HF Pathway Pathway

Patient presents with Breathlessness

Take a history and examination (see Note 1)

Is LVSD confirmed on Echocardiography or other imaging modality?

No

Investigations

- Full Blood Count
- Electrolytes
- Liver Function Test
- Hba1c
- Thyroid Function Test
- Pro-BNP/BNP
- ECG
- Chest X-ray

Yes

Bloods should be assessed to detect contraindications to medications.
All patients with LVSD should be referred to the heart failure nurse specialist for education and support

Is pro-BNP is over 100pg/ml (pre-existing IHD/AF do not perform BNP refer for echo) Echocardiography

HIGH BNP/ NT proBNP or previous MI
BNP > 400pg/ml
or
NT proBNP >2000 pg/ml

Refer to 2 week urgent RAHF Clinic
To see Heart Failure Specialist

INTERMEDIATE BNP/ NT proBNP
BNP 100–400 pg/ml
Or
NTproBNP 400–2000 pg/ml

Refer to 6 week Echo and clinic

LOW BNP/NT proBNP
BNP < 100 pg/ml
Or
NTpro BNP< 400pg/ml

An alternative diagnosis for the dyspnoea should be considered

Ongoing medication should be reviewed to ensure fluid retaining medication or potential interactions are minimised

Diuretics should be initiated to reduce fluid overload and symptoms. The patient should be educated to understand their own ability to titrate the daily dose of diuretic against their symptoms and daily weights

NOTE 1

Key Symptoms:
- Breathlessness on exertion
- Orthopnoea
- Nocturia
- Paroxysmal Nocturnal Dyspnoea

Key Signs:
- Tachycardia
- High blood pressure
- Basal crepitations
- Gallop Rhythm at the apex

Dr Matthew Fay
Westcliffe Cardiology Service
September 2013

The protocol embedded in SystmOne should be used when reviewing the patients with confirmed LVSD. This will bring consistency of intervention throughout the clinical team

The protocol endeavours to achieve the management of LVSD to optimise all prognostically significant medication to ensure the best care is obtained for the patients

The image below highlights what is the protocol is aiming to achieve for the patient

Diuretics should be initiated to reduce fluid overload and symptoms. The patient should be educated to understand their own ability to titrate the daily dose of diuretic against their symptoms and daily weights.

If the systolic blood pressure is > 90mmHg and unless contraindicated an ACE-I inhibitor should be commenced and up titrated to the maximum tolerated dose

Aldosterone Antagonists (Spironolactone or Eplerenone) should be initiated to maintain the potassium between 4-5mmol/l

Sinus Rhythm

If the heart rate is > 75bpm and unless contraindicated a beta-blocker should be commenced and up titrated to the maximum tolerated dose

Atrial Fibrillation

If the heart rate is > 75bpm and unless contraindicated a beta-blocker should be commenced and up titrated to the maximum tolerated dose

Renal function should be regularly assessed in people on ACE-I. With the addition of aldosterone antagonists then the renal function should be checked every 2 weeks for the first month, then 4 weeks after that if stable and then every 3 months.
ARBs should only be considered if truly intolerant of ACE-I
Eplerenone can be considered if intolerance to Spironolactone

