NHS
Sunderland
Clinical Commissioning Group

Lithium

Shared Care Guideline (Amber)

Introduction

Uses/Licensed Indications:

- Treatment and prophylaxis of mania or hypomania episodes
- Treatment and prophylaxis of bipolar disorder
- Management of treatment resistant depression
- Occasional use in control of aggressive or self-harming behaviours

Criteria for Shared Care:

- Clinically stable
- On a stable dose of lithium with serum levels in range

Note: stable = the dose has remained constant for 4 weeks (BNF)

Exclusions for Shared Care:

- Unstable disease state
- Unstable dose and serum levels not in range
- Refusal to accept NPSA Lithium Information Pack

Dosage and preparations:

MUST be prescribed by brand name as different brands of lithium have different bio-availabilities. Dosage as determined by serum lithium levels.

Lithium carbonate is currently available as:
Camcolit® 400mg modified release tablets
Liskonum® 450mg modified release tablets
Priadel® 200mg and 400mg modified release tablets
Lithium Carbonate Essential Pharma® 250mg immediate release tablets
Lithium citrate is currently available as:
Priadel® liquid 520mg/5ml
Li-Liquid® 509mg/5ml (To avoid overdose, Li-Liquid 1018mg/5ml should not be used)

Monitoring

Regular monitoring of serum levels is mandatory due to lithium's narrow therapeutic index. The normal therapeutic range is **0.4 – 1.0 mmol/litre** (maybe lower or narrower depending on the patient).Take blood samples 12 hours after the previous dose.
Measure lithium plasma levels one week after initiation and one week after dose change and weekly until plasma levels are stable. Aim to keep lithium levels between 0.6mmol/L to 0.8mmol/L in people being prescribed lithium for the first time. Consider maintaining lithium level between 0.8mmol/L to 1.0mmol/L for a trial of 6 months in those who have had a relapse while taking lithium in the past or who are taking lithium and have subthreshold symptoms and functional impairment.
Once stable, serum lithium level must be monitored every 3 months
(Note: After one year, serum lithium monitoring can be reduced to a minimum of 6 monthly if level <0.8mmol/l and there are no risk factors. Consult NICE CG185, page 34 before reducing monitoring to 6 monthly) www.nice.org.uk/guidance/cg185

3 monthly	Serum lithium	GP
6 monthly	Weight/BMI, U&Es, eGFR & TFTs (more frequently as required)	GP
12 monthly	Annual physical health check including ECG if indicated, life style review, BP, lipid profile, FBG/HbA1c	GP

Assess side effects and adherence at every visit
Consider referral to specialist renal or endocrinology services if appropriate
Record the test results in the lithium therapy record book in the NPSA pack

Specialist Responsibilities

Establish the diagnosis, suitability & need for lithium treatment
Do baseline tests/assessment:

- ✳ Personal & family physical & mental history
- ✳ U&Es (including calcium) & eGFR
- ✳ ECG
- ✳ Weight / BMI & waist circumference
- ✳ Thyroid function
- ✳ Full blood count
- ✳ FPG / HbA1c
- ✳ BP

	✳ Urinalysis ✳ Allergies ✳ Lipid profile (fasting if possible) ✳ Pregnancy test (if indicated) ✳ Alcohol, illicit drugs and smoking assessment ✳ Current medication - assess any other medication being taken by the patient for suitability with lithium. ✳ A discussion about pregnancy should take place with all women of child bearing age before prescribing lithium. Educate patient on lithium and give patient a completed NPSA lithium information pack. Initiate lithium treatment, monitor and regularly review until the patient's condition, dose and serum levels are stable. Advise the importance of adherence. Request that the patient's GP takes over prescribing and monitoring where appropriate, when the patient's condition is stable and the dose has remained constant for four weeks. Provide the GP with details of the patient's management plan including: • Indication for prescribing • Serum lithium level range required • Last recorded serum lithium level, renal & thyroid test results • Brand of lithium used, tablet or liquid strength, dose & formulation • When the patient received the last supply of lithium & when he/she will require the next supply • Details of any potentially interacting medication that the patient is currently taking, with further advice as necessary • Details of the patient's next outpatient visit &/or frequency of subsequent follow-up • Name of the patient's CPN/Care co-ordinator Ensure that systems are in place for the safe prescribing and monitoring of lithium. Be available for advice if the patient's condition changes, for dosage queries and ensure procedures are in place for re-assessment when necessary. Notify the GP of any changes in therapy and if the patient does not attend appointments for specialist review within 1 month, plus specific information on the planned course of action.
GP Responsibilities	If unwilling to accept shared care prescribing, contact mental health specialist to discuss these exceptional cases. **Monitoring**: Monitor serum lithium levels, renal function, thyroid function and weight or BMI, annual physical health check as above. Update monitoring results in the record book within the NPSA lithium information pack. Monitor mental state, adherence, side-effects and signs of toxicity at each visit Respond to high or low serum lithium levels as appropriate. **Prescribing:** Provided monitoring results are satisfactory, prescribe the patient's lithium therapy on a MONTHLY basis stating the dose, brand, formulation & tablet or liquid strength required. Adjust dose as necessary, depending on monitoring results and inform mental health specialist of dose and monitoring test results. Avoid concurrent prescribing of ACE inhibitors, Angiotensin-II Receptor Antagonists, NSAIDs and diuretics with lithium (see Common Drug Interactions) **Advice:** Contact mental health specialist if advice needed regarding mental health treatment (including dose adjustment), mental health status of patient, physical health concerns relating to lithium therapy (including deterioration of renal or thyroid function), or if the patient does not attend appointments. When seeking advice, inform mental health specialist of any new medication or non-psychiatric secondary or tertiary referral. **Discontinuation:** Rapid discontinuation may increase the risk of relapse. If the decision is made to discontinue lithium then this should be done as slowly as possible (unless there is lithium toxicity), taking into account any clinical risk and the mental state of the patient. Alternative treatment should be considered. Contact mental health specialist for advice

