MANCHESTER CITY COUNCIL

Manchester Mental Health NHS and Social Care Trust

Shared Care Guideline For Lithium

Implementation Date:	June 2006
Reviewed on behalf of the Medicines Management Committee:	January 2010
Review Date:	December 2010 and Jan 13
Next review	January 2016

1. Introduction

'Some patients taking lithium have been harmed because they have not had their dosage adjusted based on recommended regular blood tests. If patients are not informed of the known side effects or symptoms of toxicity, they cannot manage their lithium therapy safely. Regular blood tests are important. Clinically significant alterations in lithium blood levels occur with commonly prescribed and over-the counter medicines. The blood level of lithium is dependent on kidney function and lithium has the potential to interfere with kidney (renal) and thyroid functions. Lithium has a narrow therapeutic range. Safe and effective use of lithium needs careful monitoring of serum levels of lithium as well as of renal and thyroid function.' NPSA alert Safer Lithium Therapy 2010. This guideline has been reviewed in light of the alert and subsequent audit and review of services across Manchester.

2. Scope

Effective prophylaxis enables people to live a full life in the community. It is therefore more appropriate for them to have their follow up appointments and Lithium tests with their own GP. Communication of the blood results between primary and secondary care is important and the responsibility to make sure that it happens falls to whoever performs the blood tests. This shared care guideline details how monitoring and management arrangements should be implemented to support the safe and effective use of the drug.

In many cases a patient receiving Lithium therapy would be cared for by their GP who would take responsibility for the supervision and prescribing of the lithium. The GP would be responsible for asking for advice as needed from mental health services. Some patients may need to continue under the supervision and periodic review of a specialist mental health practitioner. This may be a consultant psychiatrist, non-medical prescriber, specialist nurse.

Clinical conditions being treated

Lithium is a useful medication in the treatment of:

- Recurrent depression
- Prophylaxis and treatment of Bipolar Disorder
- Mania
- As an adjunct in the treatment and prophylaxis of Schizoaffective Disorder (in combination with other treatments such as neuroleptics).

<u>When initiating lithium as long-term treatment (NICE bipolar disorder 2006)</u>

- advise patients that erratic compliance or rapid discontinuation may increase the risk of manic relapse
- measure height and weight, and arrange tests for urea and electrolytes and serum creatinine, and thyroid function
- arrange an ECG for patients with cardiovascular disease or risk factors for it
- arrange a full blood count if clinically indicated
- establish a shared-care protocol with the patient's GP for prescribing and monitoring lithium and checking for adverse effects
- be aware that patients should take lithium for at least 6 months to establish its effectiveness as a long-term treatment.

Serum lithium levels

Should be checked 1 week after starting and 1 week after every dose change, and until the levels are stable. The usual range for serum lithium levels is between 0.6 and 0.8 mmol per litre in people being prescribed it for the first time. For people who have relapsed previously while taking lithium or who still have sub-threshold symptoms with functional impairment while receiving lithium, a trial of at least 6 months with serum lithium levels between 0.8 and 1.0 mmol per litre should be considered. Lower levels of 0.4-0.6 mmol per litre may sometimes be effective/indicated, eg if there are side-effects or for unipolar depression prophylaxis. Levels above or below this level should be discussed with the specialist services contact and consideration given to increasing or decreasing the dosage. (Usual range of 0.3-0.8 mmol/l in the elderly)
Bloods should be taken 12 hours after last dose

Long term lithium treatment:

- Monitor serum lithium levels normally every 3 months.
- Monitor older adults carefully for symptoms of lithium toxicity, because they may develop high serum levels of lithium at doses in the normal range, and lithium toxicity is possible at moderate serum lithium levels.
- Monitor weight, especially in patients with rapid weight gain.
- Undertake more frequent tests if there is evidence of clinical deterioration, abnormal results, a change in sodium intake, or symptoms suggesting abnormal renal or thyroid function such as unexplained fatigue, or other risk factors, for example, if the patient is starting medication such as ACE inhibitors, non-steroidal anti-inflammatory drugs, or diuretics. Contact specialist for advice if needed.
- Arrange thyroid and renal function tests every 6 months, and more often if there is evidence of impaired renal function.
- Initiate closer monitoring of lithium dose and blood serum levels if urea and creatinine levels become elevated, and assess the rate of deterioration of renal function. The decision whether to continue lithium depends on clinical efficacy, and degree of renal impairment; prescribers should consider seeking advice from a renal specialist and psychiatrist.
- Monitor for symptoms of neurotoxicity, including paraesthesia, ataxia, tremor and cognitive impairment, which can occur at therapeutic levels.
- Monitor clinical condition: Benefit may not be apparent for up to 1 year. Long-term treatment should be undertaken only with careful assessment of risk and benefit. The need for continued therapy should be assessed regularly and patient should be maintained on lithium after 3-5 years only if benefit persists. Consult specialist to discuss long term treatment.

3. Product information and treatment regimen to be used

Preparations vary widely in bioavailability therefore changing preparations requires the same precautions as initiation of treatment (see BNF). Lithium patient packs are now available following on from the NPSA alert. In secondary care these will be available from local pharmacists / pharmacy services. In primary care contact your medicines management team. Alternatively the information can be access through NHS Non-Secure Contract held by 3M. Orders should be sent to Telephone: 0845 610 1112 Email: nhsforms@spsl.uk.com . Electronic copies of the purple booklet in English and Welsh are available at www.nrls.npsa.nhs.uk/.