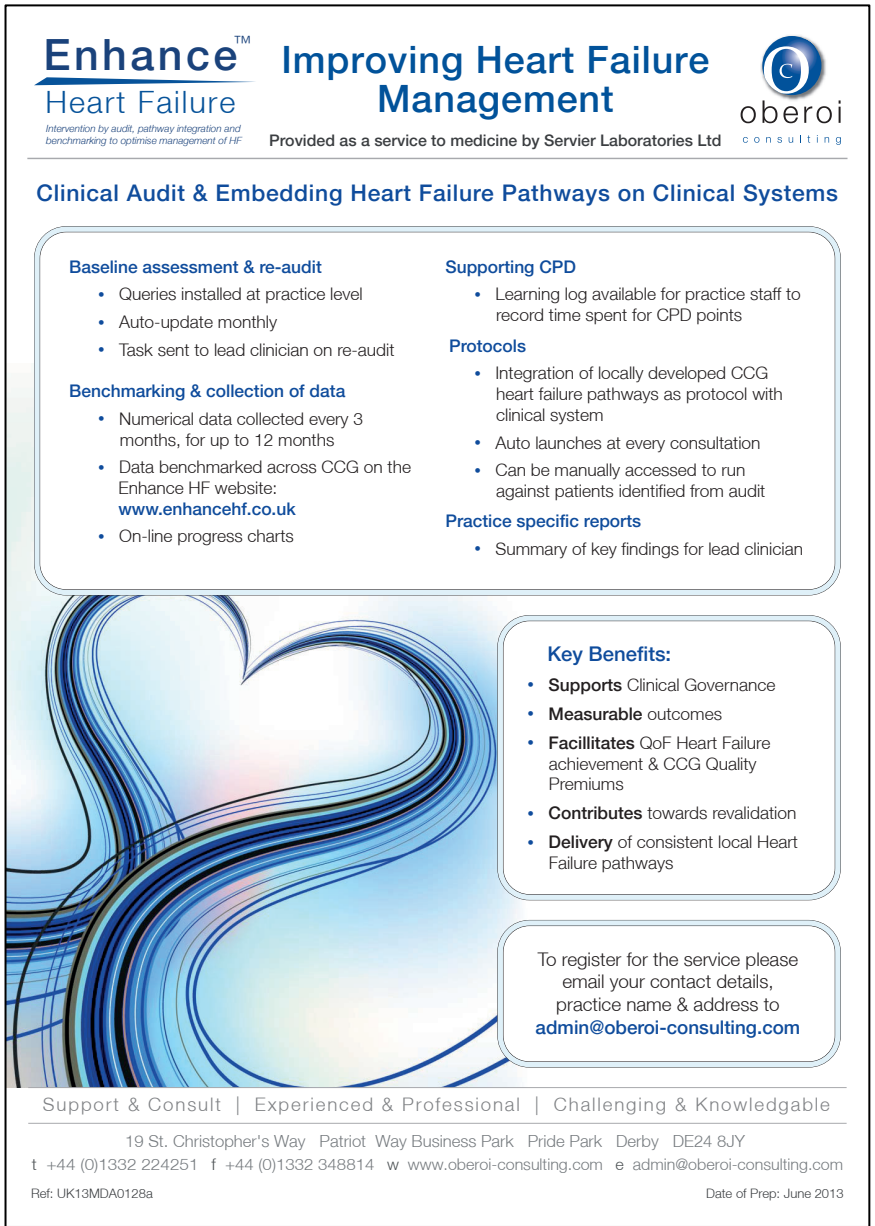
If the heart rate remains over 60bpm and/or a beta-blocker is contraindicated or there are symptoms of hypotension on uptitration of the beta-blocker then consider adding Ivabradine for rate control.

If the heart rate remains over 60bpm and/or a beta-blocker is contra-indicated then consider low dose digoxin.
ALL PEOPLE WITH LVSD AND AF SHOULD BE ANTICOAGULATED

If the patient remains symptomatic despite the above then referral to a specialist should be considered.
As a minimum on going monitoring annual U&E's and ECG should be performed.

Dr Matthew Fay
Westcliffe Cardiology Service
September 2013

How to Sign Up to SystmOne Protocol



Enhance™ Heart Failure

Intervention by audit, pathway integration and benchmarking to optimise management of HF

Improving Heart Failure Management

Provided as a service to medicine by Servier Laboratories Ltd

oberoi consulting

Clinical Audit & Embedding Heart Failure Pathways on Clinical Systems

Baseline assessment & re-audit

- Queries installed at practice level
- Auto-update monthly
- Task sent to lead clinician on re-audit

Benchmarking & collection of data

- Numerical data collected every 3 months, for up to 12 months
- Data benchmarked across CCG on the Enhance HF website: **www.enhancehf.co.uk**
- On-line progress charts

