Western Health and Social Care Trust

Lithium Policy

September 2013

Policy Title	**Lithium Policy**
Policy Reference Number	**Med14/001**
Implementation Date	**September 2013**
Review Date	**September 2015**
Responsible Officer	**Dr Elizabeth Brady** **Dr Bronagh Sproule** **Daryl Connolly, Medicines Governance Pharmacist**

Signature

_____ _____

Chief Executive **Date**

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Lithium Policy & Clinical Guidelines

1.0 Background

Lithium is a naturally occurring element which has been used for more than 50 years in the treatment of psychiatric illness. In recent times lithium has been used almost exclusively for the treatment of bipolar affective disorder and as adjunctive treatment of psychoses or treatment of refractory depression. The mechanism of action of lithium is not wholly understood but the efficacy of lithium is well established, reducing attempted and suicide rates by 80% in those with bipolar disorder.

In December 2009 the National Patient Safety Agency (NPSA) issued a Patient Safety Alert[1]concerning the use of lithium. The NPSA responded to concerns that patients came to harm if there were failures in:

a. Dose adjustments in response to lithium level test results.
b. Patient counselling regarding known side effects or symptoms of toxicity.
c. Management of lithium when interacting medicines were co-prescribed.
d. Monitoring for potential long-term adverse effects of lithium.

These guidelines have been developed as part of the response to the NPSA Patient Safety Alert. The guidelines describe the minimum standards to which adherence is expected when dealing with patients who take lithium for any indication and requires that blood test results are available at the point when clinical decisions are made**.** In May 2012, standardised regional guidance was introduced throughout Northern Ireland for the initiation and monitoring of lithium therapy. This guidance also aimed to formalise arrangements for lithium monitoring between community mental health teams and Primary Care.

This protocol has been developed in support of the:

- National Patient Safety Rapid Response Report: NPSA/2009/PSA005, “Safer lithium therapy’[1]available at http://www.npsa.nhs.uk and in line with current
- NICE Guidance: NICE Clinical Guideline 38 – Bipolar Disorder; July 2006; NICE Clinical Guideline 23 – Depression amended April 2007[2].

2.0 Equality and Human Rights screening

This policy has been screened under the equality legislation (Section 75 of the Northern Ireland Act 1998), targeting social need initiative, disability discrimination and the human rights act 1998. No significant equality implications have been identified. Assessment attached.

3.0 Scope of the Policy

This protocol applies to all healthcare professionals that are involved in the prescribing, administering and/or supply of lithium for use in adults. This protocol does not apply to the use of lithium in children.

4.0 Clinical management of patient's who take lithium

4.1 Before starting Lithium

Lithium is classified as an 'amber' list medication. This means that treatment is initiated by a specialist (usually in secondary care), and responsibility for monitoring remains with the specialist until the patient is stabilised on the optimum dose.

Before starting a patient on lithium the following baseline tests are mandatory:

a. Urea & Electrolytes (U&Es) including eGFR, to check renal function.
b. Thyroid Function Tests (TFTs).
c. Body Mass Index (BMI)
d. Waist Circumference.
e. Blood pressure

In individuals where cardiac risk factors are present, an electrocardiogram is indicated. In women of child bearing age, pregnancy should be excluded. The patient should be advised to use suitable contraception during treatment.

Before starting a patient on lithium, the patient should receive written and verbal information outlining the following:

- The rationale for use of lithium
- How to take lithium e.g. the dose and frequency
- The need for monitoring of lithium levels
- The potential adverse effects of lithium
- The need for monitoring for possible adverse effects of lithium
- The need to maintain adequate hydration even when unwell

- The need to avoid interacting medicines particularly those directly available e.g. over-the-counter non-steroidal anti-inflammatory drugs
- The signs of possible lithium toxicity and how to seek help
- The importance of adherence and high risk of relapse on stopping
- The importance of effective contraception (in women of child-bearing potential)
- To avoid significant changes in diet that affect salt intake.

A dedicated Lithium pack (the “Purple Pack”), containing an information booklet, a dose record booklet and an alert card is available and should be provided to all patients taking Lithium. The doctor initiating lithium is responsible for issuing the patient with this pack, which is held by the patient. The doctor should explain to the patient the importance of carrying the alert card and monitoring booklet with them at all times, and keeping these documents up to date.

4.2 On-going monitoring

All patients taking lithium should continue to be monitored to ensure safe use. The specific monitoring requirements for lithium are summarised in:

- Appendix 3 – Shared Care Guidance
- Appendix 4 – Initiation and Monitoring Care Pathway.

Monitoring in the community is either:

- entirely within in the Recovery Team (Pathway 1),
- shared with Primary Care (Pathway 2) or
- entirely within Primary Care (Pathway 3).

