NHS FORTH VALLEY FORMULARY 17th Edition v1 March 2018

Date of First Issue	31/07/2012
Approved	30/08/2012
Current Issue Date	09/03/2018
Review Date	After each ADTC New Drug Sub Group Meeting
Version	Version 1 (17th Edition)
EQIA	NO
Author / Contact	NHS FV Prescribing Support Team fv-uhb.prescribingsupport@nhs.net
Group Committee –	ADTC New Drugs Sub Group

Consultation and Change Record – for ALL documents

Contributing Authors: NHS Forth Valley Acute & Primary Care Staff

Consultation Process: Approval by ADTC New Drugs Sub Group
Acute Specialist Services

Distribution: Forth Valley Doctors and Consultants
Forth Valley GPs, Practice Managers, Nurse Prescribers
Forth Valley Pharmacy Staff
Forth Valley Community Pharmacy Contractors

Change Record			
Date	**Author**	**Change**	**Version**
23/02/2018	T. Anderson	Updated Oral Hypoglycaemic information in Appendix 11.	1.0 (17th Edition)
29/12/2017	T. Anderson	Evolocumab in section 2.12	

Contact numbers

Primary Care Pharmacy

Prescribing Support Team
Primary Care Pharmacy Office
Ground Floor,
Falkirk Community Hospital
Falkirk
FK1 5QE

Director of Pharmacy	Page 07825 843190	01324 673610
Prescribing Support Team		01324 673603
Clinical and Community Services Office (Mental Health, Learning Disabilities & Vaccines) Pharmacy Department Forth Valley Royal Hospital Stirling Road Larbert FK5 4WR		01324 566728 & 01324 566729
On-call service	contact Switchboard	01324 566000

Acute Services Pharmacy

Opening hours -	8.30 am – 5.00 pm	Monday to Friday
	10.00 am – 4:30 pm	*Saturday*
	10.00 am – 2.30 pm	*Sunday*

On-call service out-with these hours - Contact the pharmacist through the unit page holder.

Forth Valley Royal Hospital

01324 566000

Stores & Distribution	01324 566702
Dispensary	01324 566701 / 700
Aseptic Office	01324 566709 / 710 / 711
Medicines Information	01324 566725
Kirsty Peacock (CD Inspection Officer)	01324 566725

Contents

Contents

Introduction

The formulary is produced by the New Drugs Sub Group of the Forth Valley Area Drug and Therapeutics Committee (ADTC), and the contents reflect wide consultation with a range of practitioners in medicine and pharmacy.

Aims and objectives

The main aim of this formulary is to promote rational, safe, clinical- and cost-effective prescribing in both Primary and Secondary Care. The BNF contains several thousand medicines and is designed to be comprehensive. The Forth Valley Formulary is a list containing fewer medicines, which provide appropriate treatment for the vast majority of patients, are approved for use in hospital and general practice. The modest size of the list should enhance the quality of prescribing as familiarity with the limited range of medicines will be readily acquired. Clinical units, Community Health Partnerships (CHPs) and general medical practices may wish to use the complete Forth Valley Formulary or may restrict the number of items further to suit local circumstances.

Using the Formulary

Medicines are presented according to the BNF classification. This enables the formulary to be used in conjunction with the current BNF, which prescribers are asked to use as their primary reference source for information regarding dosages, contra-indications and adverse reactions. Generally, formulations and strengths of preparations have been omitted to allow flexibility of prescribing, except when a particular formulation is not approved. Drugs are referred to throughout by generic name, with some exceptions. Where proprietary names are given, this indicates either a compound product or a product with unique characteristics and no substitutions should be made. Some brief prescribing points have been added and have been reviewed by general practitioners and specialists working together.

Formulary Management

The printed version of the formulary will be updated annually at the start of August to respond to the outcome of the Scottish Medicines Consortium assessment of new drugs and local requirements, as discussed and reviewed by the New Drugs Sub Group of the ADTC following assessment by the SMC. The formulary is also available on the NHS Forth Valley intranet and this electronic version will be updated after each New Drugs Meeting.

The formulary process is quite separate from any licensing restriction which might apply, details of which can be found in the BNF or Summary of Product Characteristics. The final decision on the formulary status of a new drug is made by the ADTC. Throughout the year, ADTC decisions of formulary amendments will be routinely communicated to Drug and Therapeutics Committees and Prescribing Groups, CHPs and general practitioners via *ADTC News* bulletin.

There is an area wide process for requesting drugs for inclusion in the Forth Valley Formulary. This involves the requestor completing a New Drugs Proforma available within electronic versions of the Formulary at the following link.
http://www.nhsforthvalley.com/__documents/qi/ce_guideline_prescribing/Formulary-and-non-formulary-request-processes.pdf

Completed forms for Primary Care to be submitted to Primary Care Pharmacy Services, Ground Floor, Falkirk Community Hospital, Westburn Avenue, Falkirk, FK1 5QE and Acute forms submitted to Pharmacy Department, Forth Valley Royal Hospital.

Scottish Medicines Consortium (SMC)

The remit of the Scottish Medicines Consortium (SMC) is to provide advice to the NHS Boards and their Area Drug and Therapeutics Committees (ADTCs) across Scotland about the status of all newly licensed medicines, all new formulations of existing medicines and any major new indications for established products. Locally the process for considering SMC recommendations has been finalised and and can be found on the following link http://www.nhsforthvalley.com/__documents/qi/ce_guideline_prescribing/Formulary-and-non-formulary-request-processes.pdf
Prescribers will be updated via the ADTC News bulletin and the formulary web site.

The ADTC advises prescribers **not** to prescribe any drug that has been rejected by SMC or has not been considered by SMC **unless there is evidence to justify prescribing in the light of particular circumstances of an individual patient.**

Where a medicine is not recommended for use by the Scottish Medicines Consortium (SMC) for use in NHS Scotland, including those medicines not recommended due to non-submission, this will be noted by the Area Drug and Therapeutics Committee New Drug Sub Group and the medicine will not be added to the NHS Forth Valley Joint Formulary.

Where a medicine that has not been accepted by the SMC or NHS HIS following their appraisal on clinical and cost-effectiveness, there is a **Individual Patient Treatment Request (IPTR)** process which provides an opportunity for clinicians i.e. hospital Consultants or General Practitioners to pursue approval for prescribing, on a "case by case" basis for individual patients.
A copy of this policy can be found at the Pharmacy page on the Intranet on the following link:
http://www.nhsforthvalley.com/__documents/qi/ce_guideline_prescribing/individualpatienttreatmentrequestprocess.pdf

Full details of all drugs that have been considered by the SMC can be found on their website
http://www.scottishmedicines.org.uk/

NICE guidance

NHS Quality Improvement Scotland (NHS QIS) reviews NICE (National Institute for Health and Clinical Excellence) Multiple Technology Appraisal (MTA) and decides whether the recommendations should apply in Scotland.
Where NHS QIS decides that an MTA should apply in Scotland, the NICE guidance supersedes SMC advice. Unlike the SMC process, MTAs examine a disease area or a class of drugs and usually contain new evidence gathered after the launch of drugs or new economic modelling.

SMC is the source of advice for Scotland on new drug therapies and the NICE Single technology Appraisal (STA) process therefore has no status in Scotland. If a NICE STA endorses a drug that was not recommended by the SMC, it is open to the manufacturers to resubmit the drug to SMC with new evidence.

This information is reviewed by the New Drugs Sub Group on a routine basis.

Paediatric Declaration

Children, and in particular neonates, differ from adults in their response to drugs. Pharmacokinetic changes in childhood are important and have a significant influence on drug absorption, distribution, metabolism and elimination and need to be considered when choosing an appropriate dosing regimen for a child. Where possible, children and neonatal medications should be prescribed within the terms of the product licence (market authorisation). However, many children may require medicines not specifically licensed for paediatric use.

Recommendations have been drawn up by the Standing Committee on Medicines, a joint committee of the RCPCH and the Neonatal and Paediatric Pharmacists Group on the use of medicines outwith their product licence. The recommendations are:

- Those who prescribe for a child should choose the medicine which offers the best prospect of benefit for that child, with due regard to cost
- The informed use of some unlicensed medicines or licensed medicines for unlicensed applications is necessary in paediatric practice
- Health professionals should have ready access to sound information on any medicine they prescribe, dispense or administer, and its availability
- In general, it is not necessary to take additional steps, beyond those taken when prescribing licensed medicines, to obtain the consent of parents, carers and child patients to prescribe or administer unlicensed medicines or licensed medicines for unlicensed applications
- NHS Forth Valley and Health Authorities should support therapeutic practices that are advocated by a respectable, responsible body of professional opinion

Forth Valley Formulary should not be used in isolation when prescribing medications for children/neonates. It is recommended that Medicines for Children (a Royal College of Paediatric & Child Health Publication) is used where possible or the Childrens BNF or BNF. For neonates e.g. in SCBU, the relevant formularies available on the ward should be used. Many of the drugs stated in the formulary will be used in paediatrics but not at the dosages stated.

