Code A - PA (Nursing & Clinical Governance)

From: Watling, Jeff Code A

Sent: 08 April 2005 15:37

To: Code A

Cc:

Subject: Guidelines and MM Committee Papers

I apologise on two counts:

1 for the late arrival of these papers
2 for sending out the Fareham and Gosport Guidelines by forwarding them as separate e-mails. I had a problem with saving the "Prodigy" files - the system administrator obviously did not like them! I could print them off so I hope you will be able to do so also.

Please note that the meeting venue is Room 10 QUaD Centre QAH.

Jeff

<<AGENDA April 2005.doc>> <<Notes February 2005.doc>> <<Hf page front guidelines.doc>> <<Heart Failure Guideline Draft.doc>> <<guidelines form Heart Failure.doc>> <<Cholesterol Testing and Treatment125.01 form PHPS 07001U.doc>> <<Guidelines for Cholesterol Testing and Treatment v81.4.05.doc>>

East Hants PCT
Fareham and Gosport PCT
Portsmouth City PCT
Portsmouth Hospitals NHS Trust
Royal Hospital, Haslar
Portsmouth & SE Hampshire LM Committee
Hampshire Partnership NHS Trust

Guidelines and Medicines Management Subcommittee

Room 10 QuaD Centre QAH QAH 12.30 to 1.30pm Monday 11th April 2005. Lunch will be available

AGENDA

2.05.1 Apologies for absence

Dr I Reid

2.05.2 Notes of meeting 14th February (attached)

2.05.3 Matters arising

5.04.4b) Pneumonia, hospital acquired

No further information from the respiratory consultants on this guideline.

1.05.3.1 Revised Heart Failure Guidelines (attached)

1.04.4a Fareham and Gosport PCT Nursing Treatment Guidelines (forwarded)

Allergic Rhinitis
Acne Vulgaris
Bacterial Vaginosis
Cradle Cap
Emergency Contraception – Oral Progestogen-only
Gastro-Oesophageal Reflux in Infants
Gastroenteritis in Children
Head Lice
Management of Infant Colic
Management of Ingrowing Toenail
Impetigo
Nappy Rash
Scabies
Shingles
Threadworm
Umbilical Cord Care
Lower UTI in Pregnant Women
Uncomplicated Lower UTI in (non-pregnant) Women
Warts and Verrucae

2.05. 4 Guidelines for Approval

2.05.4.1 Guidelines for Cholesterol Testing and Treatment (attached)

0.04.3 Confirmation of dates for next meetings

All Mondays at 12.30pm

13th June, 15th August, 10th October, 12th December

East Hants PCT
Fareham and Gosport PCT
Portsmouth City PCT
Portsmouth Hospitals NHS Trust
Royal Hospital, Haslar
Portsmouth & SE Hampshire LM Committee
Hampshire Partnership NHS Trust

Notes of Guidelines and Medicines Management Subcommittee. Monday 14th February 2005

1.05.1 Present

Code A Dr N Lewkowicz, Code A
Code A Fiona Cameron, Code A Jeff Watling.

Apologies for absence

Dr T Kenny, Dr I Reid, Dr E Fellows

1.05.2 Notes of meeting 29th November accepted as a correct record

1.05.3 Matters arising

5.04.4b) Pneumonia, hospital acquired

This guideline was recently reviewed following comments from F & M Group. There was some discussion concerning the dose of ciprofloxacin in severe pneumonia and apparent discrepancy between the table and Note 3 below. There was also a question concerning the dose of Cefuroxime (note 2). The guideline was approved subject to the resolution of the above issues.

Post meeting note – Respiratory consultants not happy with the choice of antibiotics and have requested more time to reconsider guideline.

5.04.4c) Anticoagulation

This guideline was now in its third revision and was approved. There was some discussion about responsibility for prescribing of Enoxaparin for patients requiring longer-term prophylaxis. Assuming that treatment was generally initiated in secondary care it was agreed that prescribing responsibility should rest with secondary care for the first month, thereafter prescribing responsibility should switch to primary care unless the patient was attending a hospital outpatient clinic monthly of more frequently for review.

5.04.4e) Administration of Drugs to patients with feeding tubes

This guideline was approved. There was some discussion about the use of oral, as opposed to hypodermic syringes for administration of oral therapy. Current Guidance from the NPSA It was agreed that r final approval (see also paper concerning enteral syringes).

5.04.5d Paget's Disease (attached) for final approval

Subject to typographical changes this guideline was approved.

5.04.5e PHT Protocol for Management of Sliding Scale Insulins

This Protocol applies to PHT only and has been modified for use on PCT managed wards. Has been temporarily approved by Chairman's action but needs further work to ensure consistency between three guidelines currently available in PHT.

1.05.3 Guidelines for approval

a. Clopidogrel Guideline

This guideline had been updated to take account of treatment of patients post acute coronary syndrome. It was agreed that the flow chart should be re-introduced into guideline. It was also noted that PCT advisors would need to consider how to limit repeat prescribing outside this guidance.

b. CMV Guideline

This guideline was approved without change

c. Representatives Guideline

This was a review of a Guideline previously issued by PHT. Marginal changes had been made but an attempt had also been made to provide contact numbers for PCT advisors etc. The Guideline was approved but as PCTs already had guidance for representatives it was agreed to remove PCT footers and PCT based staff from the contact list.

d. Vancomycin

This guideline had previously been discussed and was brought back to the committee to approve minor changes. These were noted and the guideline was approved.

1.05.4 Policy Decision

Draft Heart Failure Guidelines, associated service specification for the heart failure nurse specialist and clinical guidelines for the heart failure nurse specialist run clinics and home visits.

The committee welcomed Trish Lynn to the meeting to discuss the above. In general the guidelines were welcomed. The committee expressed concern about the presence of non-formulary drugs in the guidelines. It was agreed that non-formulary drugs should not be included in the guidelines. There needed to be consistency in that drug doses needed to be included or excluded in the treatment algorithms. The committee was concerned that the recommended amiloride dosage appeared to be high (subsequently confirmed as correct in NICE Guidance). Need to complete a PHPS Form 07 to ensure that there is an explicit evidence based to this guideline. The Guidelines should be returned to JJW for initial review and returned to the next meeting for final approval.

1.05.5 Any other business.

a. Fiona Cameron explained that Fareham and Gosport PCT have a number of Nursing Treatment Guidelines, which they wish to bring to the Committee for approval but not PHPS Form 7 backing sheets are available. The Committee agreed to review these documents.

b. Dr Martin Brown (lead consultant for EMH) was wishing to produce a guideline for management of depression and dementia in the elderly. JJW to send proforma documents to JB.

c. CHD booklet to be launched on March 10th

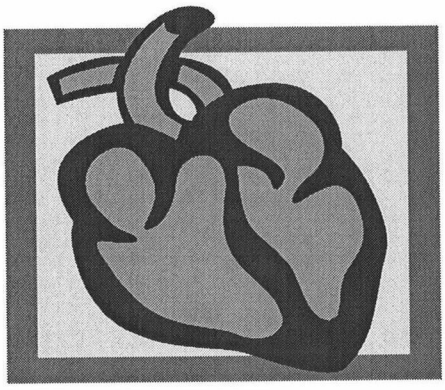
d. Concern was expressed that staff in general were unaware of Drug Therapy Guidelines – agreed to update index of drug therapy guidelines and attempt to circulate this to raise awareness.