4.3 Communication with Primary Care

The results of initial assessment tests and all monitoring will be included with the referral documentation from consultant psychiatrist to primary care prescriber at the point of commencing the shared care agreement. In addition, any changes to patient’s lithium treatment, or the commencement of interacting medication, should be communicated to the patients GP. This can be done on the appropriate proforma as per the care pathway (Appendix 2). Written results should be sent to the relevant GP within 2 weeks of blood testing.

5.0 Responsibility / Roles of professional teams

5.1 General Practitioners

All patients in the Western Trust on Lithium should be on the local Lithium register at both their GP practice and Community Mental Health Team. For those patients on Pathway 2, the G.P. should ensure that tests required under the shared care guidance are carried out and the results acted on appropriately and communicated to the consultant psychiatrist.

Patients should be reviewed regularly by their GP including, as a minimum:

a. An annual physical health check to include recording of body mass index and blood pressure
b. Monitoring on Pathway 1,2 or 3 as agreed with secondary care (Appendix 2)
c. Consideration of possible interactions when issuing new prescriptions.

The GP should satisfy themselves that appropriate monitoring is being conducted and may opt to manage the blood monitoring as per Pathway 2.

5.2 Community Pharmacy

Community Pharmacists dealing with a prescription for lithium should satisfy themselves that it is safe to issue the medication before they do so. Where a potential interaction between lithium and a newly prescribed item is identified this should be discussed with the prescriber as a matter of urgency. Any medication should only be withheld from the patient where there is a clear and defined risk of patient harm. The Pharmacist should ask the patient if they are attending for regular blood testing and prompt the patient to do this if it is apparent that this is not in place.

5.3 Hospital Pharmacy

Hospital Pharmacists dealing with a prescription for lithium should satisfy themselves that it is safe to issue the medication before they do so. Where a potential interaction between lithium and a newly prescribed item is identified this should be discussed with the prescriber as a matter of urgency. This is of particular importance when a patient taking lithium is being managed in a non-specialist area e.g. a medical or surgical ward.

6.0 Prescribing Lithium

For all patients taking lithium who are admitted to the Trust, lithium levels should be reviewed upon admission to ensure it is safe to continue therapy. If the patient has had a recorded lithium result within the target therapeutic range (0.4-1.0mmol/l) within the last three months, lithium levels do not need to be measured on admission unless:

- the dose has been changed
- renal function has deteriorated
- toxicity is suspected
- an interacting medication has been commenced
- poor concordance with medication is suspected.

All patients taking lithium should carry a record book which details dose and brand of lithium the patient takes, and results of blood tests (lithium level should be routinely done every 3 months, renal function and thyroid function should be done every 6 months). Ask to see this booklet when a patient is admitted.

Lithium levels should routinely be taken 12 hours post dose. Most patients take lithium in the evening, therefore samples should usually be taken in the morning (if a patient takes lithium at 22.00, levels can be checked at 10.00 the following morning).

Prescribe using brand name as well as generic name. Patients should be maintained on the same brand and dose of lithium (unless toxicity is suspected or proven) i.e. Lithium carbonate tablets (Priadel) 400mg nocte. If a brand or preparation of lithium is swapped, for example switching from tablets to liquid for a patient with swallowing difficulties, then weekly lithium levels should be recorded, similar to lithium initiation guidance.

Inform the patient of any changes in their lithium treatment and provide appropriate written and verbal information.

7.0 Medicines that interact with lithium

Most cases of lithium intoxication occur as a complication of long-term therapy and are caused by reduced excretion of the drug due to a variety of factors including dehydration, deterioration of renal function, infection, and co-administration of interacting medication.

Diuretic medications, especially the thiazides (e.g. bendroflumethiazide), ACE inhibitors and angiotensin II inhibitors can significantly increase levels. If no alternative is available and an interacting medication is necessary then lithium levels and renal function should be monitored carefully (e.g. weekly until stabilised). Inform the patient of the interaction and the requirement for increased monitoring.

Non-steroidal anti-inflammatory drugs (NSAIDs) can increase lithium levels and risk of toxicity therefore should be avoided if possible. Patients should be advised to avoid over-the-counter NSAIDs and aspirin. Paracetamol can be recommended if simple analgesia is required.
For a full list of interactions, refer to appendix 1 of the BNF or contact a pharmacist for advice.

8.0 Pregnancy and Lactation

Due to the risk of teratogenicity the BNF recommends avoiding lithium in the first trimester of pregnancy. Dose requirements may be raised in the 2nd and 3rd trimester, returning to normal following delivery. There is some risk of toxicity in the neonate. In all cases discussion with consultant psychiatrist is advised to carry out a careful risk-benefit analysis of ongoing lithium therapy. Lithium is excreted in breast milk and should therefore be avoided.