In addition sugar free medicines should be used as much as possible when prescribing in children/neonates.

Website

An Adobe® Acrobat® version of the formulary can be found on the Forth Valley Pharmacy Services intranet site at the following address:

http://staffnet.fv.scot.nhs.uk/index.php/a-z/pharmacy/

The web-based version of the formulary will be updated after each ADTC meeting and will represent the most up to date version at any point in time.

Formulary Status

The formulary is intended for use across both primary and secondary care. The key for use has been agreed as follows:

✓	- Initiate and continue
⌖	- Continue where appropriate

GPs should not normally be expected to prescribe non-formulary drugs on the recommendation of hospital specialists unless sound clinical reasons are given in writing. If this does not happen, the GP can contact the specialist concerned. This requirement also extends to patients attending outpatient clinics.

Appeals

If a drug has been omitted from the formulary, and a consultant or GP maintains that such an omission could compromise patient care, the case for formulary inclusion can be reconsidered. Appeals against any formulary decisions should be made with full supporting evidence to the New Drugs Sub Group via the Medicines Information department at Forth Valley Royal Hospital. Final decisions on appeals are taken by the ADTC.

Non-formulary drug supply

In exceptional clinical circumstances a non-formulary medicine may be required for a particular patient. For certain non-formulary drugs which are being continuously monitored and for recent non-formulary decision this will require completion of a non-formulary request form by the consultant or clinical pharmacist for all hospital initiated non-formulary drugs.

Within primary care, it would be expected that the majority of prescribing would be from formulary choices.

Non-formulary drug use is reviewed by Drug and Therapeutics Committees, and thereafter by the ADTC.

An example of the Non-formulary request form has been included. This is available within the electronic version of the Formulary at the following link
http://www.nhsforthvalley.com/__documents/qi/ce_guideline_prescribing/Formulary-and-non-formulary-request-processes.pdf

Guidance on prescribing

Local and National Guidance

The appendices of this formulary include Primary Care, Secondary Care and area-wide Forth Valley Guidelines. Where national guidance is applicable references to web addresses have been included (as links in the electronic version). Prescribers are reminded that the electronic document is a dynamic document, which will be updated after each New Drugs Sub Group meeting. Similarly local and national guidance is continually updated and may influence prescribing. Some useful web addresses are included below to provide access to the latest national guidelines:

British Hypertension Society	http://www.bhsoc.org/
British Thoracic Society	http://www.brit-thoracic.org.uk/
National Institute for Health and Clinical Excellence	http://www.nice.org.uk/
Scottish Intercollegiate Guidelines Network	http://www.sign.ac.uk/

In hospitals

A Medicines Code of Practice is in existence within Forth Valley Royal Hospital that gives guidance on the writing of prescriptions and the safe and secure handling of medicines.

Combination products

Please note: Whenever possible prescribe individual drug components rather than a fixed ratio combination as it allows flexibility of dosing and is usually more cost effective.

Unlicensed Medicines

The New Drugs Sub Group is aware of several preparations being used out-with their licences, and some of these have been included within the formulary. Prescribers can still obtain unlicensed preparations in the same manner as they did prior to the launch of the Formulary.

In primary care, prescribers should note that if prescribing a preparation for an unlicensed indication, the liability for its use lies with the prescriber.

Therapeutic drug monitoring

Guidelines on therapeutic drug monitoring for antibiotics and other drugs can be found in Appendix 5.

Advice

Information and advice on medicine use is available from your local community pharmacist, Medicine Information Centre, Prescribing Support Team, practice or clinical pharmacist.

Feedback

The success of the formulary depends on feedback from the users and is most welcome. The formulary will be updated regularly.

Chapter/Section/Drug	Primary Care		Acute
	CHPs	Mental Health Specialties	Services

1 Gastro-intestinal System

See updated Chapter on Forth Valley Intranet:

https://staffnet.fv.scot.nhs.uk/a-z/pharmacy/area-wide/formulary/forth-valley-formulary/

Chapter/Section/Drug	Primary Care		Acute
	CHPs	Mental Health Specialties	Services

2 Cardiovascular System

See updated Chapter on Forth Valley Intranet:
https://staffnet.fv.scot.nhs.uk/a-z/pharmacy/area-wide/formulary/forth-valley-formulary/

Chapter/Section/Drug	Primary Care		Acute
	CHPs	Mental Health Specialties	Services

3 Respiratory System

See updated Chapter on Forth Valley Intranet:
https://staffnet.fv.scot.nhs.uk/a-z/pharmacy/area-wide/formulary/forth-valley-formulary/

Chapter/Section/Drug	Primary Care		Acute
	CHPs	Mental Health Specialties	Services

4 Central Nervous System

See updated Chapter on Forth Valley Intranet:
https://staffnet.fv.scot.nhs.uk/a-z/pharmacy/area-wide/formulary/forth-valley-formulary/

5 Infections

See updated Chapter on Forth Valley Intranet:
https://staffnet.fv.scot.nhs.uk/a-z/pharmacy/area-wide/formulary/forth-valley-formulary/

Chapter/Section/Drug	Primary Care		Acute
	CHPs	Mental Health Specialties	Services

6 Endocrine System

See updated Chapter on Forth Valley Intranet:
https://staffnet.fv.scot.nhs.uk/a-z/pharmacy/area-wide/formulary/forth-valley-formulary/

Chapter/Section/Drug	Primary Care		Acute
	CHPs	Mental Health Specialties	Services

7 Obstetrics, gynaecology and urinary tract disorders

See updated Chapter on Forth Valley Intranet:
https://staffnet.fv.scot.nhs.uk/a-z/pharmacy/area-wide/formulary/forth-valley-formulary/

8 Malignant disease and immunosuppression

Comment	Please refer to Superior Vena Cava Obstruction Treatment Guideline for Acute Services, Superior Vena Cava Obstruction Guideline for Primary Care, Malignant Spinal Cord Compression Guideline for Seconday Care & Malignant Spinal Cord Compression Guideline for Primary Care (http://www.qifv.scot.nhs.uk/CE_ClinicalGuidelines.asp)
Comment	Prescribing of anti-cancer medicines should be in accordance with West of Scotland Cancer Network approved clinical management guidelines and chemotherapy protocols, where available

8.1 Cytotoxic drugs

		CHPs	Mental Health Specialties	Acute Services
8.1.1	Alkylating drugs			
	Bendamustine			✓
	Chlorambucil			✓
	Cyclophosphamide	⌖		✓
	Folinic acid			✓
	Ifosfamide			✓
	Melphalan			✓
	Lomustine			✓
	Busulfan	To be prescribed only by West of Scotland haemopoietic stem cell transplant team with HSCT protocols		
	Mesna (urothelial toxicity)			✓
	Treosulfan			✓
8.1.2	Cytotoxic antibiotics			
	Bleomycin			✓
	Doxorubicin			✓
	Epirubicin			✓
	Idarubicin			✓
	Mitomycin-C			✓
	Mitozantrone			✓
	Daunorubicin			✓
8.1.3	Antimetabolites			
	Capecitabine			✓
	Cladribine			✓
	Cytarabine			✓
	Fludarabine Phosphate			✓
	5-Fluorouracil (cream - in liaison with Dermatologist)	⌖		✓
	Pemetrexed			✓
	Nelarabine			✓
	Gemcitabine			✓
	Methotrexate	⌖	⌖	✓
Comment	For patients, who are receiving S/C Methotrexate use licensed pre-filled syringe.			
	Mercaptopurine			✓
	Tioguanine			✓

Chapter/Section/Drug		Primary Care: CHPs	Primary Care: Mental Health Specialties	Acute Services
8.1.4	Vinca alkaloids and etoposide			
	Etoposide			✓
	Vinblastine			✓
	Vincristine			✓
	Vinorelbine			✓
8.1.5	Other antineoplastic drugs			
	Aflibercept (Zaltrap®)			✓
	Bortezomib			✓

