(For Consultant Ophthalmologist’s use only for choroid related diagnosis)
## 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/ eye 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 ®)
- 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% ear drops
- Gentamicin (Genticin) 0.3% 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

- **Beclometasone 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

**PbR = Indicates a drug excluded from HRG tariff price**
Triamcinolone acetonide  
(Nasacort ®) 55 mcg/ dose nasal spray

Dexamethasone isonicotinate  
(Dexa-Rhinaspay Duo ®)  
20mcg/ dose nasal spray

Sodium cromoglicate  
(Rynacrom ®) 4 % nasal spray

DRUGS USED FOR NASAL CRUSTING

Glucose in Glycerol 25% nasal drops  
(unlicensed) (ENT consultants use only)

Note: 2nd line treatment of nasal crusting in patients with vasculitis after saline douche in combination with steroid inhalers

12.2.2 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.  
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.

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)  
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

- 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
- Conotran ® 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% & miconazole 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 DIPROPIONATE
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 3% ointment,
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

Notes: The use of topical antimicrobial agents is to be discouraged as this can cause sensitisation & contribute towards bacterial resistance

PbR = Indicates a drug excluded from HRG tariff price
13.5 PREPARATIONS FOR ECZEMA AND PSORIASIS

13.5.1 PREPARATIONS FOR ECZEMA

Glycerin of Ichthamol 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)

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 Etanercept
nPbR Infliximab
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

**ANOCENTAL 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**

Condylone® 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)

PbR = Indicates a drug excluded from HRG tariff price
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  
(Silver sulfadiazine) (Flamazine ®) 1 % cream  

**13.10.2** ANTIFUNGAL PREPARATIONS  
Clotrimazole 1 % cream, dusting powder & solution  
Ketoconazole 2 % cream  
(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 & ANTI-SEPTICS  
**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
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
Lyofom ® 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 Meningococcal 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

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

PbR = Indicates a drug excluded from HRG tariff price
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

<table>
<thead>
<tr>
<th>Drug</th>
<th>Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thiopental sodium</td>
<td>500 mg injection</td>
</tr>
<tr>
<td>Etomidate</td>
<td>20 mg/10 ml injection</td>
</tr>
<tr>
<td>Ketamine</td>
<td>10 mg/ml, 100 mg/ml, 50 mg/ml</td>
</tr>
<tr>
<td>Propofol</td>
<td>10mg/ml, 500 mg/50ml, 200mg/20ml</td>
</tr>
<tr>
<td>Propofol 1% injection (Diprifusor® TCI System)</td>
<td>(for endarterectomies anaesthetised by Dr. Igielman &amp; Dr. Khalil only)</td>
</tr>
</tbody>
</table>

### 15.1.2 INHALATIONAL ANAESTHETICS

<table>
<thead>
<tr>
<th>Drug</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Isoflurane</td>
<td></td>
</tr>
<tr>
<td>Sevoflurane</td>
<td></td>
</tr>
<tr>
<td>Enflurane</td>
<td></td>
</tr>
<tr>
<td>Halothane</td>
<td></td>
</tr>
</tbody>
</table>

### 15.1.3 ANTIMUSCARINIC DRUGS

<table>
<thead>
<tr>
<th>Drug</th>
<th>Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Atropine sulphate</td>
<td>600 micrograms/ml injection</td>
</tr>
<tr>
<td>Glycopyrronium bromide</td>
<td>200 micrograms/ml &amp; 600 micrograms/3ml injection</td>
</tr>
<tr>
<td>Hyoscine hydrobromide</td>
<td>400 micrograms/ml injection</td>
</tr>
</tbody>
</table>

### 15.1.4 SEDATIVE & ANALGESIC PERI-OPERATIVE DRUGS

#### 15.1.4.1 ANXIOLYTICS & NEUROLEPTICS

<table>
<thead>
<tr>
<th>Drug</th>
<th>Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diazepam</td>
<td>(See section 4.1.2 for preparations)</td>
</tr>
<tr>
<td>Lorazepam</td>
<td>4 mg/ml injection</td>
</tr>
<tr>
<td>Midazolam</td>
<td>10 mg/2ml &amp; 10 mg/5ml injection</td>
</tr>
</tbody>
</table>

### 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
- **Vecuronium**
  - 10 mg injection

#### DEPOLARISING MUSCLE RELAXANTS

- **Suxamethonium**
  - 50 mg/ml injection

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PbR = 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

(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®) cream

Lidocaine with chlorhexidine gluconate (Instillagel®) in sterile lubricant

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)
**PbR** = Indicates a drug excluded from HRG tariff price

<table>
<thead>
<tr>
<th>Drug</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prilocaine</td>
<td>1 % injection</td>
</tr>
<tr>
<td><strong>Prilocaine</strong> 30mg/ ml with octapressin</td>
<td>(felypressin) 0.03 units/ ml injection</td>
</tr>
<tr>
<td><em>Mepivacaine</em> 3 % injection</td>
<td><em>(Chiropody)</em></td>
</tr>
<tr>
<td><strong>Tetracaine (Amethocaine)</strong> 4 %</td>
<td><em>Ametop® gel</em></td>
</tr>
<tr>
<td>Ethyl chloride BP spray</td>
<td></td>
</tr>
</tbody>
</table>

**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 (July 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.
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

PbR = Indicates a drug excluded from HRG tariff price
16 Unlicensed & Specialists Use Drugs Approved by MOG

<table>
<thead>
<tr>
<th>Drug</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Ruxolitinib (INC424)</strong></td>
<td>&quot;Incyte®&quot; 5mg tablets (Approved for 2nd line compassionate treatment in patients with high risk myelofibrosis) Requested by Dr. K Saja (Cons. Haematologist)</td>
</tr>
<tr>
<td><strong>Intrathecal Fluorescein Sodium</strong></td>
<td>(For diagnosis of CSF leak by Dr. P Chatrath Consultant ENT surgeon)</td>
</tr>
<tr>
<td><strong>Sativex “Cannabis Extract”</strong></td>
<td>Oromucosal Spray (For muscle spasticity, to be funded by Neurosciences directorate) (For Dr. A Chaudhuri’s use only)</td>
</tr>
<tr>
<td><strong>Thalidomide</strong></td>
<td>(Haematologists only for multiple myeloma and myelofibrosis with cytopenias +/- splenomegaly)</td>
</tr>
<tr>
<td><strong>nPbR Peginterferon alfa-2a (Pegasys®)</strong></td>
<td>(Consultant Haematology for patients with polycythaemia vera or essential thrombocyaemia)</td>
</tr>
<tr>
<td><strong>nPbR Bevacizumab (Avastin®)</strong></td>
<td>(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</td>
</tr>
<tr>
<td><strong>Diphenylcyclopropenone/diphencypro ne (DPCP/DCP)</strong></td>
<td>(For alopecia areata after topical and lesional steroids) Dr. Wade’s use only</td>
</tr>
<tr>
<td><strong>Idarucizumab</strong></td>
<td>2.5g/50ml solution for injection/infusion (Praxbind®)</td>
</tr>
<tr>
<td><strong>5-aminolevulinic acid</strong></td>
<td>30mg/ml powder for oeral solution (5-ALA) (Gliolan®)</td>
</tr>
</tbody>
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