Supporting CPD

- Learning log available for practice staff to record time spent for CPD points

Protocols

- Integration of locally developed CCG heart failure pathways as protocol with clinical system
- Auto launches at every consultation
- Can be manually accessed to run against patients identified from audit

Practice specific reports

- Summary of key findings for lead clinician

Key Benefits:

- **Supports** Clinical Governance
- **Measurable** outcomes
- **Facillitates** QoF Heart Failure achievement & CCG Quality Premiums
- **Contributes** towards revalidation
- **Delivery** of consistent local Heart Failure pathways

To register for the service please email your contact details, practice name & address to **admin@oberoi-consulting.com**

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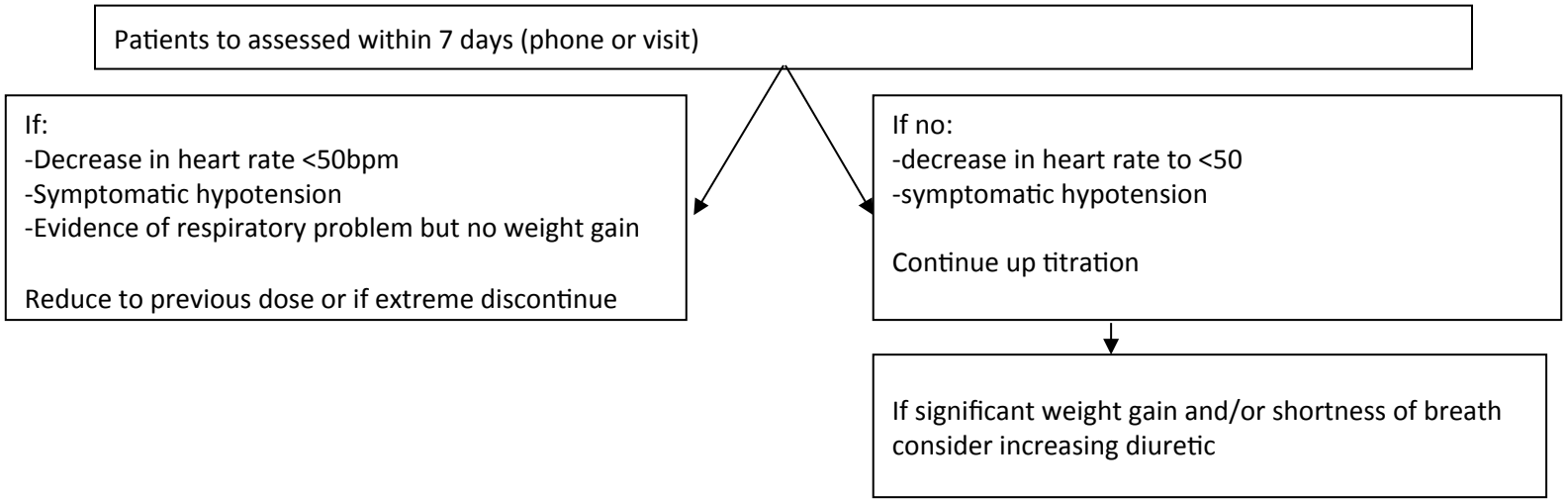
Appendix 1-Beta-blockers in LVSD