9.0 Lithium toxicity and dehydration

The usual therapeutic range for lithium in adults is 0.4 – 1.0mmol/L (0.4-0.8mmol/L in older people). Symptoms of toxicity usually occur when the blood lithium concentration is greater than 1.5mmol/L and can include:

- Severe nausea, vomiting or diarrhoea
- Coarse tremor
- Myoclonus (unexplained involuntary jerks)
- Blurred vision
- Drowsiness
- Confusion
- Convulsions
- Renal failure
- Arrhythmias

If any of the symptoms of toxicity occur then plasma lithium levels should be checked and the patient re-hydrated with an increased sodium intake if necessary. Levels of 2mmol/L or more require urgent treatment, as detailed in the Emergency Treatment of Poisoning in the BNF. In the Western Trust, lithium levels of >1.0mmol/L will be urgently communicated to the referrer from the biochemistry laboratory.

10.0 Monitoring

10.1 Renal function

Long term treatment with Lithium may result in impaired renal function, as a result of permanent changes in kidney histology and both reversible and irreversible kidney damage. Advice from renal physicians should be sought, and dose reduction should be considered.

10.2 Thyroid Function

With long term therapy, hypothyroidism is common and may return to normal on discontinuation of lithium. However, as hypothyroidism is straightforward to treat, it may be recommended to commence levothyroxine replacement therapy alongside lithium.

11.0 Lithium and Surgery

Lithium should be discontinued 24 hours prior to major surgery. Lithium need not be discontinued prior to minor surgery. However, careful monitoring of fluids and electrolytes is needed (see below). When considering whether surgery is major or minor take into account duration of anaesthesia, co-morbidities and anticipated fluid loss.

There is no evidence of significant interaction between lithium and anaesthetic agents, although lithium may prolong the action of muscle relaxants.

Lithium treatment can cause polyuria in some patients. If fluid intake is restricted this can lead to dehydration which reduces lithium clearance and increases the risk of toxicity. Patients who have lithium-induced polyuria should be given parenteral fluids the night before their operation, thus preventing dehydration and lithium toxicity.

Lithium should be recommenced post-operatively as soon as kidney function and fluid-electrolyte balances have normalised. The patient should usually be eating and drinking again normally at this point. It is possible to restart at the patient's usual dose if lithium has only been omitted for less than 5 days. The lithium level should be checked 5 – 7 days after restarting.

12.0 Patient information and record books

Patients should be instructed to carry the alert card with them at all times and to ensure they have the record book with them whenever they see their Consultant or GP, when requesting a prescription or having one dispensed, or when admitted to hospital.
Any patient who is prescribed lithium but who does not have the information leaflet, record book or alert card should be issued one as soon as possible. Supplies of these materials can be obtained from the lithium clinic or BSO.

REFERENCES

1. NPSA (2009). Safer Lithium Therapy. NPSA/2009/PSA005. Available from http://www.nrls.npsa.nhs.uk/alerts .

2. National Institute for Health & Clinical Excellence (2006). The management of bipolar disorder in adults, children and adolescents, in primary and secondary care. CG38. Available from http://guidance.nice.org.uk/CG38 .

3. BMJ Group and Pharmaceutical Press. British National Formulary (BNF) – always refer to the most current issue or access online at http://bnf.org/bnf/

4. Informa Healthcare (2012) Taylor, Paton & Kapur. *The South London and Maudesley NHS Foundation Trust Prescribing Guidelines, 11th Edition*. London 2012.

APPENDIX 1 - HSC Pathway 1,2,3

LITHIUM CARE FLOWCHART

Lithium Initiation Preferably in Secondary Care.
Psycho-education included

Patients added to Lithium Register in both Secondary Care and Primary Care
Lithium Blood Results Copied to Primary Care

Pathway 1
Patient remains in Secondary Care for review and monitoring. Lithium blood monitoring results copied to Primary Care.*

Pathway 2
Patient remains in Secondary Care for review but, with agreement between GP and Secondary Care, monitoring passes to Primary Care. Lithium blood monitoring results copied to Secondary Care.*

Pathway 3
If patient stable or strong patient preference, with agreement between GP and Secondary Care, review and monitoring passes to Primary Care. Lithium blood monitoring results not copied to Secondary Care.*

*A communication proforma from secondary care to primary care will advise of the pathway the patient will follow and responsibilities for review and monitoring. Primary and secondary care Lithium registers should be updated using this information.

The regional lithium SCG requires blood monitoring results to be "copied to" the patient's GP/ consultant. This should continue to occur. This proforma aims to provide additional assurance that the required monitoring results are received by the patient's GP/consultant.

