Basildon and Brentwood Clinical Commissioning Group

Thurrock Clinical Commissioning Group

Chapter 2 - Cardiovascular System

Primary Care Prescribing Formulary - Preferred Drug Choices

Drug group	Drug choice	Comments/notes
Cardiac glycosides	Digoxin	
Thiazide diuretics	Bendroflumethiazide	***First choice***
	Indapamide	***Second choice*** Low dose indapamide 1.5mg SR has been shown to control hypertension as effectively as 2.5mg (IR) with lower incidence of hypokalaemia.
	Metolazone	No longer licensed in UK, supplied as a special (therefore prices may vary). ***Restricted prescribing:*** -Refractory heart failure/severe fluid overload. -Intolerant to or inadequate response to licensed alternatives (high dose bendroflumethiazide). -Specialist heart failure recommendation, GP continuation. -U&E monitoring required.
	Hydrochlorothiazide	***Not recommended:*** unlicensed Combination products containing hydrochlorothiazide not routinely recommended.
Loop diuretics	Furosemide	***First choice***
	Bumetanide	***Second choice***
Aldosterone antagonist	Spironolactone	***First choice***
	Eplerenone	***Restricted prescribing:*** -Adjunct in LV dysfunction with evidence of heart failure after MI. -Use for 6 months then change to spironolactone. -Cardiology initiation, GP continuation.
Potassium sparing diuretics with other diuretics	Co-amilofruse (amiloride and furosemide)	Preferable to prescribe thiazides and potassium-sparing diuretics separately, unless compliance is a problem.
Anti-arrhythmic drugs	Specialist initiated and usually continued in primary care	
Beta-adrenoceptor blocking drugs	Atenolol	***First choice*** First line for hypertension and IHD.
	Bisoprolol	***First choice*** First line for heart failure. Second line for hypertension.
	Propranolol	***Second choice***
	Metoprolol	***Second choice***
	Sotalolol	***Restricted prescribing:*** -Cardiology consultant initiation, GP continuation for rate control.
	Nebivolol	***Not recommended:*** -Do not prescribe 2.5mg tablets. If 2.5mg dose is required prescribe as 5mg tablets, which are scored and can be broken.
Alpha-adrenoceptor blocking drugs	Doxazosin	***First choice*** -Please refer to *'Position Statement: The prescribing of doxazosin modified release is not supported'*. -Prescribe as IR tablets, which are significantly more cost effective, and the MR offers no advantage over the IR.

<table>
<tr><td rowspan="4">Angiotensin converting enzyme inhibitors (ACEI)</td><td>Ramipril</td><td>First choice
First line for hypertension, heart failure, post MI, reducing CV risk in diabetic patients including diabetic nephropathy.</td></tr>
<tr><td>Perindopril erbumine</td><td>First choice
Prescribe generically as erbumine not arginine, and not as brand Coversyl or Coversyl Plus (perindopril arginine and indapamide).</td></tr>
<tr><td>Lisinopril</td><td>Second choice</td></tr>
<tr><td>Enalapril</td><td>Second choice</td></tr>
<tr><td rowspan="3">Angiotensin-II receptor antagonists (ARB)
ARBs should only be used in patients with persistent troublesome ACEI induced cough</td><td>Losartan</td><td>First choice</td></tr>
<tr><td>Candesartan</td><td>First choice</td></tr>
<tr><td>Irbesartan</td><td>Second choice</td></tr>
<tr><td colspan="3">Dual therapy with ACEI + ARB is not recommended for any indication, other than under specific conditions for patients with heart failure (NICE CG108 (2010): Chronic heart failure).