1.05.6 Confirmation of dates for next meetings

All Mondays at 12.30pm

11th April, 13th June, 15th August, 10th October, 12th December

NHS



THE HEART FAILURE NURSE SPECIALIST RUN CLINICS & HOME VISITS

CLINICAL GUIDELINES

East Hampshire Primary Care Trust, Fareham and Gosport Primary Care Trust

Portsmouth and South East Hampshire
Guidelines and Medicines Management
Committee

NHS

Drug Therapy Guideline No Month 2004
Drug Management of Chronic Heart Failure

Drug Management of Chronic Heart Failure (DRAFT)

Introduction

Heart failure is defined as.....
Heart failure is a major cause of morbidity and mortality, and results in approximately 5 per cent of all emergency medical admissions to hospital. The prevalence of heart failure increases with age from 1-2 per cent in 50-60 year olds to over 10 per cent in those aged 80 and over.
Mortality is high with approximately 30 per cent mortality within 1 year, increasing to 60-70 per cent after 5 years, with 50 per cent of deaths being sudden. Drug therapy aims to increase life expectancy and improve symptoms and quality of life.

The objectives of this guideline are to ensure:

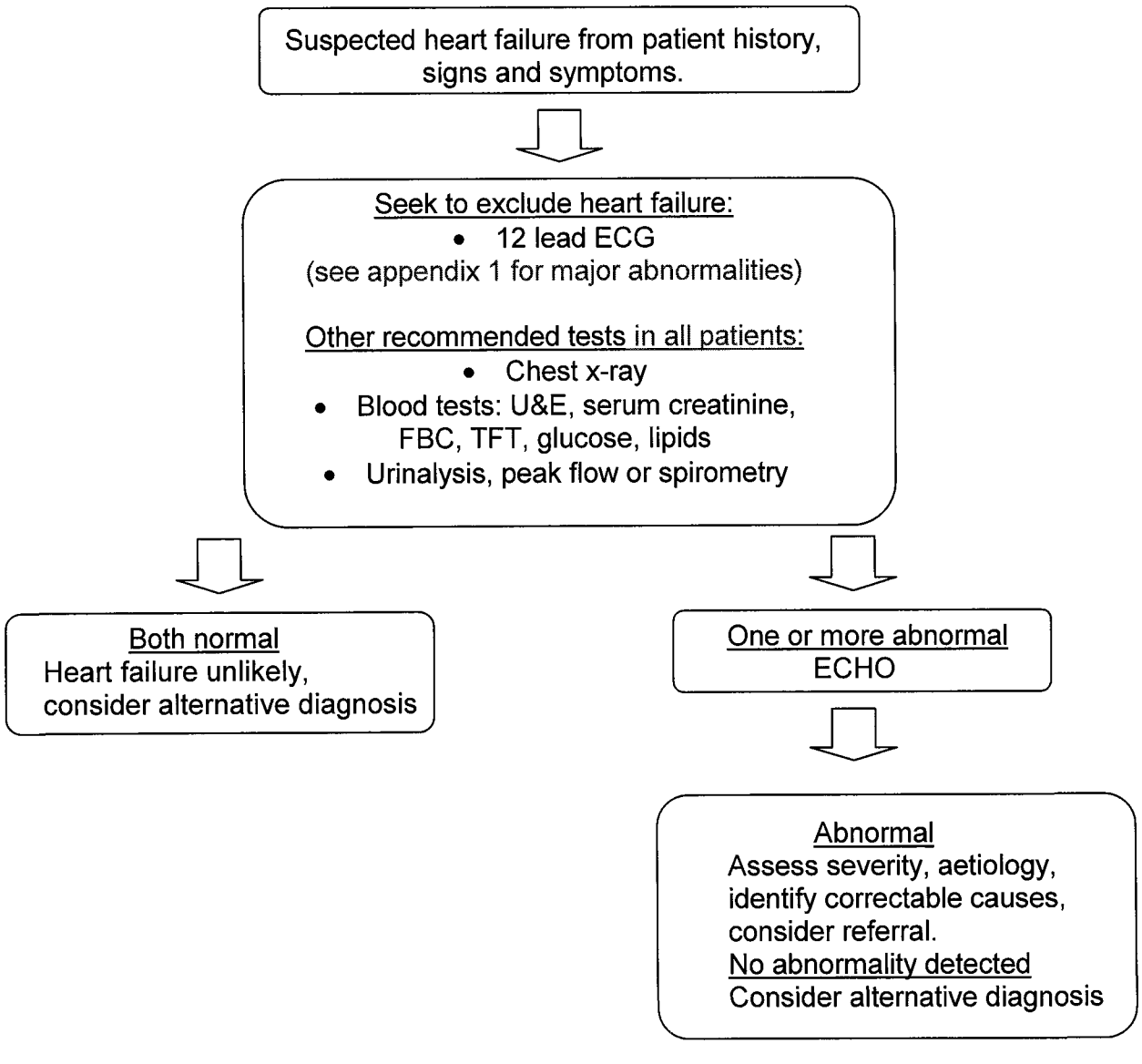
- All patients with a confirmed diagnosis of heart failure receive optimal treatment with appropriate monitoring and adjustment when necessary.
- Quality of life is maintained.
- Prevention of disease progression to more severe grades of heart failure and duration of life is increased.

This guideline applies to all adult patients with a diagnosis of heart failure due to **left ventricular systolic dysfunction** under the care of practitioners working for the NHS Trust/ Primary Care Trusts listed below.