	Panobinostat (Farydak®)			✓
	Brentuximab vedotin			✓
	Carboplatin			✓
	Cisplatin			✓
	Hydroxycarbamide	⌖	⌖	✓
Comment	A shared care policy is in place for the prescribing and monitoring of hydroxycarbamide in the community			
	Procarbazine			✓
	Amsacrine			✓
	Bevacizumab (Avastin®)			✓
	Cetuximab			✓
	Ipilimumab			✓
	Pembrolizumab			✓
	Dacarbazine			✓
	Everolimus			✓
	Gefitinib			✓
	Imatinib			✓
	Irinotecan			✓
	Bosutinib			✓
	Ceritinib (Zykadia®)			✓
	Dabrafenib			✓
	Idelalisib			✓
	Nilotinib			✓
	Ponatinib			✓
	Regorafenib			✓
	Ruxolitinib			✓
	Sorafenib (Nexavar®)			✓
	Sunitinib			✓
	Vemurafenib (Zelboral®)			✓
	Afatinib (Giotrif®)			✓
	Lipegfilgrastim (Lonquex)			✓
	Oxaliplatin			✓
	Paclitaxel			✓
	Topotecan			✓
	Trastuzumab			✓
	Nintedanib			✓
	Cabazitaxel			✓
	Docetaxel			✓
	Temozolomide			✓
	Eribulin (mesilate)			✓
	Tretinoin			✓
	Erlotinib			✓
	Axitinib (Inlyta®)			✓
	Crizotinib (Xalkori®)			✓
	Cabozantinib (Cabometyx®)			✓
	Carfilzomib (Kyprolis®)			✓
8.2	***Drugs affecting the immune response***			
8.2.1	Antiproliferative immunosuppressants			
	Azathioprine	⌖	⌖	✓
	Mycophenolic acid	⌖	⌖	✓

Chapter/Section/Drug		Primary Care		Acute
		CHPs	Mental Health Specialties	Services
8.2.2	Corticosteroids and other immunosuppressants			
	Ciclosporin [Cyclosporin]	⌖	⌖	✓
	Prednisolone	✓	✓	✓
	Methylprednisolone	⌖	⌖	✓

	Tacrolimus	⌖	⌖	✓
8.2.3	Rituximab			
	Rituximab 10mg/ml Concentrate for infusion (MabThera®)			✓
	Alemtuzumab (Lemtrada®)			✓
	Obinutuzumab			✓
	Blinatumomab (Blincyto®)			✓
	Nivolumab (Opdivo®)			✓
8.2.4	Other immunomodulating drugs			
	Interferon-alfa (Haematology use only)	⌖		✓
	Peginterferon Alfa (Pegasys®)			✓
	Viraferon® (Hepatitis B)			✓
	Interferon alfa 2b (Viraferon & Intron A) 18 million IU. Solution For injection, multidose pen in Combination with ribavarin (Rebetol®) capsules 200mg			✓
	Peginterferon Solution for Injection (Plegridy®) **(Restricted Specialist Use)**			✓
	Dimethyl Fumarate (Tecfidera®)**(Restricted Specialist Use)**			✓
	Fingolimod (Gilenya®) **(Restricted Specialist Use)**			✓
	Glatiramer Acetate (Copaxone) **(Restricted Specialist Use)**			✓
	Mifamurtide			✓
	Lenalidomide (Revlimid®)			✓
	Pomalidomide			✓
	Thalidomide **(Restricted to Consultant Haematologist use only)**			✓
	Mifamurtide			✓
	Natalizumab **(Specialist Initiation)**			✓
	Teriflunomide (Aubagio®) **(Restricted Specialist Use)**			✓
	Others			
	BCG bladder instillation			✓
8.3	***Sex hormones and hormone antagonists in malignant disease***			
8.3.1	Oestrogens			
	Ethinylestradiol [Ethinyloestradiol]	⌖	⌖	✓
8.3.2	Progestogens			
	Medroxyprogesterone acetate	✓	✓	✓
	Megestrol acetate	✓	✓	✓
	Norethisterone	✓	✓	✓
8.3.4	Hormone antagonists			
	Tamoxifen	⌖	⌖	✓
	Abiraterone Acetate			✓
	Anastrozole			✓
	Degarelix	⌖	⌖	✓
	Histrelin	⌖	⌖	✓
	Letrozole	⌖	⌖	✓
	Cyproterone acetate	⌖	⌖	✓
	Enzalutamide (Xtandi®)	⌖	⌖	✓
	Flutamide	⌖	⌖	✓
	Bicalutamide	⌖	⌖	✓
	Goserelin	⌖	⌖	✓
	Exemestane	⌖	⌖	✓
	Leuprorelin (Prostap DCS®)	✓	✓	✓
	Octreotide	⌖	⌖	✓
	Pasireotide (Signifor®)	⌖	⌖	✓

Chapter/Section/Drug	Primary Care		Acute
	CHPs	Mental Health Specialties	Services

9 Nutrition and Blood

See updated Chapter on Forth Valley Intranet:

https://staffnet.fv.scot.nhs.uk/a-z/pharmacy/area-wide/formulary/forth-valley-formulary/

10 Musculoskeletal and joint diseases

See updated Chapter on Forth Valley Intranet:
https://staffnet.fv.scot.nhs.uk/a-z/pharmacy/area-wide/formulary/forth-valley-formulary/

11 Eye

See updated Chapter on Forth Valley Intranet:

https://staffnet.fv.scot.nhs.uk/a-z/pharmacy/area-wide/formulary/forth-valley-formulary/

12 Ear, Nose and Oropharynx

See updated Chapter on Forth Valley Intranet:
https://staffnet.fv.scot.nhs.uk/a-z/pharmacy/area-wide/formulary/forth-valley-formulary/

13 Skin

13.2 Emollient and barrier preparations

Comment	Please refer to Forth Valley Dermatology Guidelines & Emollient guide: This guide is to aid in the choice of a FV formulary product			
13.2.1	Emollients			
Comment	Aveeno products are expensive and non-formulary			
	Emulsifying Ointment	✓	✓	✓
	White soft paraffin	✓	✓	✓
	50:50 Ointment (Liq paraffin/White soft paraffin)	✓	✓	✓
	Cetraben® – alternative for patients unable to use an oily product)	✓	✓	✓
	Dermamist	✓	✓	✓
	Dermacool (Menthol & Aqueous Cream)	✓	✓	✓
	Diprobase® cream	✓	✓	✓
	Doublebase®	✓	✓	✓
	Doublebase Dayleve Gel (only for patient undergoing UVB treatment)	✓	✓	✓
	Emollin	✓	✓	✓
Comment	Dermamist and Emollin are only for use in children whose skin cannot be touched and in adults who need to apply emollients to parts of their body which are difficult to reach			
	Epaderm®	✓	✓	✓
	Hydromol Ointment	✓	✓	✓
	Oilatum®	✓	✓	✓
	Ultrabase®	✓	✓	✓
	Oilatum®	✓	✓	✓
	Zerobase Cream	✓	✓	✓
	Zerocream Cream	✓	✓	✓
	Zeroderm Ointment	✓	✓	✓
Preparations containing urea (for exceptionally dry skin)				
	Balneum Plus® **(1st line)**	✓	✓	✓
	Calmurid® cream	✓	✓	✓
	Eucerin intensive lotion 10%	✓	✓	✓
Emollients with antibacterials				
	Dermol ®	✓	✓	✓
	Eczmol Cream	✓	✓	✓
	Oilatum plus	✓	✓	✓
13.2.2	Barrier preparations			
Comment	Barrier preparations are not appropriate for use in the treatment of eczema			
	Conotrane	✓	✓	✓

13.3 Topical local anaesthetics and antipruritics

	Calamine oily lotion	✓	✓	✓
Comment	The oily lotion gives a more prolonged effect, but contains peanut oil.			
	Crotamiton (Eurax®)	✓		✓
	Doxepin Hydrochloride	⌖	⌖	✓

Chapter/Section/Drug		Primary Care		Acute
		CHPs	Mental Health Specialties	Services
13.4	***Topical corticosteroids***			
Mild	Hydrocortisone - cream/oint	✓	✓	✓
	Haelan ® Tape (Hospital initiation only)	✓	✓	✓
	Haelan® Cream (Hospital initiation only)			
Mild with	Timodine®	✓	✓	✓