Combination products containing ACEI/ARB and diuretic/calcium channel blockers are not routinely recommended.</td></tr>
<tr><td>Angiotensin receptor neprilysin inhibitors</td><td>Sacubitril/valsartan (Entresto)</td><td>Restricted prescribing:
-Please refer to 'Sacubitril Valsartan (Entresto) Prescribing Advice and Guidance' for selection criteria.
-Heart failure specialist/consultant initiation and titration, and GP continuation.
-Please ensure that previous ACEI or ARB treatment is removed from the repeat prescription template and not continued.</td></tr>
<tr><td>Renin Inhibitors</td><td>Aliskiren (Rasilez)</td><td>Restricted prescribing:
-Heart failure specialist/consultant initiation and GP continuation.
-Dual therapy with ACEI/ARB and renin inhibitor is not recommended for any indication.</td></tr>
<tr><td rowspan="3">Nitrates</td><td>Glyceryl trinitrate (GTN) pump spray</td><td>-Angina: for as required use for relief of symptoms.
-Note that GTN tablets are now significantly more costly than spray.
-Aerosol spray is more costly than pump spray. It is more cost effective to prescribe as 200 dose pack.</td></tr>
<tr><td>Isosorbide mononitrate</td><td>First choice
-Standard tablets are more cost effective than MR formulations. Prescribe as asymmetric dosing regime. The second dose should be 8 hours after the first dose to allow for a nitrate free period e.g. 8am and 4pm.
Second choice
-If patients cannot comply with standard tablets, consider once daily modified release.
-60mg modified release: do not prescribe generically, prescribe as brand name Chemydur XL or Monomil XL. Both tablet brands have a score line and can be halved.</td></tr>
<tr><td>Isosorbide dinitrate</td><td>Not recommended</td></tr>
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Calcium-channel blockers	Amlodipine	***First choice*** -When prescribing amlodipine generically, this should be as plain amlodipine. Prescriptions for amlodipine besilate will result in the supply of the brand Istin and incur significantly greater costs.
	Diltiazem	***First choice*** -Branded diltiazem MR preparations are not interchangeable. -Tildiem MR tablets are the most cost effective three times daily brand-60mg. -Angitil SR capsules are the most cost effective twice daily brand-90mg, 120mg, 180mg. -Zemtard XL capsules are the most cost effective once daily brand-120mg, 180mg, 240mg, 300mg.
	Nifedipine	***Second choice*** -Branded nifedipine MR preparations are not interchangeable. -Tensipine MR tablets are the most cost effective twice daily brand-10mg, 20mg. -Adalat LA tablets are the most cost effective once daily brand for 20mg dose (if 40mg dose required prescribe as 2 x 20mg Adalat LA tablets). -Nidef modified-release tablets are the most cost effective once daily brand for 30mg and 60mg dose.
	Verapamil	***Second choice*** -Verapamil should not be combined with a beta-blocker for any indication due to high risk of bradycardia and heart-block.
Lacidipine, lercanidipine and felodipine and other calcium channel blockers are not routinely recommended.		
Other anti-anginal drugs	Nicorandil	-Nicorandil is associated with oral, anal, GI and para-stomal ulceration and delayed wound healing.
	Ivabradine	***Restricted prescribing:*** -Specialist/consultant initiation and GP continuation. -QT prolongation may be exacerbated by heart rate reduction. The use of ivabradine with other drugs which prolong QT interval e.g. citalopram, diltiazem, should be avoided.
	Ranolazine	***Restricted prescribing:*** -Specialist/consultant initiation and titration, and GP continuation once stabilised.
Anticoagulants and protamine	Warfarin	***First choice anticoagulant***
	Edoxaban	***First choice DOAC***
	Rivaroxaban	***First choice DOAC for treatment of DVT and PE***
	Dabigatran	***Restricted prescribing:*** Second choice DOAC
	Apixaban	***Restricted prescribing:*** Second choice DOAC

Antiplatelet drugs	Aspirin	Prescribe as dispersible tablets. Enteric-coated aspirin does not reduce GI events and may be less effective.
	Clopidogrel	In all cases where clopidogrel is initially used in combination with aspirin, when the clopidogrel is stopped, anti-platelet therapy continues with aspirin 75mg daily alone. Please ensure prescription template is updated accordingly.
	Dipyridamole	***Restricted prescribing:*** Modified-release dipyridamole alone is recommended by NICE as an option to prevent occlusive vascular events: -for people who have had an ischaemic stroke only if aspirin and clopidogrel are contraindicated or not tolerated or -for people who have had a transient ischaemic attack only if aspirin is contraindicated or not tolerated, or if clopidogrel (unlicensed use) has been excluded.
	Prasugrel	***Restricted prescribing:*** -Specialist/consultant initiation and GP continuation. -Treatment should continue for up to **12 months.** Please ensure that all prescriptions have a stop date and that no repeats are issued after that date.
	Ticagrelor	***Restricted prescribing:*** -Specialist/consultant initiation and GP continuation. -Treatment should continue for up to **12 months.** Please ensure that all prescriptions have a stop date and that no repeats are issued after that date.
Consider co-prescription of a PPI for patients at higher risk of GI bleeding. Patients requiring treatment with clopidogrel and PPI should avoid omeprazole and esomeprazole which may reduce the effects of clopidogrel on platelet function and lead to poorer long-term patient outcomes.		
Lipid regulating drugs	Atorvastatin	***First choice***
	Simvastatin	***First choice*** -Simvastatin doses should not exceed 20mg for patients on amiodarone, verapamil, amlodipine or diltiazem. -There is an increased risk of myopathy associated with high-dose (80mg) simvastatin.
	Fenofibrate	***Restricted prescribing:*** -Fibrates should not be routinely offered but may be considered in patients with hypertriglyceridemia or if other options are not tolerated or where existing statin treatment has not adequately controlled plasma lipid levels. -Prescribe generically as micronised **capsules** not tablets (200mg starting dose and 267mg for dose titration). -Avoid using fibrates in combination with a statin where the clinical benefit clearly outweighs the clinical risk of increased muscle effects including rhabdomyolysis.
	Ezetimibe	***Restricted prescribing:*** -Ezetimibe monotherapy is recommended as an option for treating primary (heterozygous-familial or non-familial) hypercholesterolaemia in adults in whom initial statin therapy is contraindicated or not tolerated- specialist/consultant initiation and GP continuation. -Combination simvastatin and ezetimibe (Inegy) is not recommended for prescribing.
	Omega-3-acid ethyl esters (e.g. Omacor)	***Not recommended***
	Nicotinic acid	***Not recommended***
	Colestyramine	***Restricted prescribing:*** -Specialist/consultant initiation and GP continuation for complex dyslipidaemias. -**Do not prescribe** sugar free sachets or as the brand name Questran **Light.**
	Colesevelam	***Not recommended***
	Colestipol	***Not recommended***

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