This guideline incorporates guidance from the National Institute for Clinical Excellence (NICE). Available at www.nice.org

Assessment

Algorithm for the assessment of patients with suspected heart failure

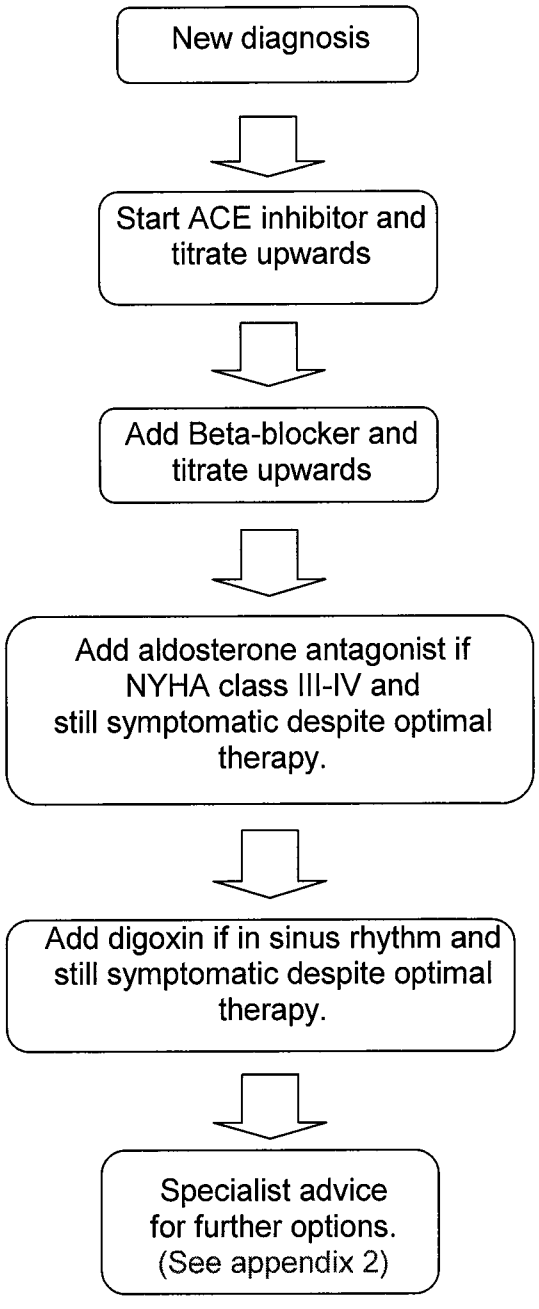


Consider referral to appropriate specialist practitioner if confirmed diagnosis of heart failure and:

- 1 or more co-morbidities – COPD/asthma, renal impairment, serum creatinine>200 micromol/L, anaemia, thyroid disease, peripheral vascular disease, gout and urinary frequency.

- Severe heart failure, not responding to treatment or no longer manageable in the home setting.

Algorithm for treatment of heart failure due to left ventricular systolic dysfunction



Drug Therapy Guideline No Month 2004
Drug Management of Chronic Heart Failure

Notes

1. Diuretics should be added at any stage to control symptoms of oedema/shortness of breath.
2. Patients should be treated with doses proven to be effective in randomized control trials or the maximum dose tolerated by the patient.
3. When up-titrating beta-blocker or ACE inhibitor limited by hypotension, review alternative antihypertensive agents to allow optimization of therapy.
4. See later guidance for information on dosage adjustment and titration for individual drug classes.

Diuretics

- Indicated in all patients with symptomatic heart failure (including patients experiencing fatigue or lethargy).
- All patients receiving diuretics should be considered for treatment with ACE inhibitor and beta-blocker.
- There have been no randomized control trials of diuretic impact on mortality in heart failure but they have been shown to improve symptoms, improve exercise performance and reduce hospital admissions.

Loop Diuretics

- Furosemide, Bumetanide.
- Loop diuretics are the preferred diuretics as they are more powerful agents than thiazide diuretics. They are effective in patients with renal impairment as they are active at low glomerular filtration rates.
- Commence furosemide 20mg (Bumetanide 0.5mg) daily in patients with NYHA II (see appendix 3 for summary of NYHA classification) who have not had loop diuretic before.
- Increase to furosemide 40mg daily (Bumetanide 1mg) if symptoms continue.
- In patients with NYHA III who have symptoms of pulmonary or peripheral oedema already taking a loop diuretic, increase furosemide dose by 40mg (Bumetanide by 1mg) until symptoms resolve. Maximum recommended dose of furosemide 250mg daily (Bumetanide 5mg-10mg daily). Consider referral to specialist for review of medication, if approaching maximum doses of diuretic.
- If larger doses of diuretic are required, more effective diuresis may be obtained with twice daily dosing (morning and midday).
- Diuretics should be titrated up and down according to the patient's clinical condition. Diuretic dose may be decreased following initiation of ACE inhibitor.

Thiazide Diuretics

- Bendroflumethiazide, metolazone.

- A thiazide diuretic may be sufficient in mild heart failure but is less potent than a loop diuretic.
- Metolazone can be added if there is a poor response to loop diuretic, providing a synergistic effect.
- Addition of thiazide diuretics is associated with dramatic diuresis and disturbance in fluid balance and electrolytes. Patients must be closely monitored while on this combination. Specialist advice should be considered unless approaching palliation.
- Adjust dose according to response and renal biochemistry. Aim for lowest possible dose of thiazide, for example, alternate days or twice weekly dosing.

Contraindications

1. Renal failure with anuria.
2. Precomatose states associated with liver cirrhosis.

Monitoring

1. Check urea and electrolytes due to the potential for electrolyte imbalance 3 to 5 days following initiation or dose change, particularly when a thiazide and loop diuretic combination is used.
2. Monitor biochemistry and symptom control every 1 to 2 weeks until stable.
3. Monitor for potential side effects such as:
   - Hypotension
   - Hyponatraemia
   - Hypokalaemia (lower risk if patient on ACE inhibitor and Spironolactone)
   - Hypomagnesaemia
   - Gout
   - Hyperglycaemia

Angiotensin converting enzyme (ACE) inhibitors

- Ramipril, Perindopril, Enalapril.
- ACE inhibitors have been shown to prolong survival, reduce hospital admissions and improve symptoms and exercise tolerance.
- ACE inhibitors are indicated in all patients with symptomatic heart failure and those patients who are asymptomatic with left ventricular systolic dysfunction (LVSD) <40 per cent.

- Commence with low dose if initial renal biochemistry and blood pressure are satisfactory.
- Double ACE inhibitor dose at a minimum of 1- 2 weekly intervals if renal biochemistry and blood pressure stable.
- Aim for the target dose or highest dose tolerated by patient. Target doses: Ramipril 10mg daily, Perindopril 4mg daily, Enalapril 40mg daily (usual maintenance dose 20mg daily).
- A small dose of ACE inhibitor is better than no ACE inhibitor.
- Avoid giving ACE inhibitors with Amiloride and review the need for potassium supplements.
- Example dosing schedule:

Ramipril*	Perindopril
1.25mg od	2mg od
2.5mg od	4mg od
5mg od	
10mg od	

*doses above 2.5mg daily can be administered in 2 divided doses.