4. Management

Consultant/ Specialist services responsibilities:

Lithium therapy will usually be initiated by a consultant psychiatrist. A GP may consider restarting lithium (preferably in consultation with a psychiatrist) for the same diagnosis if the patient has previously benefited but has relapsed since discontinuation.

On initiation specialist services will be responsible for:

1. Undertaking all the relevant baseline tests, recording these and sharing with the GP.

2. Counselling the patient and providing the NPSA lithium information and documenting this on DATIX in the relevant section.

3. Ensuring blood tests are done until patient stable and GP practice agrees transfer of responsibility to prescribe.

4. Monitoring the side effects initially and agreeing on-going monitoring with the GP.

5. Discussing any concerns with the GP

6. Ensuring lithium is prescribed by brand

7. Sending all the information and a copy of the shared care document to the GP. The information should include a letter from the psychiatrist detailing results of tests to date, that a lithium booklet and counselling has taken place and a contact number for the psychiatrist.

8. Being available for advice for the GP after shared care has been agreed and responsibility has passed to the GP

GP/ Primary Care:

1. Ensuring blood testing occurs as per NICE guideline

2. Ensuring results are checked and abnormalities acted upon.

3. Ensuring patients are aware of their blood testing requirements. Patients should be encouraged to know acceptable levels and their most recent results.

4. Being responsible for the monitoring and identification of lithium levels and lithium toxicity.

5. Discussing with the specialist any concerns and discussing with discontinuation prior to advising the patient to stop lithium apart from in an emergency situation.

6. Sharing blood testing with secondary care

7. Undertaking urgent lithium levels if signs of toxicity and advising the patient to omit a dose until the level has been checked

8. Checking results including trends over time

Both parties should ensure that results are shared by both sectors and means of doing this should be agreed. As there is currently not a single electronic system for all to access the means of sharing information should be discussed at the start.

5. Summary of cautions, contra indications, side effects

NB: this will not replace the SPC and should be read in conjunction with it.

Whenever a patient on lithium presents feeling unwell/ vomiting, always consider lithium toxicity. Checking levels also does not negate the need for a medical review.

Immediate management if lithium toxicity is suspected

Urgent lithium level and renal function
Omit lithium until level is obtained (NB important not to omit lithium if there is no toxicity as rebound relapse of illness may occur)
Appropriate management of clinical condition including A&E referral, supportive measures, monitoring and reversal of dehydration/electrolyte imbalance, haemodialysis in severe toxicity

Common side effects which are often dose related (may exacerbate and be early signs of toxicity as levels increase)

Tremor
Polyuria
Thirst
Diarrhoea
Indigestion/heartburn
Feeling dulled mentally, rarely drowsiness
Metallic taste in mouth

Signs of toxicity (associated with lithium above therapeutic range).

Coarse tremor
Blurred vision
Muscle weakness
Ataxia
Slurred speech
Vomiting
Severe diarrhoea
Severe polyuria
Confusion
Seizures

Renal damage may also occur. Lithium toxicity may be fatal.

Factors, which increase the risk of lithium toxicity, include renal failure, reduced sodium intake, increased sodium loss (e.g. diarrhoea and vomiting), diuretics and NSAIDs.

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Common Interactions reported by NPSA

Thiazides and related diuretics;
ACE inhibitors
Non-steroidal anti-inflammatory drugs (NSAIDS)
Sodium bicarbonate containing, non-prescription antacids or urinary alkalinising agents.'

(See BNF for full details)

Discontinuation

In general consult a specialist for advice if stopping lithium. For urgent discontinuation for adverse events contact psychiatry team. Junior doctors to seek senior advice and produce plan for monitoring levels, clinical state, and renal function.

For non urgent discontinuation tail off over 4-6 weeks and inform psychiatrist.

If major side effects develop then lithium should be stopped immediately, otherwise, reduce the dose gradually over a period of at least 4 weeks to reduce the risk of relapse. Discontinuation is also recommended during periods of serious intercurrent infection.

If immediate discontinuation is required, inform the patient of the reason and monitor for relapse. Highest risk of relapse is within the first three months after discontinuation and so the patient should be monitored within this period. Increased risk continues throughout the first year after discontinuation so it is important to ensure that the patient is aware of the continued risk.

If the patient becomes pregnant, the situation should be discussed urgently with a psychiatrist. Where possible, lithium should be avoided during the first trimester of pregnancy.

6. Special considerations

Lithium should always be prescribed by brand name, eg. Priadel, Camcolit. Lithium has a narrow therapeutic window therefore requires careful monitoring. Lithium is subject to an NPSA alert and as such prescribing and dispensing of lithium should be covered by standard operating procedures. Patient information is available through the NPSA alert and www.choiceandmedication.org.uk/mhsc/

7. Statement of agreement

Shared care is an agreement between the GP and the Consultant. This form is a request by the consultant to share the suggested care pathway of your patient. If you are unable to agree to the sharing of care and initiating the suggested medication, please make this known to the consultant within 14 days, ideally stating the nature of your concern.

8. Supporting References

1 British National Formulary
2 NICE guidance
3 NPSA alert
4 SPC www.medicines.org.uk/emc and www.mhsc.nhs.uk for shared care document