SHARED CARE AGREEMENT: TENOFOVIR DISOPROXIL▼

NHS GREATER GLASGOW AND CLYDE

NB: This document should be read in conjunction with the current Summary of Product Characteristics (SPC)

DRUG AND INDICATION:

Generic drug name:	**Tenofovir disoproxil (TDF)**
Formulation:	Film-coated tablet containing 245 mg of tenofovir disoproxil
Intended indication:	Chronic hepatitis B infection in adults with either: • compensated liver disease with evidence of active viral replication, liver inflammation and/or fibrosis. • decompensated liver disease.
Status of medicine or treatment:	Licensed medicine Formulary medicine

RESPONSIBILITIES OF ACUTE CARE/SPECIALIST SERVICE (CONSULTANT):

- Undertake baseline investigations/monitoring and initiate treatment or ask GP to initiate treatment.
- If appropriate, ensure that the patient has an adequate supply of medication (usual minimum of 28 days) until the shared care arrangement are in place
- Dose adjustments

Acute care/specialist service will provide the GP with:

- An initiation letter (which includes diagnosis, relevant clinical information, treatment plan, duration of treatment before consultant review)
- Letter of outpatient consultations, ideally within 14 days of seeing the patient

Acute care/specialist will provide the patient with relevant drug information to enable:

- Understanding of potential side effects
- Understanding of the role of monitoring

RESPONSIBILITIES OF PRIMARY CARE (GENERAL PRACTITIONER):

- To prescribe in collaboration with the acute specialist according to this agreement
- To ensure the continuous prescription of medication until treatment is discontinued at specialist instruction
- Liaison with the hospital specialist in the event of symptoms or abnormal results thought due to this treatment

RESPONSIBILITIES OF PATIENT:

- To attend hospital and GP clinic appointments. Failure to attend appointments may result in medication being stopped
- To report adverse effects to their specialist or GP
- To request repeat prescriptions from the GP prior to current prescription finishing

ADDITIONAL RESPONSIBILITIES:

- None

CAUTIONS:

- Renal impairment: dosage adjustment is recommended for patients with creatinine clearance < 50 ml/min, (see SPC).
- Avoid concurrent use of nephrotoxic drugs
- Exacerbations of hepatitis
- Lactic acidosis
- Liver transplant recipients
- Co-infection with hepatitis C or D
- Human immunodeficiency virus (HIV)/HBV co-infected patients – use with other antivirals
- Pregnancy and breastfeeding

CONTRAINDICATIONS:

Hypersensitivity to the active substance or to any of the excipients

TYPICAL DOSAGE REGIMEN:

Route of administration:	Oral administration.
Recommended starting dose:	245 mg (one tablet) every 24 hours taken orally with food.
Titration of dose:	No
Maximum dose:	245 mg once daily
Conditions requiring dose adjustment:	Renal impairment.
Usual response time:	Variable, depends on HBV viral load and host factors
Duration of treatment	Treatment with tenofovir disoproxil is usually for many years. Treatment may be discontinued if there is HBsAg loss or HBeAg seroconversion.

All dose adjustments or discontinuations will be decided in acute care and directions specified in a medical letter to the GP

SIGNIFICANT DRUG INTERACTIONS:

- Caution if co administered with medicines which reduce renal function or have extensive renal elimination

UNDESIRABLE EFFECTS:

- Document the likely adverse drug reactions and the suggested management of them in the table below.

ADR details (where possible indicate if common, rare or serious)	Management of ADR
Weakness, fatigue, headache, dizziness, nausea, vomiting, diarrhoea, abdominal pain, rash	These are the most frequent side-effects with tenofovir. These are usually mild and self-limiting and patient should remain on treatment. If they become severe or the GP is concerned, the GP should contact the hospital specialist and treatment may be discontinued after discussion.
Metabolic disturbance secondary to renal tubular toxicity: Increased creatinine, hypophosphataemia, hypokalaemia. Rarely acute renal failure, acute tubular necrosis, Fanconi syndrome, nephritis, nephrogenic diabetes insipidus. Osteomalacia, manifested as bone pain and possibly contributing to fractures, and myopathy	Renal tubular toxicity occurs in around 1.5% of patients treated with TDF for Hepatitis B and is usually reversible on discontinuation of treatment. Monitoring for renal toxicity will take place in the acute setting

The above list should not be considered exhaustive. For further documented ADRs and details of likelihood etc, see Summary of Product Characteristics or BNF.

BASELINE INVESTIGATIONS (ACUTE SECTOR):

- Urea and electrolytes, eGFR, LFTs, HIV and serum phosphate.
- Urinary protein creatinine ratio (not required according to SPC, but indicative of early renal toxicity)

MONITORING (PRIMARY CARE):

- No monitoring is to be undertaken in Primary Care

MONITORING (ACUTE SECTOR):

- The following monitoring is to be undertaken in the acute setting

Monitoring Parameters	Frequency	Laboratory results	Action to be taken
Urea and electrolytes, LFTs, eGFR and serum phosphate	4 weeks after treatment initiation then every 3 months during first year of treatment, thereafter every 6 months if no abnormalities. More frequent monitoring in patients at higher risk of renal impairment	Falls in eGFR or serum phosphate may indicate toxicity	Discussion with responsible Consultant May require discontinuation of Tenofovir
Urine protein creatinine clearance (PCR). Not recommended in SPC, but a useful early marker of renal tubule toxicty		A rise in urine PCR may indicate toxicity	
Hepatitis B Viral load	Every 3-6 months		
Hepatitis B e markers	Every 6 months		

PHARMACEUTICAL ASPECTS:

- Shelf life is dependent on manufacturer

COST:

- BNF indicative prices range from £61.32 - £204.39 for 30 tablets ie 1 month supply (BNF accessed on-line 2/5/18)
- PLEASE NOTE: All medicines included in a shared care agreement that meet the criteria for a "high cost expensive medicine" and are prescribed in accordance with the shared care agreement are automatically accounted for in the "high cost/ expensive medicines list" for budget-setting purposes. No additional action is therefore required by GPs to request funding. For those medicines which are the subject of a shared care agreement but which do not meet the high cost expensive medicines criteria, transfer of prescribing costs will be considered as appropriate.

INFORMATION FOR COMMUNITY PHARMACIST:

- Supplies of generic Tenofovir are available from all major wholesalers.

ACUTE CARE/SPECIALIST SERVICE CONTACT INFORMATION:

Name	Designation	Acute Site	Department phone number
Dr David Bell Dr Erica Peters	Consultant in Infectious Diseases	Brownlee Centre, Gartnavel General Hospital	0141 301 7489
Dr Helen Cairns Dr Matt Priest	Consultant Gastroenterologist	Gartnavel General Hospital	0141 301 7489
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Dr Judith Morris Dr Shouren Datta	Consultant Gastroenterologist	Queen Elizabeth University Hospital Victoria Infirmary	0141 201 2177 0141 347 8320
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Dr Rizwana Hamid	Consultant Gastroenterologist	Vale of Leven Hospital	01389 817 239
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SUPPORTING DOCUMENTATION:

- NHS GGC Hepatitis B Treatment Guideline
  http://www.staffnet.ggc.scot.nhs.uk/Info%20Centre/PoliciesProcedures/GGCClinicalGuidelines/GGC%20Clinical%20Guidelines%20Electronic%20Resource%20Direct/Hepatitis%20B%20Infection%20Assessment%20and%20Management%20in%20Adult%20Patients.pdf