Contraindications

- Idiopathic or hereditary angiodema.
- Bilateral renal artery stenosis

Cautions

- Symptomatic hypotension <85mmHg
- Serum potassium >5.5mmol/l – seek consultant opinion
- Serum creatinine > 180micromol/l – seek consultant opinion
- Significant aortic stenosis – seek cardiology opinion

Monitoring

1. Monitor for signs of symptomatic low blood pressure (<85mmHg), consider reducing diuretic dose if no signs of congestion/oedema, consider discontinuing other hypotensive agents. If patient remains symptomatic despite these measures, reduce or stop ACE inhibitor.
2. Monitor for chronic non-productive cough in euvolaemic patients, where pulmonary oedema is excluded, exclude COPD, consider changing to angiotensin II receptor antagonist if cough interferes with sleep and likely to be ACE inhibitor related.
3. Monitor serum creatinine for signs of worsening renal function, if small asymptomatic increase, continue to monitor. An increase in serum creatinine of up to 20 per cent above baseline is acceptable. If a greater rise in serum creatinine despite adjustment of concomitant drugs, halve dose of ACE and recheck. If creatinine increases to greater than 20 per cent of

baseline the ACE inhibitor should be stopped and specialist advice sought regarding further management.

4. Monitor urea and electrolytes for raised serum potassium. A rise of up to 5.9mmol/L is acceptable. If potassium rises above 6.0mmol/l then ACE should be stopped and specialist advice sought. Risk factors include the use of potassium sparing diuretics, pre-existing renal impairment and diabetes. If serum potassium between 5.5-5.9 mmol/L, repeat to confirm level in case previous sample haemolysed.
5. Monitor biochemistry and blood pressure weekly for six weeks, then at 3 and 6 months. When stable monitor at 3-6 monthly intervals.
6. Angioedema and rash (may be delayed in onset).

Beta-blockers

- Bisoprolol
- Carvedilol is licensed for use in heart failure and can be used second line in patients who are intolerant to Bisoprolol. Carvedilol is not available on the district prescribing formulary at the moment.
- Beta-blockers are indicated in patients with heart failure with NYHA class I-IV
- Beta-blockers have been shown to decrease sudden cardiac death and improve morbidity and survival.
- Activation of the sympathetic nervous system is known to have an adverse prognostic effect and high concentrations of catecholamine are known to cause acute and chronic myocardial damage.
- Potential for early deterioration in patients relying on adrenergic activity for compensation.
- Beta-blockers should be started at a low dose and titrated gradually in patients who are stable on a diuretic and ACE inhibitor. There should be no evidence of fluid overload and intravenous therapy should be discontinued for at least one week before initiating therapy with a beta-blocker. In some instances patients may commence on a beta-blocker prior to discharge from hospital.
- Benefits from beta-blockers are slow in onset and the patient may worsen initially.
- A stepwise programme should be followed and the dose increased gradually to the maximum licensed dose or the maximum dose tolerated by the patient.
- Stepwise program for Bisoprolol:

1.25mg daily	for 1 week
2.5mg daily	for 1 week
3.75mg daily	for 1 week
5mg daily	for 4 weeks
7.5mg daily	for 4 weeks
10mg daily	maintenance

Contraindications

- History of significant asthma.
- 2nd/3rd degree heart block

Cautions

- Symptomatic peripheral vascular disease
- Bradycardia (<55bpm)
- Hypotension (<85sbp)
- Phaeochromocytoma

Monitoring

1. Monitor for signs of fluid retention and worsening symptoms at each stage. If peripheral or pulmonary oedema present then the diuretic dose may need to be doubled or the beta-blocker dose halved.
2. Monitor for symptomatic hypotension (dizziness, light-headedness). Consider discontinuing concomitant hypotensive agents if possible, or halve beta-blocker dose.
3. Monitor for bradycardia (heart rate less than 50 beats/min) and worsening symptoms. Consider discontinuing/reducing dose of concomitant drugs that slow heart rate, or halve beta-blocker dose.
4. Monitor for fatigue. If marked side effect then may need to halve beta-blocker dose.
5. Monitoring of biochemistry and symptoms should be carried out 1-2 weeks after initiation and then 1-2 weeks after dose optimization.
6. Monitor for side effects:

    - Bronchospasm
    - Conduction disorders
    - Worsening heart failure
    - Sleep disturbance
    - Bradycardia
    - Gastrointestinal disturbance

Aldosterone Receptor Antagonist

- Spironolactone
- The aldosterone receptor antagonist, Spironolactone, should be considered for all patients with resistant heart failure. Ideally patients should be treated with a diuretics, an ACE inhibitor and beta-blocker. Some patients may need treatment with Spironolactone prior to beta-blocker initiation to render euvolaemic.

- Spironolactone has been shown to reduce hospitalisation for cardiac causes and increase life expectancy.
- Patients should be commenced on Spironolactone 25mg daily if renal function <180 micromol/l and serum potassium <4.5mmol/l
- If serum potassium in the range 4.5-4.9mmol/l start Spironolactone 12.5mg daily. If tolerated the dose may be increased to 25mg daily with regular monitoring of renal function and serum potassium.

Contraindications

- Avoid in significant renal impairment (serum creatinine > 220micromol/l)

Cautions

- Avoid if serum potassium >5.0mmol/l
- Addison's disease
- Hyponatraemia

Monitoring

1. Monitor biochemistry 1 week after initiation or change in dose.
2. Monitor serum potassium. If in the range 5.0-5.5 mmol/l then halve Spironolactone dose. If >5.5 mmol/l then stop Spironolactone.
3. When established recheck urea and electrolytes at six monthly intervals.
4. If serum creatinine >200 micromol/l, discontinue Spironolactone and refer to specialist.
5. Monitor for side effects:

    - Gastrointestinal disturbance
    - Lethargy
    - Headache
    - Hyperkalaemia
    - Hyponatraemia
    - Hepatotoxicity
    - Gynaecomastia

Digoxin

- Digoxin indicated for NYHA class II-IV CHF in patients in sinus rhythm who remain symptomatic despite maximal therapy with diuretics, ACE inhibitor, beta-blocker and spironolactone.

- Digoxin is also indicated in patients with atrial fibrillation but should not preclude the use of a beta-blocker at a later date.
- Digoxin has been shown to reduce the risk of hospital admission due to worsening heart failure, in patients in sinus rhythm and improve exercise performance in these patients.

Contraindications

- $2^{nd}/3^{rd}$ degree heart block
- Sick sinus syndrome
- Wolff-Parkinson-White syndrome
- Hypertrophic obstructive cardiomyopathy
- Electrolyte disturbances

Monitoring

1. Dose reductions to allow optimization of Bisoprolol therapy and avoid bradycardia may be required. Dose adjustment should be made according to ECG.
2. Monitor for side effects and signs of digoxin toxicity e.g. nausea, vomiting, diarrhoea, visual disturbances and arrhythmias.
3. See separate trust guideline 'Digoxin Guideline'.

Angiotensin II Receptor Antagonists

- Angiotensin II receptor antagonists are not licensed for use in heart failure due to left systolic ventricular dysfunction but may be used as an alternative to ACE inhibitors.
- Angiotensin II receptor antagonists should be considered in all patients who are unable to tolerate an ACE inhibitor.
- Patients with resistant heart failure already taking an ACE inhibitor and a beta-blocker may be considered combination treatment with an angiotensin II receptor antagonist under cardiology advice.
- Contraindications and monitoring as for ACE inhibitors.