Antimicro-bials	Fucidin H®	✓	✓	✓
	Nystaform-HC ® (peri-oral use)	⌖	⌖	✓
	Canesten HC®	✓	✓	✓
	Daktacort®	✓	✓	✓
Moderate	Eumovate® - cream/oint	✓	✓	✓
	Moderate with antimicrobials → Trimovate®	✓	✓	✓
Potent	Betnovate® - cream/oint	✓	✓	✓
	Diprosone® - cream/oint **(2nd line)**	✓	✓	✓
	Betacap®	⌖	⌖	✓
	Betamousse®	⌖	⌖	✓
	Synalar® gel - for scalp use	✓	✓	✓
	Elocon® (Once daily application)	✓	✓	✓
	Potent with antimicrobials →			
	Lotriderm ® **(2nd line)**	⌖	⌖	✓
	Fucibet®	✓	✓	✓
	Betamethasone and clioquinol	⌖	⌖	✓
Very Potent	Clobetasol Propionate	✓	✓	✓
	Clobetasol with neomycin & nystatin	⌖	⌖	✓
	Diprosalic® - oint/scalp application	✓	✓	✓
	Nerisone Forte® **(2nd line)**	⌖	⌖	✓
	Topical cortico-steroids with salicyclic acid Diprosalic ointment/scalp application	⌖	⌖	✓
13.5	***Preparations for eczema and psoriasis***			
Comment	Extemporaneous preparations of "nostrums" containing Ichthammol, Coal Tar or Salicylic acid are no longer "cheap" options. It is highly likely that these will require to be produced by a "Specials" manufacturer at very high cost (upwards of 10 times the expected cost).Therefore, if possible prescribe proprietary preparations which correspond closest to the formulation and strength required.			
13.5.1	Preparations for eczema			
	Ichthammol ointment	✓	⌖	✓
	Zinc paste and ichthammol bandage	⌖	⌖	✓
	Alitretinoin **(Restricted use consultant dermatologists only)**	⌖	⌖	✓
	Steripaste bandage (hospital initiation only)	⌖	⌖	✓
	Silk Clothing (hospital initiation only)	⌖	⌖	✓
	DermaSilk	⌖	⌖	✓
	DreamSkin	⌖	⌖	✓
13.5.2	Preparations for psoriasis			
	Salicylic acid (as part of extemporaneous preparation) (see comments above)	✓	✓	✓
	Calcipotriol	✓	✓	✓
	Dovobet®	✓	✓	✓
	Enstilar®	✓	✓	✓
	Calcitriol Ointment	✓	✓	✓
	Psoriderm	✓	✓	✓
Comment	Psoriderm has been added since Carbo-Dome and Alphosyl HC are no longer available			
	Exorex® - lotion **(2nd line)**	✓	✓	✓

Chapter/Section/Drug		**Primary Care**		**Acute**
		CHPs	**Mental Health Specialties**	**Services**
	Dithranol	✓	✓	✓
	Acitretin			✓
13.5.3	Drugs affecting the immune response			
	Ciclosporin	⌖	⌖	✓
	Methotrexate	⌖	⌖	✓

Comment	Ciclosporin and Methotrexate – Near patient testing under supervision of consultant dermatologist			
	Tacrolimus - ointment **(in accordance with SMC guidance)**	⌖	⌖	✓
	Adalimumab (Humira®)			✓
	Etanercept (Enbrel®)			✓
	Infliximab (Remicade®) **Restricted Advice, Follow SMC Advice**			✓
	Secukinumab (Cosentyx®)			✓
	Ustekinumab (Stelara®)			✓
	Apremilast (Otezla®)			✓
13.6	***Acne and rosacea***			
13.6.1	Topical preparations for acne			
	Benzoyl peroxide (Panoxyl®)	✓	✓	✓
	Benzoyl peroxide and clindamycin gel (Duac®)	✓	⌖	✓
	Azelaic acid **(2nd line)**	✓	⌖	✓
	Clindamycin	✓	⌖	✓
	Erythromycin (Topical)	□ □ ◫✓	□ □✓	□ □◫✓
	Zineryt® lotion	✓	✓	✓
	Adapalene (Differin®) (less irritant than tretinoin)	✓	✓	✓
	Adapalene, Benzoyl peroxide (Epiduo®)	✓	✓	✓
	Isotrex® gel **(1st line)**	✓	✓	✓
	Isotrexin® gel	✓	✓	✓
	Nicotinamide gel	✓	✓	✓
13.6.2	Oral preparations for acne			
	Isotretinoin (specialist use only)			✓
	Co-cyprindiol 2000/35	✓	✓	✓
13.6.3	Brimonidine (Mirvaso®)	✓	⌖	✓
	Invermectin (Soolantra®)	✓	⌖	✓
13.7	***Preparations for warts and callouses***			
	Salicylic acid (Salactol®, Occlusal®) *(Verrugon® - for plantar warts only)*	✓	✓	✓
	Podophyllotoxin - Cream & Solution (Warticon®)		⌖	✓
13.8	***Sunscreens and camouflagers***			
13.8.1	Sunscreen preparations			
	Sunsense® Ultra	✓	✓	✓
	SpectraBan®	✓	✓	✓
	Uvistat® SPF30	✓	✓	✓
	Diclofenac 3% in sodium hyaluronate gel (Solaraze®)	✓	✓	✓
	Fluorouracil 5% cream	✓	✓	✓
	Fluorouracil 0.5% / salicylic acid 10% cutaneous solution (Actikerall®)	⌖	⌖	✓

Chapter/Section/Drug		Primary Care		Acute
		CHPs	Mental Health Specialties	Services
	Imiquimod (Aldara)	✓	✓	✓
	Methly-5-aminolevulinate cream **(Hospital initiation only)**			✓
Comment	Imiquimod - Where surgery is not appropriate or in patients unresponsive to conventional therapy For information and guidelines on the treatment of actinic keratosis please refer to the Primary Care Dermatology Society website at the following link **http://www.pcds.org.uk/clinical-guidance/actinic-keratosis-syn.-solar-keratosis**			
	Ingenol mebutat 150 & 500mg gel	✓	✓	✓

13.8.2	Camouflagers			
Comment	Camouflagers are prescribable for postoperative scars, other deformities, and as an adjunctive therapy for emotional disturbances due to disfiguring skin disease e.g. vitiligo. Prescriptions should be endorsed as "ACBS"			
13.9	***Shampoos and other scalp preparations***			
	Capasal®	✓	✓	✓
	Dermax®	✓	✓	✓
	Ketoconazole shampoo (Nizoral®)	✓	✓	✓
	Polytar®	✓	✓	✓
	Sebco®	✓	✓	✓
	T/Gel®	✓	✓	✓
	Hirsutism			
	Eflornithine 11.5% **(Restriced to SMC Advice)**	✓	✓	✓
13.10	***Anti-infective skin preparations***			
13.10.1	Antibacterial preparations			
	Mupirocin (Bactroban®)- restrict for MRSA	✓	✓	✓
	Silver sulfadiazine (for burns)	✓	✓	✓
	Fusidic acid	✓	✓	✓
	Metronidazole	✓	✓	✓
13.10.2	Antifungal preparations			
	Amorolfine (for fungal nail infections)	✓	✓	✓
	Clotrimazole	✓	✓	✓
	Ketoconazole cream (Nizoral®)	✓	✓	✓
Comment	Nizoral® cream is only prescribable for seborrhoeic dermatitis and pityriasis versicolor and must be endorsed "SLS".			
	Miconazole Nitrate	✓	✓	✓
	Terbinafine	✓	✓	✓
	Tioconazole	✓	✓	✓
13.10.3	Antiviral preparations			
	Aciclovir	✓	✓	✓
13.10.4	Paracitical preparations			
	Dimeticone Lotion (Hedrin®)	✓	✓	✓
	Malathion (Derbac M®)	✓	✓	✓
	Lyclear® Dermal Cream	✓	✓	✓
Comment	Refer to Forth Valley Headlice Policy			
13.10.5	Preparations for minor cuts and abrasions			
	Histoacryl®	✓	✓	✓
13.11	***Skin cleansers, antiseptics, and desloughing agents***			
13.11.1	Alcohols and saline			
	Industrial Methylated Spirit	✓	✓	✓
	Sodium Chloride 0.9%	✓	✓	✓
13.11.2	Chlorhexidine salts			
	Chlorhexidine	✓	✓	✓
13.11.4	Chlorine and iodine			
	Povidone-iodine	✓	✓	✓

Chapter/Section/Drug		Primary Care		Acute
		CHPs	Mental Health Specialties	Services
13.11.5	Phenolics			
	Triclosan		✓	✓
13.11.6	Oxidisers and dyes			
	Crystacide® **(Only for use if resistance develops)**	✓	✓	✓
	Potassium permanganate	✓	✓	✓

13.12	***Antiperspirants***	
	Aluminium Salts	✓

14 Immunological products and vaccines

See updated Chapter on Forth Valley Intranet:
https://staffnet.fv.scot.nhs.uk/a-z/pharmacy/area-wide/formulary/forth-valley-formulary/

15 Anaesthesia

See updated Chapter on Forth Valley Intranet:
https://staffnet.fv.scot.nhs.uk/a-z/pharmacy/area-wide/formulary/forth-valley-formulary/

Appendices

10 Emollient guide: This guide is to aid in the choice of a FV formulary product
11 Further Guidance on Hypoglycaemic Agents on Forth Valley Formulary

Pharmacy Services

Guidance on Issuing Steroid Cards

This advice has been produced by the Forth Valley Airways Group

Inhaled Steroids

Steroid Cards should be issued to the following patients[1,2,3]