HSCB Lithium Implementation Group April 13

APPENDIX 2 – On-going Communication Proforma

Health and Social Care in Northern Ireland

Ongoing Lithium Monitoring
Communication Proforma

The Trust or GP practice responsible for a patient's ongoing lithium monitoring must use this proforma to communicate lithium monitoring results:

- From Consultant to GP – for patients following Pathway One or
- From GP to Consultant - for patients following Pathway Two *(See Lithium Flowchart on reverse)*

To (name of GP/Consultant): .....

Address (GP Practice/Trust site) .....

Patient Name:..... **DOB**..../...../..... **H&C number**.....

Address: ..... **attended for lithium monitoring*** **on** ..... (date) **at** ..... (Name of GP Practice/Trust site).

Medical Lead** ..... **Tele No:** ..... **Cipher No/Lab Code**.....

This patient is following Pathway ..... (One/Two)

* As per Regional Lithium Shared Care Guideline
**Name of GP/Consultant responsible for the patient's monitoring, their contact details and their GP cipher no or consultant lab code

Monitoring	Results	Comments	Monitoring	Comments
Serum Lithium *0.4 – 1.0 mmol/l* *(elderly 0.4 –0.8)*			Side-effects? Eg observed /reported	
FreeT4 *12 – 22 pmol/l*				
TSH *0.3 – 4.2mU/l*			Mood changes? Eg observed /reported	
eGFR				
Urea 2.5 -7.8 mmol/L				
Creatinine Females: 45-84 umol/L Males: 59-104 umol/L			LMP/Contraception?	
BMI				
If monitoring above is not carried out, a valid reason for this must be documented eg not due				

A copy of the blood results may be attached to this proforma (rather than inserting manually).
Please note: **If lithium levels are abnormal or toxicity is suspected, medical staff must inform the patient's GP/consultant immediately (by telephone), in addition to sending this proforma.**

The above lithium monitoring results have been reviewed:

by:..... (name of GP/ Consultant#) **on** ..... (date)

Action taken (if no action, please state):

.....

Treatment plan:

.....

Additional comments:

.....

Signed (GP/ Consultant#)..... **Date**.....

#Name and role of staff must be specified if not GP or Consultant

The regional lithium SCG requires blood monitoring results to be "copied to" the patient's GP/ consultant. This should continue to occur. This proforma aims to provide additional assurance that the required monitoring results are received by the patient's GP/consultant.

HSCB Lithium Implementation Group April 13

APPENDIX 3 – Shared Care Guideline

Health and Social Care Board

Interface Pharmacist Network Specialist Medicines

Lithium

Mental Health Shared Care Guideline

Using a printed guideline? Always check you are using the most up to date version. See www.ipnsm.hscni.net

	Consultant Details Name: _____ Location: _____ Tel: _____
	Patient Identifier Date: _____
Introduction	**Indications**: Lithium is widely used in primary and secondary care for the following: • Prophylaxis and treatment of mania • Prophylaxis of bipolar disorder • Prophylaxis of recurrent depression where treatment with other antidepressants has failed • Augmentation of antidepressant therapy (unlicensed use).
Dosage & Administration	Preparations vary widely in bioavailability. **Lithium must be prescribed by brand** and pharmaceutical formulation (not generically). Patients should be maintained on the same brand and presentation to ensure stable lithium levels. Change in brand or presentation requires the same precautions as initiation of treatment. Lithium liquid should be prescribed by brand, stating the dose as the amount of lithium citrate to avoid dosing errors. Lithium carbonate is currently available as: • **Camcolit®** 250mg immediate release tablets and 400mg modified release tablets • **Liskonum®** 450mg modified release tablets • **Priadel®** 200mg and 400mg modified 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 prescribed) Particular care should be given to ensuring the correct dose and frequency of administration of lithium when prescribing or administering lithium.
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** (elderly 0.4 – 0.8mmol/litre). **Blood samples must be taken 12 hours after the previous dose. The time of the sample, total daily dose and the time of the last dose must be noted on the lab request form.** **Monitor more frequently:** • after dose changes • after changes of preparation • in elderly patients • if there is evidence of declining renal function. • after changes in other medication which may affect lithium level (see interactions) (Take samples at least 5 days after changes in dose or changes to treatment affecting lithium levels.) **Initiation Phase** Allow at least 5 days after initiation to achieve steady state before sampling for the first lithium level. A target serum lithium level should be set for each patient and the dose adjusted by the prescriber, if necessary, to achieve this target. The BNF recommends serum lithium levels at weekly intervals until the dose has remained unchanged for 4 weeks. **Long Term Monitoring Requirements** (For patients with no risk factors, no serious side effects and a stable mental state) • Every 3 months: serum lithium levels • Every 6 months: fT4, TSH and U&E / eGFR • Every 12 months: check weight & height (BMI) • Assess side effects at every visit. Consider referral to specialist renal or endocrinology services if appropriate.
Mental Health Specialist Responsibilities	• A Register of lithium patients should be maintained and should clearly state who is responsible for routine review, monitoring and for acting on abnormal results • Where the specialist is responsible for monitoring, they will be responsible for acting on test results and informing the patient's GP immediately of abnormal Lithium levels together with action taken • Confirm the diagnosis and assess risk factors • Pre-treatment tests – U&E, eGFR, free T4, TSH, weight and height. FBC and ECG if indicated • Educate patient and/or carer. Provide "Lithium Therapy- Important Information for Patients" pack and update patient monitoring record book with result of regular tests • Advise GP how to initiate treatment • If GP agrees, responsibility for monitoring may pass to GP - complete pathway referral proforma • Communicate test results to GP (request "copy to" on lab form - state GP name and cipher code) • Review patient at agreed regular intervals (as determined by mental health specialist) • Advise GP on how and when to discontinue treatment.
Primary Care Responsibilities (continued overleaf)	• A Register of lithium patients should be maintained and should clearly state who is responsible for routine review, monitoring and for acting on abnormal results • Provided monitoring results are satisfactory, provide the patient with repeat prescriptions - specifying strength, brand and presentation • Monitor mental state and refer to mental health specialist for advice if treatment is ineffective • Check for side effects, altered risk factors and signs of lithium toxicity at each appointment