Other agents

- Hydralazine and Isosorbide combination – This combination may be considered in patients who are intolerant of ACE inhibitors or angiotensin II receptor antagonists. This combination is generally less effective than ACE inhibitors and is less well tolerated due to side effects (headache, gastrointestinal disturbance)
- Aspirin – should be considered in patients with concomitant atherosclerotic disease.
- Warfarin – Should be considered in patients with concomitant atrial fibrillation or patients in sinus rhythm with a history of thromboembolic disease left ventricular aneurysm or intracardiac thrombus.

- Lipid lowering agents – Should be considered in patients with concurrent atherosclerotic disease. See separate guideline.
- Calcium channel blockers – Amlodipine or Felodipine MR may be considered to treat hypertension and/or angina in addition to optimal heart failure therapy.

Drugs to be avoided

- Patients with heart failure may have significant renal and hepatic impairment. Drugs cleared by these routes should be used with caution in this patient group.
- Non-steroidal anti inflammatory drugs (NSAIDs), including non-selective and COX-II selective agents, can exacerbate oedema and renal impairment in heart failure patients.
- Short acting dihydropyridine agents, Verapamil and Diltiazem should be avoided in heart failure as they can cause clinical deterioration.

Evidence Base

Code A Cardiology Directorate Pharmacist and Paul Kalra, Cosultant Cardiologist manage this guideline.
See Trust Policy for the Production of Drug Therapy Guidelines
Approved by: Date:
Ratified by: Date:
Review date:

Appendix 2. PHPS Form 07 001U Documentation of Preparation, Approval, Publishing, Audit and Review of Drug Therapy Guidelines

Record of Preparation, Publishing, Audit and Review of Drug Therapy Guidelines

Preparation

Title of Drug Therapy Guideline	The Heart Failure Nurse Specialist Run Clinics & Home Visits Clinical Guidelines	
Reference number		
Name of Guideline Project Manager	Trish Lynn	
Membership of Guideline Development Group		**Date**
1 Code A		Dec 2004
2 Code A		July 2004
3 Viewed by Code A		Dec 2004
4 Viewed by the CHD DIT		Jan 2005
5 Medical consultants: P Kalra		Feb 2005
6		
7		
8		

Methods used to formulate recommendations
Literature searches of SIGN, NICE, UKMI, NeLH, Cochrane, Bandolier, Departement of Health web site, Medline, Embase, eguidelines, Prodigy, Drug infozone and Drug and Therapeutics Bulletin data bases were carried out using search terms Heart Failure management and treatment. The guideline was viewed by the senior pharmacists, strategic development clincian, heart failure nurse specialists, cardiologists leading on heart failure and input encouraged. Comments were received from who thought that the presentation of the guideline was not as clear as it could be. These comments were taken into consideration and changes made. The guideline were presented at the CHD DIT where only Dr Kalra made comments for changes. Dr Kalra and I met and the following changes were made:- highlighting the need for closely monitoring the effects of metolazone, and to discuss with cardiologist or responsible physican patients who may need it. On spironolactone the need for ACEI & Beta Blocker before considering spironolactone, use in caution with patients on Tamoxifen and the need to stop for patients with D&V and unable to tolerate fluids. For ACEI adding in 20% increase in creatine instead of 50%. For A11RA only adding in Candesarten with cardiologist input. With Digoxin, adding in not to be used at the expense of a beta blocker. He also suggested including the New York Heart Association (NYHA) classification as an appendix. The guidelines then went to the District Wide Medicines and Guidelines committee who requested the removal of all non formulary medicines. There was some concern about the max dose of Amiloride at 40mgs if patient not on an ACEI. This has been checked and is the recommended dose in the NICE guidelines and Dr Kalra also recommends this dose, with 20mgs for patients already taking an ACEI.

Documentation of Development Process		
Reviewing groups		**Date**
Initial proposal	Guideline Development Group Guidelines written for a new service	Oct 2004
Draft 2	To CHD LIT	Jan 2005
Draft 3	To The District Wide Medicines and Guidelines Committee	Feb 2005
Draft 4		
Finalisation by Guideline Development Group		

Documentation of Minimum Requirements (state reasons for exclusion and enter the information if it is not included for any other reason than it is not applicable in the boxes below)	
Requirement	**Included**
Reasons for developing drug therapy guideline	☐
Objectives of drug therapy guideline	☐
A description of patients to whom the guideline should apply (not ageist)	☒
A clear description of condition to be detected, treated or prevented	☒
Clear description of health benefits likely to be gained from following the guidelines	☒
Clear definition of alternative options for management of the condition	☒
Statement of how the guideline to be disseminated For the use of the Heart Failure Nurse Specialists	☐
Clear presentation of the recommendations	☒
An adequate description of harms and risks associated with recommended management	☒
Reference to key national guidelines	☒
Comment concerning evidence base	☒

Documentation of Additional Information	**Incl**
Estimated costs of expenditures likely to occur from the recommended management	☐
Explicit statement of how patient preferences should be taken into account in applying the guidelines	☐
Clear definition of standards or targets or measurable outcomes, that can be monitored	☐

References Used in Preparing Drug Therapy Guideline

1. National Institute for Clinical Excellence (2003) Chronic heart failure: Management of chronic heart failure in adults in primary and secondary care. Clinical Guideline 5.
2. Michelson, E.L., Pfeffer, M.A., Granger, C.B., McMurray, J.J., et al.(2003). Effects of Candesartan in patients with chronic heart failure and reduced left-ventricular systolic function intolerant to angiotensin-converting -enzyme inhibitors: the CHARM – Alternative trial. Lancet, 362 (9386): 772-6
3. Pfeffer, M.A., Olofsson, B., Michelson, E.L., Yusuf, S. Granger, C.B., et al. 92003). Effects of Candesartan in patients with chronic heart failure and reduced left ventricular systolic function taking angiotensin-converting-enzyme inhibitors: the CHARM – Added trial. Lancet 362 (9386): 767-71
4. MERIT-HF Investigators. (1999) Effect of Metoprolol CR/XL in chronic heart failure: Metoprolol CR/XL. Randomised Intervention Trial in Congestive Heart Failure (MERIT_HF). Lancet 353: 2001-2007
5. Cleland, G.F, Loh, P.H., Freemantle, N., Clark, A.L., & Coletta, A.P. Clinical trials update from the European Society of Cardiology: SENIORS. The European Journal of Heart Failure, 6 (2004) 787-791

Methods Used to Interpret Strength of Evidence
The recommendations in this guideline have been based on evidence taken from large randomised controlled trials of good quality and overwhelming evidence from observational studies and expert opinion. The local prescribing formulary was also taken into account.