	Inhaled Steroid	Threshold Dose (per day)
Adults	Beclometasone	Dose > 1000mcg[4]
	Budesonide	Dose > 800mcg[4]
	Fluticasone	Dose > 500mcg[4]
	Mometasone *(Non – Formulary)*	Dose > 800mcg[4]
	Ciclesonide *(Non – Formulary)*	Dose > 320mcg[4] **Unlicensed dose**

Children	Beclometasone	Dose > 400mcg[1] (age not stated)
	Budesonide	Dose > 800mcg[1] (12 years and under)
	Fluticasone	Dose > 400mcg[1] (4-16 years)
	Mometasone *(Non – Formulary)*	Dose > 800mcg[1] (12-16 years)
	Ciclesonide *(Non – Formulary)*	Dose > 320mcg[4] (12-16 years) **Unlicensed dose**

Systemic Steroids

Steroid Cards should be issued to the following patients[1,2,3]

Adults

- Receiving repeated courses, 2-3 courses per year (particularly if taken for longer than 3 weeks)
- Taking a short course within 1 year of stopping long-term therapy
- Receiving more than 40mg prednisolone daily (or equivalent)
- Receiving repeated doses in the evening
- Receiving more than 3 weeks treatment
- Patients with other possible causes of adrenal suppression

Children

- As above except[5]:
  - Receiving more than 20mg prednisolone daily for children < 5 years
  - Receiving more than 30mg prednisolone daily for children > 5 years

These patients are at risk of disease relapse and/or hypoadrenalism if treatment is withdrawn rapidly[2]

Chemotherapy Patients – Acute Pharmacy Services

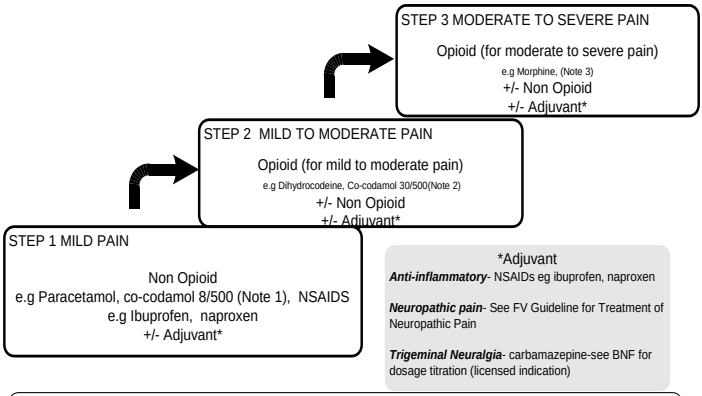
Pharmacists providing clinical check on chemotherapy prescriptions will endorse any prescription that requires a steroid card to be given

References:*1. CSM. Current problem in pharmacovigilance. May 2006; 31:5 2. Scottish Executive. Steroid treatment cards. SEHD/CMO (2006) 10. 26th July 2006 3. BNF 52. BMJ/RPS. September 2006 4. GINA Guideline 2006 5. Personal correspondance. Dr. McFadyen. Consultant Paediatrician. Stirling Royal Infirmary. 27.10.2006. Lead Pharmacsit Clare Colligan* ***Review August 2014***

Appendix 2

The Use of Oral Analgesics for Pain in Primary Care

The World Health Organisation's three-step analgesic ladder for cancer pain (see below) may also be used for non-malignant chronic or acute nociceptive pain. Analgesics should be started at the 'step' most appropriate to the patient's level of pain. Decision on analgesic choice depends on the type of pain, patient factors and supporting clinical evidence. For pain that is present constantly, analgesia should be prescribed regularly and not on an "as required" basis. For more detailed guidance on the management of chronic non malignant pain, please refer to **West of Scotland Chronic Non Malignant Pain Opioid Prescribing Guideline**



NOTE 1:
Compound analgesics containing a low dose of opioid (e.g 8mg of codeine phosphate per tablet) are commonly used, but the advantages have not been substantiated. Effervescent preparations of compound analgesics may contain high levels of sodium. For patients requiring low sodium intake please refer to individual Summary of Product Characteristics.

NOTE 2:
Prescribe regular laxatives when opioids are being taken regularly

NOTE 3 : Advice regarding strong opioids
Distinguish between malignant and non malignant chronic pain and refer to guideline as appropriate. In non malignant chronic pain max recommended morphine equivalent dose is 60mg bd (or fentanyl 25mcg patch) before considering pain clinic referal. Avoid short acting opioids for breakthrough in non malignant chronic pain.
Malignant
Use oral route first, start with normal release oral morphine eg 5-10mg every 4 hours and as required for breakthrough pain.
A 2.5mg dose may be enough in the elderly or those with renal impairment. Consider alternative opioids ony if experiencing side effects to morphine or can no longer manage oral route
Every patient on regular opioid should have access to breakthrough analgesia (equivalent to 1/6th total dose oral morphine).
Start regular laxative and prophylactic ant-emetic as required for 7-10 days

NOTE 4: Consider self help booklets and pain assessment tools in non malignant pain.
e.g. PADT (http://www.healthinsight.org/Internal/assets/SMART/PADT.pdf) , NRS, VAS and opioid risk tools..

Date of Approval	August 2013
Review Date	August 2014
References	BNF March 2013, Relief of Pain and Related Symptoms – The Role of Drug Therapy - Scottish Partnership Agency

Pharmacist Lead: Moira Baillie

Appendix 2

General Advice on Pain Management in Non Malignant Chronic Pain

Accurate assessment should be undertaken to determine the cause, type and severity of pain and effect on patient (anxiety/depression, neuropathic, mechanical, psychosocial).

Non-pharmacological interventions
Consideration should be given **at all stages** to utilising non-pharmacological interventions eg TENS, acupuncture, physiotherapy, weight loss, exercise, stress management counselling, pain management programmes, Pain Association Scotland and self management booklets available in practices.

1. **Optimise non-opioid (ie paracetamol and/or NSAID) or opioid treatment**
    - Titrate doses to achieve optimal balance between analgesic benefit, side effects and functional improvement
    - For continuous pain, ensure maximum **tolerated** dose is prescribed on a regular basis, by the clock, not 'prn'.
2. **Add in adjuvant**
    - Consider adjuvant drugs (any drug that has a primary indication other than for pain management but is analgesic in some painful conditions) and choose the class of drug according to **your assessment** of type of pain (see shaded box on the WHO analgesic ladder)[(1)].
    - Adjuvants can provide greater pain relief and less toxicity with lower doses of each drug given. **Start low and go slow (for TCA's and anticonvulsants)**
    - Topical NSAIDs are recommended for short term usage (up to 6 weeks) for small joint pain – wrist, elbow, knees and ankles [(2)]
3. **Give adequate length of trial**
    - neuropathic / inflammatory pain – 2-4 weeks to take effect and continue for 8 weeks, if tolerated, then assess
    - non-opioid / opioid – 1 month at regular, maximal doses
4. **Assess regularly using PADT or Numerical Rating Scale (ask the patient to rate their pain on a score of 1 to 10) or Visual Analogue Scale and consider stop if 30% improvement and / or significant improvement in functional ability is not achieved.**
5. If pain treatment effective, **consider withdrawal of treatment after significant improvement every 6 months** with careful review [(3)]
6. If pain management still uncontrolled, **refer to pain clinic or if non malignant pain if no/little pain relief on equivalent daily dose morphine 60mg bd**

Appendix 2

Tramadol in Non Malignant Pain

If co-codamol 30/500 + adjuvant drug therapies are ineffective or side-effects are not tolerated, tramadol could be considered. Tramadol should **not be co-prescribed with co-codamol** and should **not be considered as first line therapy.**

Tramadol is licensed for moderate to severe pain and is approximately twice as potent as codeine[(3)]. It is promoted as between WHO step 2 analgesics for moderate pain (eg codeine) and WHO step 3 analgesics (morphine). Hallucinations, confusion and convulsions as well as drug dependence, abuse and withdrawal are reported at therapeutic doses. There is some evidence for Tramadol in the treatment of neuropathic pain.
Consultation is out whether to re classify as a schedule 3.