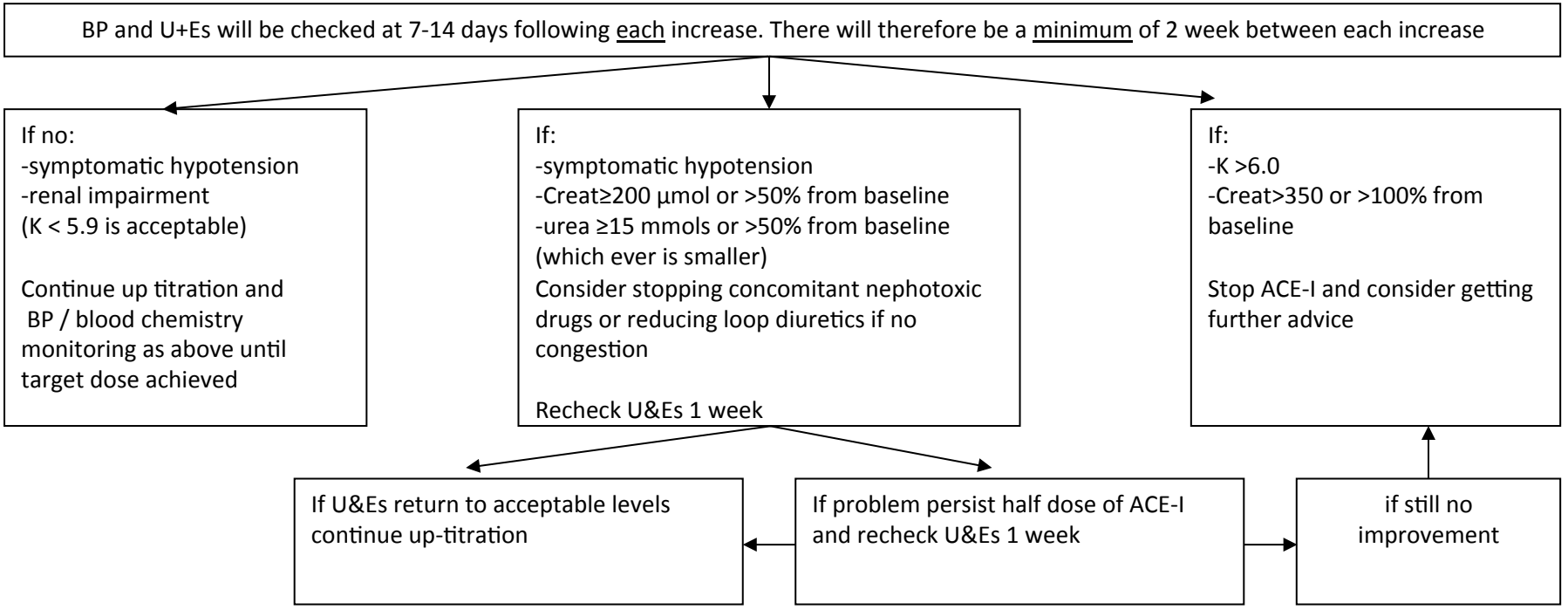
	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 12
Bisoprolol (OD)	1.25 mg	2.5mg	3.75 mg		5mg			7.5 mg	10mg
Carvedilol (BD)	3.12 mg			6.25 mg		12.5 mg		25mg 50mg if > 85Kg	
Nebivolol (OD)	1.25 mg		2.5 mg		5 mg		10 mg		

NB intervals/dose increases given are a minimum level/dose and progression may be slower