Approval

Documentation of Approval Process	
Group	**Date**
Approval by Formulary and Medicines Group	
Approval by Guidelines and Medicines Management Committee	
Approval by Area Prescribing Committee	
Ratified by sub-committee of Clinical Governance Committee	

Publishing and Dissemination

Final version prepared by;		**Date**
Final version placed on intranet website by		**Date**
Intranet address		
Alternative publication methods		

Pilot Process (if applicable)	Duration
Audit of Pilot Process	
Changes made as a result of pilot process	

Review

Review date/frequency proposed by Guideline Development Group		
Proposed review methodology		
Review date and method agreed by relevant approval committee?	**Yes** ☐	**No** ☐
Revised and approved review date or method		
Review completed by		**Date**
Changes to guideline required?	**Yes** ☐	**No** ☐

Revised version prepared by*		**Date**
Revised version placed on intranet website by:		**Date**
Intranet address:		

* Detailed documentation of review of each drug therapy guideline will be undertaken using a new PHPS Form 07 001U in accordance with the requirement of PHPSWI07 001U.

Audit

Audit date proposed by Guideline Development Group	**Date**	
Proposed audit methodology		
Audit date and method approved by relevant approval committee?	**Yes** ☐	**No** ☐
Revised and approved audit date or method		
Audit completed	**Date**	
Results reported by		
Results reported to		
Changes to guideline required?	**Yes** ☐	**No** ☐
Revised version prepared by*	**Date**	
Revised version placed on intranet website by	**Date**	
Intranet address		

* Detailed documentation of audits of each drug therapy guideline will be undertaken using a new PHPS Form 07 001U in accordance with the requirement of PHPSWI07 001U.

Appendix 2. PHPS Form 07 001U Documentation of Preparation, Approval, Publishing, Audit and Review of Drug Therapy Guidelines

Record of Preparation, Publishing, Audit and Review of Drug Therapy Guidelines

Preparation

Title of Drug Therapy Guideline	Guidelines for Cholesterol Testing and Treatment
Reference number	125.01
Name of Guideline Project Manager	Katie Hovenden
Membership of Guideline Development Group	**Date**
1 Code A 2 Code A 3 Code A 4 Tom Kenny GP 5 Code A 6 Code A 7 Code A 8 Code A Code A	Feb 2005

Methods used to formulate recommendations
A local fatality involving simvastatin and ciclosporin interaction and a recent CSM paper on statin interactions prompted a review of the cholesterol guideline to highlight the potential interactions involving simvastatin. Guidance based on the CSM summary was added to the guideline. Mike Cummings questioned whether fenofibrate should be stated as fibrate of choice when using a fibrate with simvastatin. This was added in (evidence from Zocor datasheet). Code A queried whether fluconazole would interact with simvastatin as it wasn't specifically mentioned in the datasheet or guideline, but itraconazole and ketoconazole were. A search of medline, embase the summaries of product characteristics was carried out to determine whether this interaction was significant. No reports of interactions specifically mentioning fluconazole were found. The manufacturer (pfizer) was called for advice. they stated that no studies had been carried out to determine whether fluconazole interacted with simvastatin. One report using 200mg of fluconazole a day with simvastatin had resulted in rhabdomyolysis. The company said the reaction was a caustion rather than a contraindication. Venkat Rahmon asked for the addition of a statement about advise being sought from a renal consultant when starting renal patients on statins. This was added in. The guideline was sent out again for comments and a consensus of opinion was reached. Code A brought up the point that many authorities were starting statins for primary prevention in patients with a 20% cardiovascular risk (=15% CHD risk) rather than the 30% CHD risk which was recommended in the Trust guidelines. It was decided that this issue needed discussing at a near future date.

Documentation of Development Process		
Reviewing groups		**Date**
Initial proposal	Guideline Development Group	Feb 2005
Draft 2		
Draft 3		
Draft 4		
Finalisation by Guideline Development Group		

Documentation of Minimum Requirements (state reasons for exclusion and enter the information if it is not included for any other reason than it is not applicable in the boxes below)	
Requirement	**Included**
Reasons for developing drug therapy guideline	☒
Objectives of drug therapy guideline	☒
A description of patients to whom the guideline should apply (not ageist)	☒
A clear description of condition to be detected, treated or prevented	☒
Clear description of health benefits likely to be gained from following the guidelines	☒
Clear definition of alternative options for management of the condition	☒
Statement of how the guideline to be disseminated Not included for conciseness. Guideline to be published on the trust intranet and extranet. Paper copies to be distributed to the wards and doctors.	☐
Clear presentation of the recommendations	☒
An adequate description of harms and risks associated with recommended management	☒
Reference to key national guidelines	☒
Comment concerning evidence base	☒

Documentation of Additional Information	**Incl**
Estimated costs of expenditures likely to occur from the recommended management	☐
Explicit statement of how patient preferences should be taken into account in applying the guidelines	☐
Clear definition of standards or targets or measurable outcomes, that can be monitored	☐

References Used in Preparing Drug Therapy Guideline

1 Ebrahim s. Cholesterol and CHD. Screening and treatment. Effective Health Care Bulletin. 1998, 4(1) 1-16.
2 Scandinavian Simvastatin Survival Study Group. RCT of Cholesterol lowering in 4444 patients with CHD. Lancet 1994, 334, 1383-89.
3 Sheperd J et al. Prevention of CHD with Pravastatin in men with hypercholesterolaemia. (WOSCOPS). N. Eng J Med 1995, 333,1301-7.
4 Wood D et al. Joint British recommendations on prevention of coronary heart disease in clinical practice. Endorsed by the British Cardiac Society. The British Hyperlipidaemia Association, the British Hypertension Society and the British Diabetic Association. Heart. 1998, 80,(suppl 2) S1-29.
5 Heart Protection Study Collaborative Group. MRC/BHF. Heart Protection Study of cholesterol lowering with simvastatin 40mg in 20,536 high risk individuals. A randomised placebo- controlled trial. Lancet 2002,360,7M-22M.

Methods Used to Interpret Strength of Evidence
the recommendations in this guideline have been based on national guidelines on Prevention of coronary heart disease the national service framework, GMS contract, large randomised controlled trials and expert opinion. The local prescribing formulary has also been considered. 6 Stockley Drug Interactions 6th ed 2002. 7 Zocor summary of product characteristics 8 MHRA Current problems in pharmacovigilance, 2004

Approval

Documentation of Approval Process	
Group	**Date**
Approval by Formulary and Medicines Group	
Approval by Guidelines and Medicines Management Committee	
Approval by Area Prescribing Committee	
Ratified by sub-committee of Clinical Governance Committee	

Publishing and Dissemination

Final version prepared by;		**Date**
Final version placed on intranet website by		**Date**
Intranet address		
Alternative publication methods		

Pilot Process (if applicable)	Duration
NA	
Audit of Pilot Process	
NA	
Changes made as a result of pilot process	
NA	

Review

Review date/frequency proposed by Guideline Development Group		**Sep 2006**
Proposed review methodology		
literature search and multidiciplinary review		
Review date and method agreed by relevant approval committee?	**Yes** ☐	**No** ☐
Revised and approved review date or method		
Review completed by		**Date**
Changes to guideline required?	**Yes** ☐	**No** ☐

Revised version prepared by*		**Date**
Revised version placed on intranet website by:		**Date**
Intranet address:		

* Detailed documentation of review of each drug therapy guideline will be undertaken using a new PHPS Form 07 001U in accordance with the requirement of PHPSWI07 001U.