Ref

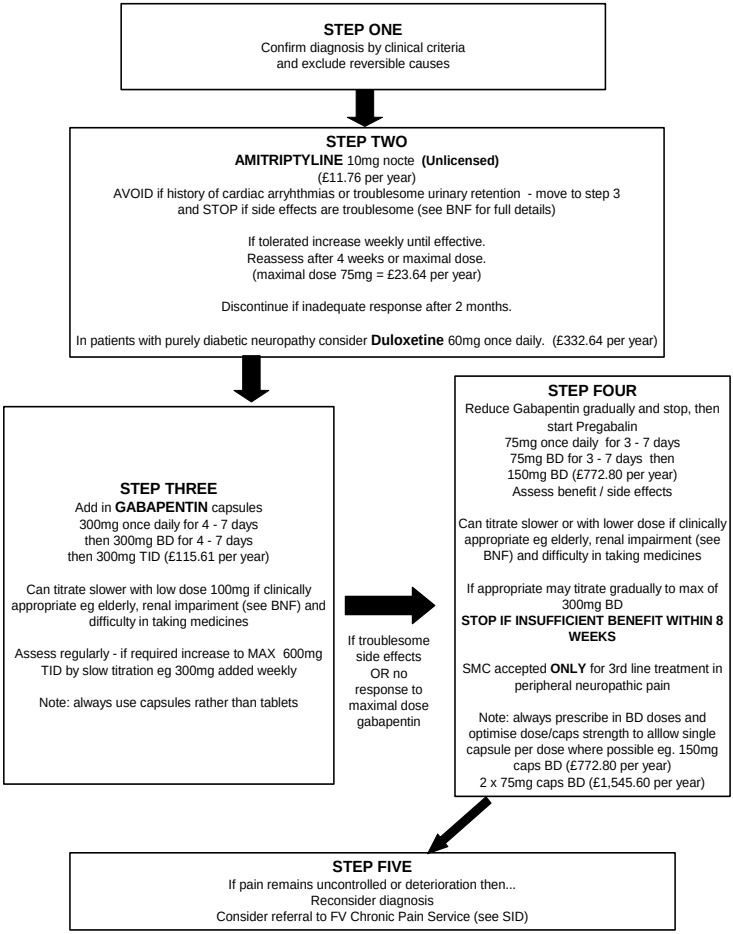
1.SIGN 106. Control of pain in adults with cancer November 2008
2.NICE Osteorthritis February 2008
3. MeReC Briefing. Issue 22, 2003.The use of strong opioids in palliative care
4. Cochrane Database Systematic Review 2006 July 19; (3):CD003726

Appendix 3

*Forth Valley Guideline for Treatment of Neuropathic Pain**

Forth Valley Guideline for Treatment of Neuropathic Pain*

This guidance EXCLUDES Trigeminal Neuralgia (use Carbamazepine first line)



Neuropathic pain* - Pain caused by a lesion or disease of the somatosensory nervous system

(International Association for the Study of Pain July 2011) Ref. BNF, NICE, SIGN 116, prices based on MIMS Novemeber 2011 and Scottish Drug Tariff November 2011 Version 4 30/11/11

Acute Services
Phenytoin Loading Guidelines For Status Epilepticus

Parenteral Phenytoin is an antiepileptic used for the control of status epilepticus and seizures due to head trauma. **These guidelines apply to adults only**.

Drug Presentation:
Phenytoin is available as a 50mg/ml (250mg/5ml) injection. If the injection or infusion has precipitated or is hazy it should be discarded.

- Continuous ECG monitoring is mandatory when administering this drug.
- For administration on designated areas only - A&E, Intensive Care areas, Acute Admissions Unit.

Status Epilepticus-Loading Dose
1. For patients not previously receiving phenytoin **:** 18mg/kg

Preparation:
Dilute with sodium chloride 0.9% to a maximum concentration of 10mg/ml e.g. 1000mg in 100ml.

The solution must be given immediately.

Administration:
DO NOT ADMINISTER INTRAMUSCULARLY

Intravenous Bolus:
Rate should **NOT** exceed 50mg/min (e.g. 20 minutes for a 1000mg dose). Administer into a large vein via a large gauge needle or IV catheter.

Intravenous Infusion:
Rate should NOT exceed 50mg/min. The infusion must be completed within one hour. Administer via an in-line filter (0.22-0.5micron) which is available on the ward. Sterile saline should be administered prior to and following phenytoin administration through the same access site to avoid local irritation and to ensure adequate venous flow.

Important Side-effects:
CNS and cardiac depression, hypotension, local tissue irritation, arrhythmias. Cardiac resuscitation equipment should be available.

Monitoring:
ECG, blood pressure, signs of respiratory depression.
Blood levels should only be taken if the patient shows signs of toxicity or is uncontrolled. This should be taken immediately prior to the next dose and levels of 10-20mg/litre aimed for.

References:
1. British National Formulary
2. Manufacturers Datasheet Compendium 2010.
3. Handbook of Clinical Drug Data, 8th Edition, 1997-98.
4. A Thomson, Clinical Pharmacokinetics Unit, Glasgow, November 1995

Acute Services
Phenytoin Guidelines For Maintenance therapy

Maintenance Dose : 5mg/kg/day (IV or oral as appropriate)

Monitoring Concentrations

Target Range : 10 – 20 mg/L

Sampling Time : predose not critical
Ideally samples should be taken after at least 5 days of maintenance therapy but may be taken earlier if toxicity is suspected or if a patient fails to respond. Steady state may not be reached until 2-3 weeks treatment at a constant dose.

Dose Adjustment
The relationship between phenytoin dose and steady state concentration is non-linear i.e. when the dose is doubled the concentration will increase disproportionately. The following guidelines may be useful if a dosage adjustment is clinically indicated.

Concentration (mg/L)	Dose	Dose Increase
<5	<4mg/kg/day	100mg
<5	4.5-6.0mg/kg/day	check compliance
5 - 10	4.5-6.0mg/kg/day	50mg
5 - 10	>6mg /kg/day	check compliance
>10		25mg

Phenytoin Formulations
Phenytoin sodium 100mg capsules/tablets/ injection = phenytoin suspension 90mg in 15ml

Factors Affecting Phenytoin Concentrations

Protein Binding Binding can be reduced in renal impairment, hypoalbuminaemia and pregnancy. This affects the interpretation of concentration measurements.

The following equation can be used to correct the total phenytoin concentration for low albumin:

$$\text{Corrected concentration} = \frac{\text{Concentration observed}}{(0.9 \times \text{albumin concentration} / 44\ \text{g/L}) + 0.1}$$

Drug Interactions
Phenytoin concentrations can be increased or decreased by other drugs. Check the current BNF for details.

References:
1. British National Formulary
2. Manufacturers Medicines Compendium 2010.
3.A Thomson, Clinical Pharmacokinetics Unit, Glasgow, November 1995

Pharmacist Lead : C. Monaghan

Therapeutic Drug Monitoring Guidelines

DRUGS				
Drug	**Time to steady state**	**Ideal Sampling time**	**Target range**	**Comments**
Carbamazepine	2-3 weeks (new therapy) 2-4 days (dose change)	Pre dose (not critical)	4 – 12 mg/L	Metabolised by the liver, autoinduction See BNF for interactions
Digoxin	7-10 days (depends on renal function)	> 6 hours post dose	0.5 – 2.0μg/L	Mainly renal excretion See BNF for interactions
Lithium	5-7 days	12 hours post dose	0.4-1.0 mmol/L	Renal excretion
Phenytoin	2-3 weeks	Pre dose (not critical)	10-20 mg/L	Metabolised in liver. Non linear increase in conc with dose.
Theophylline	2-3 days	8-12 hours post dose	10-20 mg/L	Metabolised in the liver.
Valproic acid	3 days	Pre dose	40-100 mg/L	Metabolised in the liver. Levels do not correlate well with therapeutic effect

Genito-Urinary Medicine List

The following products are not included in the Formulary but are available for restricted use by GUM Clinics:-

Antimicrobials

Erythromycin capsules
Procaine Benzylpenicillin[Procaine penicillin] injection (UNLICENSED PRODUCT)
Spectinomycin injection (UNLICENSED PRODUCT)
Benzathine penicillin (UNLICENSED PRODUCT)

Antiretrovirals

Nucleoside Reverse Transcriptase Inhibitors (NRTIs)
Abacavir
Didanosine
Emtricitabine
Lamivudine
Stavudine
Tenofovir
Zidovudine

Combined NRTIs
Elvitegravir + cobicistat + emtricitabine + tenofovir (Stribild®)
Elvitegravir + cobicistat + emtricitabine + tenofovir (Genvoya®)
Emtricitabine/Tenofovir (Truvada®)
Abacavir / Lamivudine (Kivexa®)
Abacavir / Lamivudine / Zidovudine (Trizivir®)
Lamivudine / Zidovudine (Combivir®)
Atazanavir / cobicistat 300mg/150mg (Evotaz®)

Non-Nucleoside Reverse Transcriptase Inhibitors (NNRTIs)
Efavirenz
Etravirine
Nevirapine
Rilpivirine (Edurant®)

NRTI & NNRTI Combination Product
Efavirenz/emtricitabine/tenofovir (Atripla®)
Emtricitabine/Tenofovir/Rilpivirine (Eviplera®)
Emtricitabine/Tenofovir/Alafenamide (Descovy®)
Rilpivirine/emtricitabine/tenofovir alafenamide (Odefsey®)

Protease Inhibitors (PIs)
Atazanavir
Fosamprenavir
Lopinavir / Ritonavir (Kaletra®)
Ritonavir
Saquinavir
Tipranavir
Darunavir
Darunavir 800mg, cobicistat 150mg f/c tablets (Rezolsta®)

Other Antiretrovirals
Raltegravir (As per SMC Guidance)
Maraviroc
Dolutegravir (Tivicay®)

Topical preparations

Clindamycin 2% cream, Econazole 1% cream, Imiquimod 5% cream
Unguentum M cream

Recommendations for Blood Glucose Monitoring

Type 1 diabetes

All patients with Type 1 diabetes need to be able to self-monitor blood glucose – the extent to which they do this will reflect how useful they find the information it. Driving legislation states that patients with type 1 diabetes should test before driving every time, and every 2 hours during long car journeys.