Primary Care Responsibilities (continued)

- Dose Adjustment – where the GP is clear that this is necessary, any change must be communicated in writing to the mental health specialist – if in doubt, seek specialist's advice
- Temporarily reduce dose or discontinue lithium in serious diarrhoea, vomiting or intercurrent infection (especially if sweating profusely) – if in doubt, seek specialist's advice
- Review concomitant medication for possible interaction with lithium
- When responsibility for monitoring is transferred from mental health specialist, primary care will be responsible for monitoring and acting on: lithium levels, renal function, free T4, TSH, weight and height according to guidelines above and informing the specialist immediately of abnormal Lithium levels and action taken
- Inform the specialist immediately of any change in medication which could cause a potential interaction with lithium.
- Communicate relevant test results (request "copy to" on lab form specifying consultant's name and hospital) and action taken to mental health specialist including information on interacting medication
- Update patient monitoring record book with result of regular tests.

Adverse Effects, Precautions and Contraindications

The most common side effects of lithium include: GI disturbances (e.g. nausea, diarrhoea, dry mouth); fine tremor, thirst, polyuria; polydipsia; weight gain; oedema. These may be short term and can often be prevented or relieved by a moderate reduction in dose. Refer to the SPC for a full list of adverse effects.

Toxicity

It is vital to be alert for signs of lithium toxicity, which can be fatal. These include: blurred vision, muscle weakness, drowsiness, coarse tremor, slurred speech, ataxia, confusion, convulsions, nausea, vomiting and ECG changes. Toxicity can be associated with serum levels over 1.5mmol/litre **but can occur without a rise in serum level.** It is important to "**treat the patient not the level**".

A number of factors may increase the risk of lithium toxicity including: Drug interactions (see below); renal disease; concomitant diarrhoea or vomiting (dehydration); sodium depletion.

If toxicity is suspected:

- **Stop lithium immediately**
- **Check lithium levels, serum creatinine, U&Es**
- **Refer to hospital / A&E if clinical condition warrants**
- **Seek advice from psychiatrist for re-initiation of lithium**

Precautions

Abrupt cessation of lithium is strongly associated with manic relapse. For planned cessation of therapy, lithium should be withdrawn over two to four weeks.

Lithium should be stopped 24 hours prior to surgery and restarted as soon as renal function and fluid balance return to normal. Ensure specialist is informed of any such changes.

In order to maintain a stable electrolyte balance, diet and fluid intake should remain normal. This is especially important in hot weather or work environment. Avoid major dietary changes

Contraindications

Relative and absolute contraindications include: Pregnancy, breast-feeding, severe renal impairment, serious cardiac disease (e.g. cardiac failure, sick sinus syndrome), conditions with sodium imbalance such as Addison's disease.

Common Drug Interactions

Avoiding Drug Interactions

Patients should be advised to check with their doctor or pharmacist that any new medicine (in particular those to treat pain) that is prescribed by a doctor or bought in a pharmacy or other shop, is safe to take with lithium.