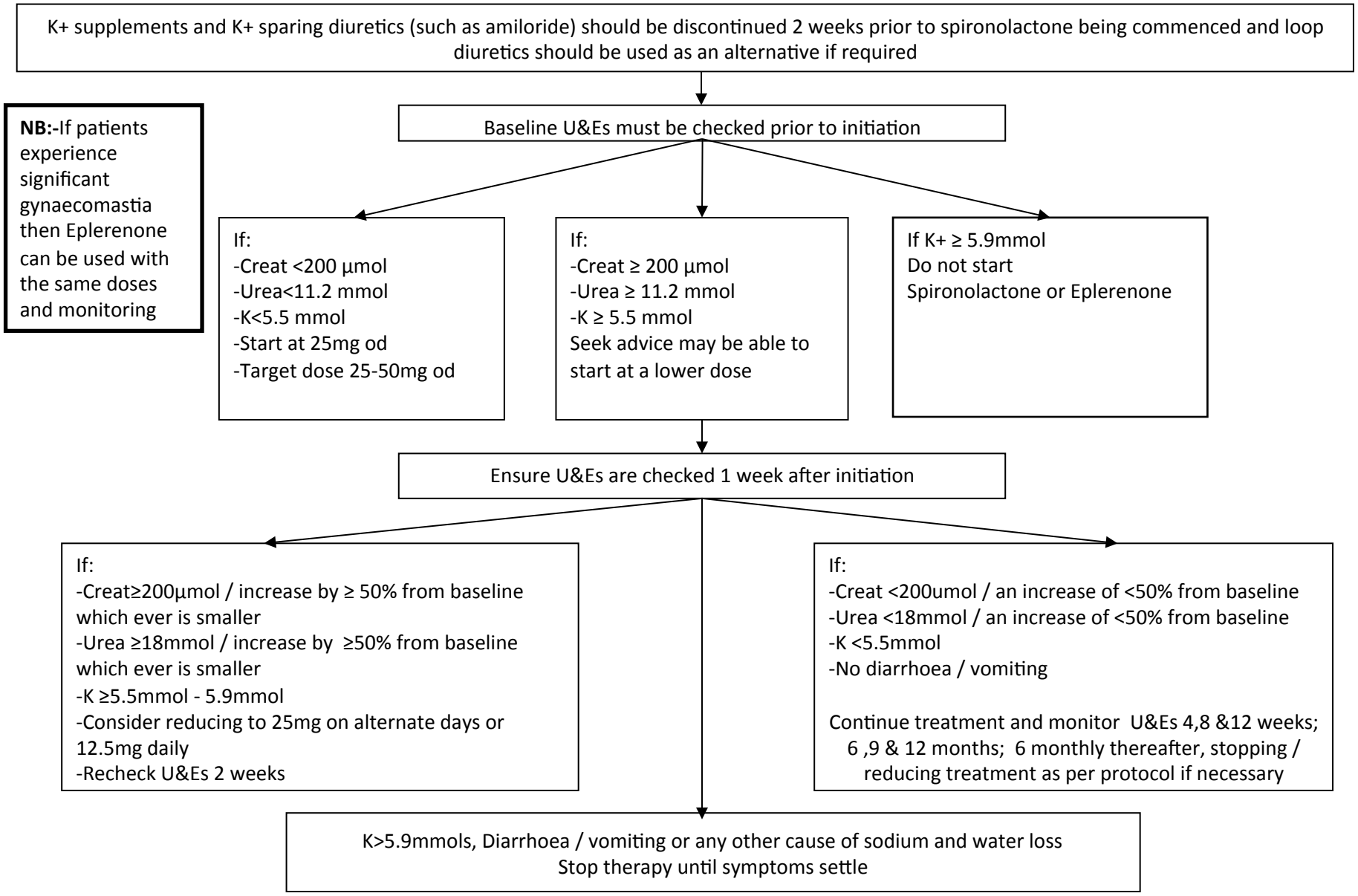


Appendix 2-ACE-Inhibitors in LVSD

Preferred options	Starting dose	Incremental rise	Target dose
Ramipril	1.25mg OD	Double doses	10mg OD
Lisinopril	2.5mg – 5mg OD	Double doses	30-35mg OD
Perindopril	2mg	Double dose	4mg OD



Appendix 3-Spironolcatone in LVSD



Appendix 4-Increasing loop diuretics in LVSD

Sudden increase in weight (>1Kg above dry weight [patients stable weight with no signs of fluid overload] sustained over≥ 2 days) and/or increasing by oedema and breathlessness – titrate as below.

↓

Furosemide is normally increased by 40mg daily at any one time or 1mg daily if Bumetanide

For some patients increasing therapy by 40mg alternate days maybe more appropriate

Additional doses can be added at lunch time if current dose in morning is 80mg or over

Splitting doses increases diuresis

↓

Maintain increased dose for 3 days

↓

If dry weight not achieved/symptoms not improved continue and reassess in a further 3-4 days.
If dry weight still not achieved then consider further increase or take advice

If weight/symptoms Increased consider use of Bendrofluazide 10mg od for 3 days with daily U&Es to ensure potassium levels do not fall or renal function become compramised