Adverse Effects and Toxicity	**Side effects:** GI disturbances (e.g. nausea, diarrhoea, dry mouth); fine tremor, thirst, polyuria, polydipsia, weight gain, oedema. May be short term and can often be prevented or relieved by a moderate reduction in dose. See SPC for full list **Toxicity:** Can occur without a rise in serum level. Can be fatal Signs of lithium toxicity: blurred vision, muscle weakness, drowsiness coarse tremor, slurred speech, ataxia, confusion, convulsions, nausea, vomiting and ECG changes**.** If lithium toxicity suspected, **stop Lithium immediately**, measure lithium serum level and renal function, refer to hospital if clinic condition warrants; seek advice from mental health specialist. Causes of toxicity include drug interactions, renal disease, concomitant diarrhoea or vomiting (dehydration); sodium depletion. If levels high (>1.0mmol/l) but no signs of toxicity, same day action required – investigate reason and correct if possible; if repeated high levels - consult with specialist to reduce dose, encourage fluids, investigate renal function, seek advice as necessary, may need to stop temporarily.
Common Drug Interactions	**Risk of lithium toxicity** in sodium depletion or reduced renal clearance so avoid concurrent diuretics (particularly thiazide diuretics), NSAIDs, ACE inhibitors and Angiotensin-II receptor antagonists. **Risk of potentially serious serotonin syndrome** with concurrent serotonergics including SSRIs, triptan migraine products, certain opioids e.g. tramadol, which resolves rapidly on stopping serotonergic agent. **Risk of neurotoxicity** due to concurrent diltiazem, verapamil, methyldopa, carbamazepine, phenytoin, haloperidol, phenothiazines or SSRIs **Theophylline/aminophylline** increase lithium excretion therefore can reduce plasma concentration of lithium. **Amiodarone** manufacturer advises avoidance of lithium due to risk of ventricular arrhythmias
Communication	**North of Tyne** The consultant and specialist team can be contacted via the Initial Response Team - Northumberland Tel: 0303 123 1146 Newcastle and North Tyneside Tel: 0191 219 4690 **South of Tyne** The consultant and specialist team can be contacted via the Initial Response Team – South of Tyne and Wearside Tel: 0303 123 1145

This information is not inclusive of all prescribing information and potential adverse effects.
Please refer to full prescribing data in the SPC or the BNF

Discharge of patients into the care of the GP

Patients prescribed lithium should not usually be discharged from secondary care mental health services. In exceptional circumstances an individual agreement for discharge may be considered in response to a patient who expressly indicates that they do not wish to remain within secondary care mental health services. In line with NICE CG185 - Bipolar disorder, these patients should be offered the option to return to primary care for further management providing symptoms have responded effectively to treatment and they remain stable.

Discharge to primary care must be a **shared** decision between the patient, the GP and the specialist prescriber and the rationale for discharge must be clearly documented. Discharge should only be considered if lithium treatment is stable for a significant period of time (usually about 1 year) and the patient is adherent to treatment and compliant with monitoring requirements. Renal and thyroid function must be stable and serum levels in range.

A medication plan should be agreed and a copy of the plan given to the patient and the GP. The patient should be encouraged and supported to visit their GP and discuss the plan before discharge from secondary care services.

If there is deterioration in mental or physical health related to lithium therapy, or the patient fails to attend appointments, the GP should contact the mental health specialist for advice (see communication section above). It may be necessary for the patient to return to secondary care mental health services under a shared care arrangement.

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Private and Confidential

Lithium - Shared Care Request/Confirmation

- Specialist prescriber to complete first section of form and send to patient's GP
- GP to complete second section of form and return to specialist prescriber within 28 day

Specialist Prescriber ……	**Patient details (use hospital label if preferred)**
Department ……	**Name** ……
Hospital ……	**Address** ……
	……
	Postcode ..... **M/F** ……...
	NHS or Hosp. Reg. No. …… **DoB** ……...

Treatment Requested for Prescribing in Accordance with an Approved Shared Care Arrangement

Drug Name **Lithium** (State brand) **Dose** **Frequency**

Indication

Other Information (if appropriate)

Signed (Specialist Prescriber) **Name (print)** **Date**

To be completed by GP

Please tick one box

I ACCEPT the proposed shared care arrangement for this patient ❑

or

I ACCEPT the proposed shared care arrangement with the caveats below ❑

or

I DO NOT ACCEPT the proposed shared care arrangement for this patient ❑

My caveats / reason(s) for not accepting include:

……..

……

Signed …… **Name (print)** ..... **Date** ……..

(Patient's GP)

N.B. Participation in this shared care arrangement implies that prescribing responsibility is shared between the specialist prescriber and the patient's GP