Audit

Audit date proposed by Guideline Development Group		**Date**
Proposed audit methodology		
Audit date and method approved by relevant approval committee?	**Yes** ☐	**No** ☐
Revised and approved audit date or method		
Audit completed		**Date**
Results reported by		
Results reported to		
Changes to guideline required?	**Yes** ☐	**No** ☐
Revised version prepared by*		**Date**
Revised version placed on intranet website by		**Date**
Intranet address		

* Detailed documentation of audits of each drug therapy guideline will be undertaken using a new PHPS Form 07 001U in accordance with the requirement of PHPSWI07 001U.

APPENDIX 3: NEW YORK HEART ASSOCIATION (NYHA) CLASSIFICATION

Class I	Patients with cardiac disease but no limitation during normal physical activity
Class II	Slight limitation, symptoms occur on moderate exertion such as walking and climbing stairs
Class III	Marked limitation, symptoms occur on minimal exertion such as walking on flat ground
Class IV	Breathlessness at rest

Portsmouth and South East Hampshire
Guidelines and Medicines Management
Committee

NHS

Drug Therapy Guideline No125.01, IssuedMONTH 2005
Guidelines for Cholesterol Testing and Treatment

Guidelines for Cholesterol Testing and Treatment DRAFT

This advice replaces the Guidelines for Cholesterol testing and management agreed in January 2002 and which appeared as part of the DRIVE guidelines. These revised guidelines take account of the requirements of the Coronary Heart Disease NSF, the new GMS contract for GPs, relevant NICE Guidance as well as recent evidence from clinical trials such as the Heart Protection Study.[5]

Cholesterol lowering using statins is effective at reducing coronary heart disease mortality and morbidity.[1,2,3] Therapy should be targeted at people who are at high risk of coronary heart disease rather than be based purely on cholesterol levels. The cost effectiveness of some anti-hypertensives, aspirin and beta-blockers is greater than statins.[1] Thus referral to the smoking cessation service, control of hypertension and appropriate use of other interventions should not be overlooked.

Cholesterol Testing in Patients *with* Diagnosed Coronary Heart Disease or other occlusive arterial Disease i.e. Secondary Prevention

This group includes all patients with established coronary heart disease e.g. angina, post MI, post CABG or cardiovascular disease e.g. stroke (haemorrhagic or ischaemic), peripheral vascular disease. This group also includes diabetic patients with coronary heart disease.

The target in this group is a total cholesterol of less than 5 mmol/l or LDL-C <3 mmol/l in line with the nGMS contract. However evidence confirms additional benefit from lower cholesterol levels in this high risk group and therefore a total cholesterol of < 4 mmol/l is ideal or LDL <3 mmol/l.

All patients prescribed a statin should have fasting triglycerides as well as HDL measured at least once and total cholesterol measured on an annual basis.[4] LFTs should be measured 3 months after initiation of a statin and annually thereafter.

There is no fixed upper age limit for considering statin therapy. Instead it is important to consider patients overall quality of life and life expectancy, as such it would not normally be appropriate to prescribe for patients with terminal illness.

Cholesterol Testing in Patients *without* diagnosed coronary heart disease or other occlusive arterial disease i.e. Primary Prevention

Patients without diabetes and a CHD event risk greater than 30% over ten years should be treated with a statin to lower their total Cholesterol to below 5mmol/l or by 30% whichever is the greater

Currently the Joint British Societies Coronary Risk Prediction Chart[4] located in the BNF (or the derived computer programme), should be used to decide whether or not to measure an individuals blood cholesterol. These are subject to review at intervals. The information required for a risk assessment is:

- Age , Gender, Pre-treatment systolic blood pressure, fasting lipids i.e. total and HDL cholesterol
- Smoking status (regular intake - equivalent to >1 cigarette per day during the last 5 years)
- Diabetes (presence or absence)

A preliminary estimated risk can be obtained by using the Joint British Societies Coronary Risk Prediction Chart and the population average cholesterol ratios i.e. 4.7 for women and 5.3 for men. If the estimated risk does not exceed 15% **do not measure cholesterol,** as the actual value is unlikely to exceed the 30% risk threshold for intervention. *This estimate will not apply if there is a suggestion of genetic dyslipidaemia e.g. familial hypercholesterolaemia or if there is a family history of premature CHD (<55 brother or father, <65 sister or mother) or in patients of ethnic background.*

Where the estimated risk **exceeds** 15%, **total and HDL cholesterol and fasting triglycerides should be measured**. If the measured risk then exceeds 30%, patients should receive specific dietary advice and after three months a repeat fasting total cholesterol and HDL should be measured. **Patients whose CHD risk continues to exceed 30% should be treated with a statin** and cholesterol levels and LFTs checked annually.

Diabetic Patients without CHD - also require a full fasting lipid profile. Hypercholesterolaemic diabetic patients with a calculated CHD risk **above 15%** should be treated pharmacologically. Diabetic patients with significant hypertriglyceridaemia i.e. TG >5mmol/ l who are unresponsive to fibrates should be referred to the diabetes centre for further evaluation.

Choice of Statin

There are currently five statins licensed in the UK (simvastatin atorvastatin, pravastatin, fluvastatin and rosuvastatin). These differ in terms of weight of evidence in clinical trails, maximum efficacy in lowering cholesterol concentrations and cost. **The best evidence available, in terms of outcome studies, is for simvastatin. In addition as a result of price reductions simvastatin is now the statin of first choice.**

Lipid regulating agents on District Formulary		REDUCTION IN TOTAL CHOLESTEROL	PRICE for 28 DAYS TREATMENT as at September 1st 2004
SIMVASTATIN (generic)	10mg	21%	£2.12
	20mg	26%	£2.26
	40mg	30%	£4.87
	80mg	37%	£26.79
ATORVASTATIN (Lipitor®)	10mg	28%	£18.03
	20mg	35%	£24.64
	40mg	40%	£28.21
	80mg	42%	£28.21
PRAVASTATIN (Lipostat®)	10mg	13%	£3.42
	20mg	18%	£5.89
	40mg	24%	£6.55
ROSUVASTATIN (Crestor®)	10mg, 20mg, 40mg	Restricted place on formulary see below	£18.03, £29.69 & £29.69 respectively
EZETIMIBE (Ezetrol®)	10mg	Restricted place on formulary see below	£26.31

Regardless of the statin prescribed it is important that the dose is titrated within the licensed range to bring cholesterol levels down to the targets outlined in this document, or to the maximum dose that the patient can tolerate. Treatment should therefore be increased in a step-wise fashion according to the recommendations below:

Treatment Recommendations

Step 1	**Simvastatin 20mg** (NOTE: a maximum dose of 10mg should be used in certain patients, see interaction information)
Step 2	**Simvastatin 40mg**
Step 3	**Simvastatin 80mg**

NOTE The above dosage recommendations are for use in patients who are not on drugs that may interact with simvastatin. Patients on interacting drugs may be subject to simvastatin dosage restrictions and contraindications please ensure that the interactions information below is referred to when starting and increasing the dose of simvastatin.