Effect of Interaction	Drug Group	Interacting drug	NPSA alert advises particular care
Increase in Lithium Levels	antibiotics	metronidazole, tetracyclines, co-trimoxazole	
	NSAIDs	e.g. ibuprofen, diclofenac	!
	ACE Inhibitors	All ACE inhibitors and angiotensin II antagonists	!
	diuretics	thiazide, loop and potassium sparing diuretics	!
Decrease in Lithium Levels	xanthines	aminophylline, theophylline, caffeine	
	sodium Salts	e.g. antacids containing sodium bicarbonate, urinary alkalinising agents	!
	diuretics	acetazolamide	
Other (No change in serum levels)	antiepileptics	carbamazepine, phenytoin	
	methyldopa		
	calcium channel blockers	diltiazem, verapamil	
	antidepressants	SSRIs and tricyclics	
	antipsychotics	e.g. clozapine, haloperidol, phenothiazines, sulpiride	

Many of these combinations can be used safely in clinical practice but additional monitoring may be needed especially on initiation, discontinuation or dose change. GPs should liaise with the mental health specialist for further advice.

Communication

For any queries relating to this patient's treatment with lithium, please contact the consultant named at the top of this document.

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
The NPSA Alert on the Safer Use of Lithium can be found at: http://www.nrls.npsa.nhs.uk/alerts/
The Northern Ireland Lithium Pathway and Referral Proforma can be found at:
http://www.hscboard.hscni.net/medicinesmanagement/Prescribing%20Guidance/Lithium/index.html

Date Prepared: June 2011 **Date of review:** June 2014

APPENDIX 4 – Lithium Initiation and Monitoring Care Pathway

Prescriber = Blue Nursing Staff = Green

Health and Social Care in Northern Ireland

Write in CAPITAL LETTERS or use addressograph

Surname: .....

First Names: .....

Hospital No: .....

DOB: ..... Check identity

Northern Ireland Secondary Care Lithium Initiation and Monitoring Care Pathway

(Colour version – WHSCT May 2012)

Content:

- Contact details – patient, GP, consultant, CPN
- Initial consultation – monitoring checklist
- Patient information checklist
- Lithium brand and dose prescribed
- Lithium monitoring requirements and record
- Side effect record
- Operational flow chart for secondary care initiation / monitoring
- Care Pathway signature sheet
- Variance recording sheet
- Primary Care communication proforma
- Appendix 1 - HSC Lithium Care Flow Chart

WHSCT working group met on the 25th April 2012 and the following changes agreed:

- Change 'medical staff' to 'prescriber' as there are independent prescribers.
- Replace one of the side effects pages with an additional monitoring page.

Prescriber = Blue Nursing Staff = Green

LITHIUM CHART		
Consultant:		Use addressograph or write in CAPITAL LETTERS Surname: ..... First names: ..... Hospital Number: ..... DOB: ..... Check Identity
G.P – Name, Phone Number	***Cypher No.***	
C.P.N – Name & Contact Number:		
Person to contact in Emergency: Name, number & relationship		**Patient Telephone No.**

LITHIUM WORK UP – INITIAL CONSULTATION			
Date	**Investigation**	**Comments/Results**	**Signature**
	Physical examination (when appropriate). **Weight Height** **BMI** **BP**		
	TFT **T4** **TSH**		
	Electrolyte profile **Urea & Creatinine**		
	eGFR		
	ECG *(if indicated)*		
	FBP *(if indicated)* **Hb & WCC**		
	Other – specify		

INFORMATION GIVEN TO PATIENTS OR CARERS			
Information	**Date**	**Provided by (Signature)**	**Patients / Carers (Signature)**
NPSA Information leaflet, alert card & Monitoring Record Book			
Patient understands information			
Video (optional)			
Emergency contact –name and contact number of Dr. & Clinic Nurse.			

LITHIUM DETAILS		
Lithium Prescribed and Dosage	**Prescriber Sign & Print**	**Date Commenced**
Review Current medication for potential interaction ☐ - refer to Shared Care Guidelines		

Prescriber = Blue Nursing Staff = Green

LITHIUM MONITORING – to be completed on Weeks 1 & 2 after Initial Consultation								
Week	Lithium Level taken	Date/Time Signature	Lithium Result	Side effects & Mood Check	Any further Questions	Management	Date/Time Signature	Results entered in Lithium book Y / N
1	Yes/No				Yes/No	Consultant informed of result Yes/No If dose altered by consultant Yes/No/NA Dosage_____ (prescriber only) If necessary Patient to return on Wk 2 □ OR return to next routine Lithium Clinic □ (√ as appropriate)		
2	Yes/No				Yes/No	Consultant informed of result Yes/No If dose altered by consultant Yes/No/NA Dosage_____ (prescriber only) Request Patient to return to next routine Lithium Clinic □ (√ as appropriate)		