Type 2 diabetes

Patients on insulin or sulphonylurea medication are at risk of hypoglycaemia and should be able to monitor blood glucose to identify this. The driving rules also apply to patients with type 2 diabetes who use insulin.
Patients who combine nocturnal insulin with oral hypoglycaemic agents will need to test fasting blood glucose in order to dose-titrate.
Some patients who manage their diabetes with diet or on metformin and are therefore not at risk of hypoglycaemia, will nonetheless find it helpful to be able to test their blood glucose periodically, e.g. to confirm a stable level of glycaemic control or during a period of ill-health. Those who periodically are treated with steroids may find it useful to be able to test at these times – some patients use sulphonylureas or even insulin during a course of prednisolone, reverting to diet alone afterwards.
If there is a suspicion that a patient with Type 2 diabetes is likely to become insulin-requiring it is prudent to ensure they are able to blood glucose monitor.

However in patients at no risk of hypoglycaemia who would not gain any benefit from self blood-glucose monitoring, regular HbA1c checks is an acceptable way of assessing glycaemic control.

Target blood glucose levels

Target blood glucose levels should be individualised.
Textbook values would be 4-7 mmols fasting, 7-8 mmols pre-meals and less than 9 mmols post-prandially. However, whilst we recognise an HbA1c < 48mmol/mol greatly reduces the risk of microvascular complications, it increases the risk of hypoglycaemia. Those with a short life expectancy, impaired awareness of hypoglycaemia, mobility or visual problems may benefit from a higher target blood glucose range. Furthermore introduction of very tight glycaemic control may increase morbidity and mortality in those at risk of ischemic heart disease.

Lead Dr. Alison MacKenzie /Dr. Linda Buchanan

Appendix 8

Blood Glucose Meter Recommendations

See updated Appendix on Forth Valley Intranet:

https://staffnet.fv.scot.nhs.uk/a-z/pharmacy/area-wide/formulary/forth-valley-formulary/

Appendix 9

FORTH VALLEY ACUTE HOSPITALS
PRESCRIBING GUIDELINES PHARMACY DEPARTMENT

HYPOPHOSPHATAEMIA in ADULTS

Risk factors for hypophosphataemia include critical illness, a period of starvation prior to nutritional support, malnutrition, alcoholism, and respiratory alkalosis.

Phosphate supplementation should be considered where there is evidence of phosphate deficiency. Serum phosphate does not always correlate to total body stores as most phosphate is stored intracellularly. The onset and severity of symptoms will determine the need for and type of treatment

Drug Presentation:

Addiphos® 20ml vial containing : phosphate 40 mmol (2mmol phosphate /ml)
potassium 30 mmol
and sodium 30 mmol

No other drugs should be added to a phosphate infusion.

No other drugs should be co administered at a Y site with phosphate.

Caution should be used if the patient has renal impairment.

Mild to moderate deficiency : usually associated with levels of 0.3-0.6mmol/l and is usually asymptomatic

Severe deficiency: usually associated with levels less than 0.3mmol/l, especially if symptomatic.

Drugs and Administration

INTRAVENOUS:

In acute deficiency, or when a clinical difference to serum phosphate needs to be assured quickly.

- 20mmols phosphate (10mls Addiphos) over 6 hours in 100mls 0.9% N Saline through a central line, or 20mmols phosphate (10mls Addiphos) in 500mls 0.9% N Saline over 12 hours through a peripheral line.
- In cases where the hypophosphataemia is symptomatic, or if prolonged phosphate wastage has occurred, then the dosage may be repeated within 12 hours and a level obtained several hours after the end of the infusion

Oral – see notes on diarrhoea before contemplating oral replacement

- 1-2 Phosphate Sandoz ® tablets (see BNF) three times a day (provides 48 - 96mmol phosphate, 60-120mmol sodium and 9-18mmol potassium per day)
- Continued therapy may be required depending on clinical response/adverse effects.
- Oral phosphate is slow to effect and should be used in slow-losers of phosphate only, and not when a rapid response is required.

Appendix 9

Important side effects[2]

Hyperphosphataemia	Symptoms may be those of resultant hypocalcaemia namely, muscle cramps, tetany and convulsion and metastatic calcification.
Hyperkalaemia and Hypernatraemia	As a result of infusion of these elements along with phosphate
Hyperphosphataemia Hypotension Hypocalcaemia	High dose rapid infusions of phosphate. Excessive doses of phosphates may cause hypocalcaemia and metastatic calcification; it is **essential** to monitor closely plasma concentrations of calcium, phosphate, potassium and other electrolytes. Treatment of adverse effects involves withdrawal of phosphate infusion, general supportive measures and correction of serum electrolyte concentrations, especially calcium.
Diarrhoea with oral therapy	Oral phosphate is poorly absorbed from the gut and may cause diarrhoea, with the potential to exacerbate losses of Magnesium, Sodium, Potassium and water. .

Precautions

In renal impairment, Addisons disease and where restricted sodium or potassium intake is required e.g.. cardiac failure, hypertension, hyperkalaemia, severe oedema. Care should be taken when replacing phosphate to minimise electrolyte disturbances and the biochemist should be contacted for advice.

Monitoring

Blood pressure monitoring is advised
Calcium, magnesium, phosphate, potassium and other electrolyte monitoring is essential. Phosphate levels should be checked at least 6 hours after the end of the infusion[3]

Acknowledgements

Jane Sillars Senior Dietitian
Mark Holliday Consultant Biochemist

References June 2012-

1. Walmsley RN, Guerin MD. Disorders of fluid and electrolyte balance. Bristol 1984. Wright publishing
2. Thatte L, Oster J et al. Review of literature: Severe Hyperphosphataemia. Am J Med Sciences 1995; 310(4):167-174
3. Bugg NC, Jones A Hypophosphataemia. Anaesthesia 1998;53:895-902

Note: June 2012 This guideline is currently under review

Pharmacist Lead: Peter Buckner

Appendix 10

Emollient guide: This guide is to aid in the choice of a FV formulary product.

(3:1 products can be used as bath additive, soap substitutes and as 'leave on' emollients)

VERY GREASY OINTMENT
Liquid and White Soft Paraffin Ointment
White soft paraffin
GREASY OINTMENT
Zeroderm ointment (3:1)
Hydromol ointment (3:1
Epaderm ointment (3:1)
Emulsifying ointment BP
Dermamist spray*
Emollin (liquid paraffin 50%, white soft paraffin 50%) spray*
GEL
Doublebase gel
Doublebase Dayleve gel – only for patients undergoing UVB treatment
CREAM
Zerobase cream
Ultrabase cream
Epaderm cream
Diprobase cream
Cetraben cream
Oilatum cream
CREAM WITH ANTIBACTERIALS
Dermol cream
Eczmol cream
CREAM WITH UREA (FOR EXCEPTIONALLY DRY SKIN)
Balneum plus (urea 5%)
Calmurid (urea 10%)
LIGHT CREAM
Zerocream (same as E45)
Dermol 500 lotion (with antimicrobial)
Eucerin intensive lotion (with urea 10%)
EMOLLIENT BATH AND SHOWER PREPS WITH ANTIMICROBIALS
Dermol 600 bath emollient
Oilatum plus
* Dermamist and Emollin are only for use in children whose skin cannot be touched and in adults who need to apply emollients to parts of their body which are difficult to reach.