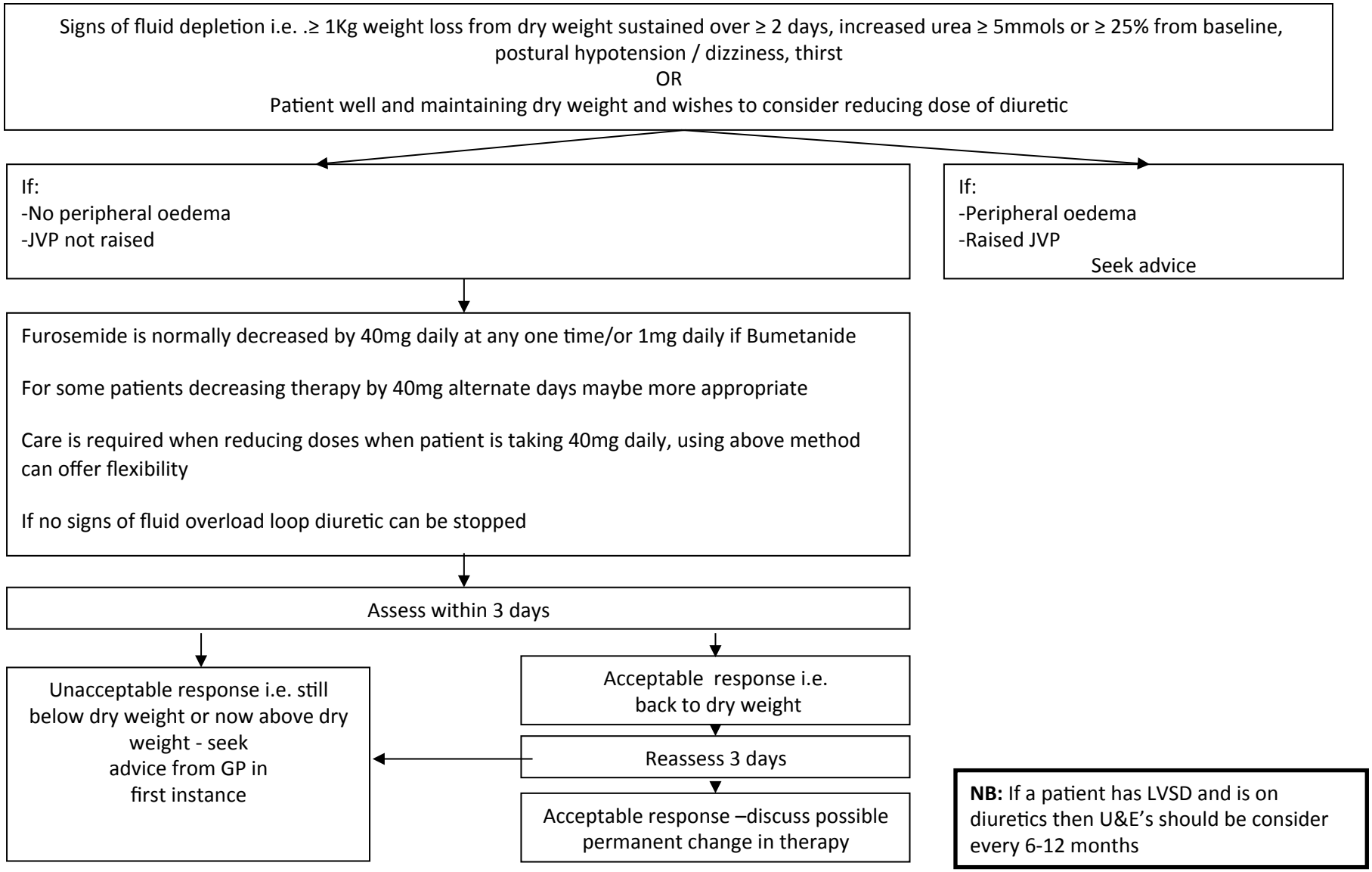
If dry weight achieved -return to original dose

↓

If repeated episodes (>2) in 2-3 weeks of weight gain/worsening symptoms discuss permanent increase in dose

NB: If a patient has LVSD and is on diuretics then U&E's should be consider every 6-12 months

Appendix 5-Decreasing loop diuretics in LVSD



NB: If a patient has LVSD and is on diuretics then U&E's should be consider every 6-12 months