Lithium Monitoring Requirements				
Months 1 - 3	Lithium levels at least 6 weekly			
Month 3 onwards	Lithium levels – 3 monthly	TFT - 6 monthly (If TSH raised check every 4-6 weeks)	Renal Function 6 monthly	If U&Es abnormal consult with medical staff
If Lithium dose changed	Monitor lithium weekly until stable			
NB: Copy all lithium monitoring results to the GP, during initiation and throughout treatment				

If patient Did Not Attend (DNA)/Cannot Attend (CNA) or results 'out of range' – clinic nurse to follow guidelines on page 8

Lithium Monitoring Record													
Date & A=Attend D=DNA C=CNA	Daily Dosage	Side Effects/ Comments	New Drug Commenced	Tests √ to request / Nurse to insert result								Prescriber Signature	Nurse Signature	Enter in Li book Y / N
				SL 0.4-1 mmol/l	*Free T4* 12 - 22 pmol/l	TSH 0.3 – 4.2 mU/l	e GFR	Weight 6 mth	BP 6mth	*Other- Specify*	*Other - Specify*			

Prescriber = Blue Nursing Staff = Green

Lithium Monitoring Requirements				
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Prescriber = Blue Nursing Staff = Green

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Lithium Monitoring Record

Date & A=Attend D=DNA C=CNA	Daily Dosage	Side Effects/ Comments	New Drug Commenced	Tests √ to request / Nurse to insert result								Prescriber Signature	Nurses Signature	Enter in Li book Y / N
				SL 0.4-1 mmol/l	*FreeT4* 12 - 22 pmol/l	TSH 0.3 – 4.2 mU/l	eGFR	Weight 6 mth	BP 6 mth	*Other- Specify*	*Other - Specify*			

Prescriber = Blue Nursing Staff = Green

Lithium Monitoring Requirements				
Months 1 - 3	Lithium levels at least 6 weekly			
Month 3 onwards	Lithium levels – 3 monthly	TFT - 6 monthly (If TSH raised check every 4-6 weeks)	Renal Function 6 monthly	If U&Es abnormal consult with medical staff
If Lithium dose changed	Monitor lithium weekly until stable			
NB: Copy all lithium monitoring results to the GP, during initiation and throughout treatment				

If patient Did Not Attend (DNA)/Cannot Attend (CNA) or results 'out of range' – clinic nurse to follow guidelines on page 8

Lithium Monitoring Record

Date & A=Attend D=DNA C=CNA	Daily Dosage	Side Effects/ Comments	New Drug Commenced	Tests √ to request / Nurse to insert result								Prescriber Signature	Nurses Signature	Enter in Li book Y / N
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Prescriber = Blue Nursing Staff = Green

Side Effects

SIDE EFFECTS – if yes insert √ and complete comments column & consult medical staff (where appropriate).											
Date	Weight Gain	Polyuria	Nausea	Oedema	Metallic Taste	Polydipsia	Loose bowels	Fine Tremor	Other	Comments (time medication taken & time blood sample taken)	Signature

Prescriber = Blue Nursing Staff = Green

Operational flowchart for secondary care induction / monitoring

Routine Outpatient appt → Lithium Work Up and Information → Monitoring Week 1 & 2 → Routine Clinic Appointment
(Medical Staff / Nurse)

If any of the 'work up' tests shown are not within the normal range – Medical staff MUST be informed and action documented by Medical Staff and /or Nurse

Patient Attends
↓
Reviewed By Medical Staff
↓
Tests requested by Medical Staff
↓
Tests & Side Effects Sheet Completed By Nursing Staff
↓
Results collected and Recorded in Lithium Chart & *patient record book* by Nursing Staff
↓

Results Normal
↓
No Further Action – Record
↓
Review at Next Clinic

******Results Abnormal******
↓
D/W Medical Staff
↓
Agree Action – if necessary Repeat/Review
↓
Nursing Staff to arrange appointment for necessary tests
↓
Patient Reviewed by Medical/Nursing Staff
Or
Nursing Staff arrange for CMHT to visit , report back &record in lithium chart/variance sheet

Patients Does Not Attend
↓
Nursing Staff informs Medical Staff
↓
Nurse to:

- Rearrange appointment or patient to attend clinic/department to Complete Tests requested by Medical Staff.
- Arrange for Community Staff to Visit and report back to Medical Staff /Nurse

↓
Record Action and Outcome in Variance Sheet
↓
Document Results in Lithium Chart
Follow ** path if results abnormal**

Patient Cannot Attend
↓
Nursing Staff informs Medical Staff
↓
Nurse to:

- Rearrange appointment for patient to attend clinic/department to Complete Tests requested by Medical Staff.
- Arrange for Community Staff to Visit and report back to Medical Staff/Nurse

↓
Record Action and Outcome in Variance Sheet
↓
Document Results in Lithium Chart
Follow ** path if results abnormal**

LITHIUM RESULTS SHOULD BE REVIEWED WITHIN 5 – 7 DAYS OR IF TOXICITY SUSPECTED CONTACT LABORATORIES FOR RESULTS

Medical staff must inform the patient's GP immediately of abnormal Lithium levels together with action taken

Prescriber = Blue Nursing Staff = Green

CARE PATHWAY SIGNATURE SHEET

All Staff using this Pathway MUST complete the details below.