Appendix 11 **FURTHER GUIDANCE ON ORAL HYPOGLYCAEMIC AGENTS ON FORTH VALLEY FORMULARY**

This appendix provides detailed guidance on the formulary choices for oral hypoglycaemic agents. The drug classes are colour coded, with the place in therapy of each drug within that group highlighted. Please refer to the FV diabetes management guidelines available on the intranet for the place in therapy for each class

DRUG	CLASS	PLACE IN THERAPY	DOSE	DOSE CHANGES	CAUTIONS/CONTRAINDICATIONS
METFORMIN	BIGUANIDE	FIRST LINE CAN BE COMBINED WITH ALL ORAL AND INJECTABLE HYPOGLYCAEMIC AGENTS	INITIALLY 500MG DAILY INCREASING TO 2 GRAMS DAILY	STOP IF eGFR <30	• TAKE WITH FOOD • CHANGE TO MR IF GI INTOLERANT • AVOID IN KETOACIDOSIS • CHECK VITAMIN B12 ANNUALLY IF LONGTERM USE • AVOID IF IODINE CONTAINING CONTRAST USED
GLICLAZIDE	SULPHONYLUREA	USE IF BMI<25 or symptomatic or metformin intolerant DOSE SHOULD BE REVIEWED IF ANOTHER ORAL HYPOGLYCAEMIC AGENT ADDED	40-320MG DAILY	AVOID IN SEVERE RENAL IMPAIRMENT AVOID IN HEPATIC IMPAIRMENT	• HYPOGLYCAEMIA • WEIGHT GAIN • AVOID IN PREGNACY AND BREASTFEEDING • REVIEW DOSE IN ELDERLY PATIENTS (>75 YEARS)
GLIMEPIRIDE	SULPHONYLUREA	ALTERNATIVE TO GLICLAZIDE IF COMPLIANCE PROBLEMS DOSE SHOULD BE REVIEWED IF ANOTHER ORAL HYPOGLYCAEMIC AGENT ADDED	1-6MG DAILY WITH BREAKFAST	AVOID IN SEVERE RENAL AND HEPATIC IMPAIRMENT	• HYPOGLYCAEMIA • WEIGHT GAIN • AVOID IN PREGNACY AND BREASTFEEDING • REVIEW DOSE IN ELDERLY PATIENTS (>75 YEARS)
PIOGLITAZONE	THIAZOLIDINEDIONE (TZD)	DUAL OR TRIPLE THERAPY WITH METFORMIN/SU	15-45MG DAILY	**AVOID IN HEPATIC IMPAIRMENT** DIP URINE BEFORE INITIATING TREATMENT AND IF MICROSCOPIC HAEMATURIA PRESENT DO NOT PRESCRIBE **CAN BE USED WITH INSULIN UNDER SPECIALIST SUPERVISION**	• AVOID IF HEART FAILURE • ACTIVE OR HISTORY BLADDER CANCER • UNINVESTIGATED MACROSCOPIC HAEMATURIA • AVOID IN ELDERLY • AVOID IF HIGH FRACTURE RISK • MONITOR LFT BEFORE AND DURING TREATMENT • AVOID PREGNANCY AND BREASTFEEDING

Appendix 11 **FURTHER GUIDANCE ON ORAL HYPOGLYCAEMIC AGENTS ON FORTH VALLEY FORMULARY**

This appendix provides detailed guidance on the formulary choices for oral hypoglycaemic agents. The drug classes are colour coded, with the place in therapy of each drug within that group highlighted. Please refer to the FV diabetes management guidelines available on the intranet for the place in therapy for each class

ALOGLIPTIN	DPP4 INHIBITOR	FIRST CHOICE DPP4 DUAL THERAPY WITH EITHER METFORMIN OR SU, TRIPLE THERAPY (SEE CONSENSUS STATEMENT) INSULIN ADD ON	25MG ONCE DAILY	eGFR 30-50: 12.5mg eGFR <30 : 6.25mg DOSES OF SU, INSULIN MAY REQUIRE TO BE REDUCED IF USED CONCOMITANTLY	• CAUTION IN MODERATE / SEVERE HEART FAILURE • AVOID IF HISTORY ACUTE PANCREATITIS • AVOID PREGNANCY / BREASTFEEDING • AVOID SEVERE HEPATIC IMPAIRMENT • AVOID IN KETOACIDOSIS
LINAGLIPTIN	DPP4 INHIBITOR	DPP4 FOR PATIENTS WITH RENAL IMPAIRMENT MONO, DUAL WITH METFORMIN OR TRIPLE (METFORMIN /SU) USE WITH INSULIN	5MG ONCE DAILY	NONE DOSES OF SU, INSULIN MAY REQUIRE TO BE REDUCED IF USED CONCOMITANTLY	• AVOID PREGNANCY / BREASTFEEDING • AVOID IF HISTORY ACUTE PANCREATITIS • CAUTION IN HEPATIC IMPAIRMENT
EMPAGLIFLOZIN	SGLT2 INHIBITOR	FIRST CHOICE SGLT2 MONO DUAL TRIPLE INSULIN ADD ON	10MG ONCE DAILY	CAN CONTINUE IF eGFR < 60 WHEN ON TREATMENT IF eGFR <45 STOP DOSES OF SU, INSULIN MAY REQUIRE TO BE REDUCED IF USED CONCOMITANTLY	• NO INTIATION IF eGFR <60 • AVOID IN SEVERE HEPATIC IMPAIRMENT • AVOID PREGNANCY / BREASTFEEDING • AVOID IN PATIENTS >85 YEARS • AVOID IF ON LOOP DIURETICS • CORRECT HYPOVOLAEMIA BEFORE INITIATION • AVOID IF KETOACIDOSIS • CAUTION IF RECURRENT UTI / GENITAL INFECTION • REINFORCE THE IMPORTANCE OF GOOD FOOTCARE • STOP IF DEVELOP ANY FOOT COMPLICATIONS AND CONSIDER ALTERNATIVE CLASS

Appendix 11 **FURTHER GUIDANCE ON ORAL HYPOGLYCAEMIC AGENTS ON FORTH VALLEY FORMULARY**

This appendix provides detailed guidance on the formulary choices for oral hypoglycaemic agents. The drug classes are colour coded, with the place in therapy of each drug within that group highlighted. Please refer to the FV diabetes management guidelines available on the intranet for the place in therapy for each class.

DAPAGLIFLOZIN	SGLT2 INHIBITOR	PATIENTS ALREADY PRESCRIBED OR INTOLERANT TO OTHER SGLT2 DUAL WITH METFORMIN TRIPLE INSULIN ADD ON	10MG DAILY	5MG IN SEVERE HEPATIC IMPAIRMENT	• AVOID IF eGFR <60 • AVOID PREGNANCY(2 /3 TRIMESTER) / BREASTFEEDING • AVOID IN PATIENTS >75 YEARS • AVOID IF ON LOOP DIURETICS • AVOID IF ON PIOGLITAZONE • CORRECT HYPOVOLAEMIA • AVOID IN KETOACIDOSIS • REINFORCE THE IMPORTANCE OF GOOD FOOTCARE • STOP IF DEVELOP ANY FOOT COMPLICATIONS AND CONSIDER ALTERNATIVE CLASS
EXENATIDE	GLP1	HBa1C >59 SECOND LINE TREATMENT IF BMI > 40 THIRD LINE IF BMI>30 AND DIABETES <10 YEARS	2MG WEEKLY (BYDUREON)	AVOID IF eGFR<50 AVOID IF LFT'S ARE ABNORMAL	• AVOID PREGNANCY AND BREASTFEEDING • AVOID SEVERE GI DISEASE/ GASTROPARESIS • AVOID IN PANCREATITIS / CHOLECYSTITIS/ HIGH ALCOHOL INTAKE • HbA1C MUST REDUCE BY 11mmol/mol AT 3 MONTHS TO CONTINUE
LIRAGLUTIDE	GLP1	FIRST CHOICE IF PATIENT <55 YEARS HBa1C >59 SECOND LINE TREATMENT IF BMI > 40 THIRD LINE IF BMI>30 AND DIABETES <10 YEARS	0.6 mg ONCE DAILY TITRATED TO A MAXIMUM 1.8MG DAILY	AVOID IF eGFR <30 AVOID IF LFT'S ARE ABNORMAL	• AVOID PREGNANCY AND BREASTFEEDING • AVOID SEVERE GI DISEASE/ GASTROPARESIS • AVOID IN PANCREATITIS / CHOLECYSTITIS • HbA1C MUST REDUCE BY 11mmol/mol AT 6 MONTHS TO CONTINUE
XULTOPHY	BASAL INSULIN / GLP1	ADD ON TO EXISTING ORAL HYPOGLYCAEMIC AGENTS	INITIALLY BETWEEN 10-16 DOSE STEPS ONCE DAILY MAXIMUM 50 DOSE STEPS DAILY	AVOID IN HEPATIC AND SEVERE RENAL IMPAIRMENT	• AVOID PREGNANCY AND BREASTFEEDING • AVOID SEVERE GI DISEASE/ GASTROPARESIS • AVOID IN PANCREATITIS / CHOLECYSTITIS

Publications in Alternative Formats

NHS Forth Valley is happy to consider requests for publications in other language or formats such as large print.

To request another language for a patient, please contact 01786 434784.

For other formats contact 01324 590886,

text 07990 690605,

fax 01324 590867 or

e-mail - fv-uhb.nhsfv-alternativeformats@nhs.net