Particular care must be exercised in using statins in renal patients, many of whom maybe on immunosuppression (including transplant recipients). It is strongly advised that statins are only started in such patients on the advice of, or after consultation with the consultant nephrologist treating the patient.

Atorvastatin may be used in patients who do not reach target cholesterol levels despite maximum doses of simvastatin. Atorvastatin is also more effective at lowering triglycerides and may be used in patients with concomitant hypertriglyceridaemia in preference to a combination of simvastatin and a fibrate.

In patients with *severe* hypercholesterolaemia e.g. heterozygous familial hypercholesterolaemia that does not respond to maximum doses of simvastatin or atorvastatin, the following options may be considered

- Addition of ezetimibe (Ezetrol®) to simvastatin or atorvastatin therapy
  OR
- Replacement of simvastatin or atorvastatin with rosuvastatin starting with a 10mg dose.

If the patient experiences side effects such as muscle pains, headaches, GI disturbances with simvastatin or atorvastatin, a switch to a more water soluble statin e.g. pravastatin or rosuvastatin may be of benefit. All patients prescribed rosuvastatin (including those switching from another statin) must start on an initial dose of 10mg (max dose 20mg od in patients of Asian origin). Also be aware of interactions with other drugs, especially with simvastatin at higher doses

In patients with mixed dyslipidaemia i.e. significantly raised fasting triglycerides i.e. >2.2mmol/l, which does not respond to a statin, consider bezafibrate or fenofibrate. If not tolerated consider acipimox, or nicotinic acid (Niaspan®)

Interactions

Possible hazardous interactions		
Drug	**Simvastatin**	**Atorvastatin**
Ciclosporin Gemfibrozil Niacin >1g/day	Increased risk of myopathy Avoid doses >**10mg**	Increased risk of myopathy
Verapamil Amiodarone	Possible increased risk of myopathy Avoid doses > **20mg**	No significant interactions reported, Caution with high doses of atorvastatin due to the potential for an interaction
Diltiazem	Possible increased risk of myopathy Avoid doses > **40mg**	No significant interactions reported, Caution with high doses of atorvastatin due to the potential for an interaction
Macrolides	Increased risk of myopathy with clarithromycin, erythromycin and telithromycin	Increased atorvastatin level with clarithromycin Increased risk of myopathy with erythromycin
	Contraindicated **Stop simvastatin whilst on interacting drug, recommence once course has finished.**	
Warfarin and other anticoagulants	Increased anticoagulant effect Should not be a problem when anticoagulant monitoring is effective	No reported interactions, monitor INR closely when adding atorvastatin to therapy.
Azole Antifungals	Increased risk of myopathy with itraconazole, miconazole and ketoconazole	Increased risk of myopathy with itraconazole
	Contraindicated **Stop simvastatin whilst on interacting drug, recommence once course has finished**	**Avoid concomitant use**
Antivirals HIV protease inhibitors	Increased risk of myopathy with a number of drugs used for HIV	Increased risk of myopathy with a number of drugs used for HIV
	Use contraindicated, see note below	**Avoid concomitant use**
Cardiac glycosides	No effect	Digoxin level possibly increased
Grapefruit juice	Avoid grapefruit juice as it can increase simvastatin blood levels	Avoid large volumes of grapefruit juice
Lipid-regulating drugs	Increased risk of myopathy with gemfibrozil (Avoid doses > 10mg), fibrates (see note below), nicotinic acid	Increased risk of myopathy with gemfibrozil, fibrates, nicotinic acid

In the cases of needing to use one of the contraindicated drugs long term or where higher doses of simvastatin are needed with a potentially interacting drug, atorvastatin may be a more appropriate choice (see table above). If atorvastatin is not appropriate pravastatin can be prescribed. Pravastatin is not substantially metabolised by cytochrome P450, therefore it may be more appropriate in patients who need statins at high doses and are on interacting drugs.

Concomitant use of simvastatin with fibrates: Fenofibrate is the fibrate of choice if treatment with a fibrate is considered necessary with a statin because there is no evidence that the risk of myopathy exceeds the sum of the individual risks of each agent. Adequate pharmacovigilance and pharmacokinetic data are not available for other fibrates

Where potentially interacting drugs are used with a statin patients should be warned to be alert for signs of rhabdomyolysis such as muscle pain, weakness or cramps.

Rosuvastatin
Prescribers should be aware of interactions with other drugs especially ciclosporin and warfarin. Drug interactions resulting from cytochrome P450- mediated metabolism are not expected.

This list of interactions is not exhaustive and the relevant product information summary or medicines information (77006636) should be referred to if you are unsure of any interaction.

References

1. Ebrahim S. Cholesterol and CHD. Screening and Treatment. Effective Health Care Bulletin. 1998; 4(1) 1-16
2. Scandinavian Simvastatin Survival Study group. RCT of cholesterol lowering in 4444 patients with CHD. Lancet 1994; 334: 1383-89
3. Shepherd J et al. Prevention of CHD with Pravastatin in men with hypercholesterolaemia. (WOSCOPS). N.Eng J.Med 1995; 333: 1301-7
4. Wood D et al. Joint British recommendations on prevention of coronary heart disease in clinical practice. Endorsed by the British Cardiac Society, the British Hyperlipidaemia Association, the British Hypertension Society and the British Diabetic Association. Heart 1998; 80(Suppl2);S1-29
5. Heart Protection Study Collaborative Group. MRC/BHF. Heart Protection Study of cholesterol lowering with simvastatin 40mg in 20,536 high risk individuals. A randomised placebo-controlled trial. Lancet 2002; 360: 7M-22M

Developed by subgroup of Area Prescribing Committee with representatives from Portsmouth Hospitals NHS Trust; Portsmouth City Teaching PCT, East Hampshire PCT and, Fareham and Gosport PCT.
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See Trust Policy for the Production of Drug Therapy Guidelines
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