Name (Block Capitals)	Designation	Full Signature	Initials	Date & Time.

Prescriber = Blue Nursing Staff = Green

VARIANCE RECORDING SHEET

If a patients care does not follow the pathway for ANY reason – e.g. did not attend, cannot attend, results out of range, educational information not available – please record in variance section below.

Date/Time	Reason for Variance	Action Taken	Outcome	Signature and Designation

Prescriber = Blue Nursing Staff = Green

VARIANCE RECORDING SHEET

If a patients care does not follow the pathway for ANY reason – e.g. did not attend, cannot attend, results out of range, educational information not available – please record in variance section below.

Date/Time	Reason for Variance	Action Taken	Outcome	Signature and Designation

Prescriber = Blue Nursing Staff = Green

Health and Social Care in Northern Ireland

Lithium Therapy Pathway Communication Proforma

Communication of Information from Consultant Psychiatrist to Primary Care
(Must be completed by consultant at Lithium initiation, and when pathway changes.)

Name: ..... DOB...../...../..... H&C number.....

Address: ..... has been/is

attending Dr..... at.....hospital.

Consultant's Contact telephone number: ..... & Lab Code.....

Add patient to or update Primary Care Lithium Register according to pathway below

		Please insert ✓ to indicate pathway patient will follow
Pathway 1	**Remain in Secondary Care for review and monitoring*** Secondary Care is responsible for informing the patient's GP of **all** blood monitoring results (using 'copy to' GP cipher number on lab request form). The GP should be informed **immediately** of abnormal lithium levels and action taken.	
Pathway 2	**Remain in Secondary Care for review, AND monitoring passes to Primary Care with GP agreement*.** Primary Care is responsible for informing Secondary Care of **all** blood monitoring results- using 'copy to' Consultant's name (and Lab Code if known) and hospital on lab request form. Secondary care should be informed **immediately** of abnormal lithium levels and action taken.	
Pathway 3	**Review and monitoring passes to Primary Care with GP agreement.** • Lithium blood results will not be copied to Secondary Care in this instance • If patient is persistently non compliant with monitoring – consider change to another treatment and discuss with, or refer back to, Secondary Care	

*Refer to Lithium SCG

Indication for treatment						
Recent blood results	Serum Lithium	freeT4	TSH	eGFR	Creatinine	Other
...../...../.....						
	Target Lithium Level					
Lithium	Current Dose & Brand:					
Lithium monitoring requirement:	As per Shared Care Guideline ☐				Other: (Please specify)	
Educational information	Patient has: Received Lithium book/pack ☐ Provided with information on Lithium therapy ☐ Confirmed they understand information ☐					
Signed (Consultant)					**Date** ...../...../.....	

Prescriber = Blue Nursing Staff = Green

Health and Social Care in Northern Ireland

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...../...../.....						
	Target Lithium Level					
Lithium	Current Dose & Brand:					
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Educational information	Patient has: Received Lithium book/pack ☐ Provided with information on Lithium therapy ☐ Confirmed they understand information ☐					
Signed (Consultant)					**Date** ...../...../.....	

Prescriber = Blue Nursing Staff = Green

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Appendix 1:

LITHIUM CARE FLOWCHART

Lithium Initiation Preferably in Secondary Care.
Psycho-education included

Patients added to Lithium Register in both Secondary Care and Primary Care
Lithium Blood Results Copied to Primary Care

Pathway 1
Patient remains in Secondary Care for review and monitoring. Lithium blood monitoring results copied to Primary Care.*

Pathway 2
Patient remains in Secondary Care for review but, with agreement between GP and Secondary Care, monitoring passes to Primary Care. Lithium blood monitoring results copied to Secondary Care.*

Pathway 3
If patient stable or strong patient preference, with agreement between GP and Secondary Care, review and monitoring passes to Primary Care. Lithium blood monitoring results not copied to Secondary Care.*

*A communication proforma from secondary care to primary care will advise of the pathway the patient will follow and responsibilities for review and monitoring. Primary and secondary care Lithium registers should be updated using this information.

ersion 1.0 December 2011 Date of Review: December 2012