

This document has been reviewed in line with the *Policy Alignment Process for Liverpool Community Health NHS Trust Services*. It is a **valid Mersey Care document**, however due to organisational change this FRONT COVER has been added so the reader is aware of any changes to their role or to terminology which has now been superseded. **When reading this document please take account of the changes highlighted in Part B and C of this form.**

Part A – Information about this Document

Policy Name	Policy for the Administration of Low Molecular Weight Heparin (LMWH) by Registered Nurses								
Policy Type	Board Approved (Trust-wide) <input type="checkbox"/>			Trust-wide <input type="checkbox"/>			Divisional / Team / Locality <input type="checkbox"/>		
Action	No Change <input type="checkbox"/>	Minor Change <input type="checkbox"/>	Major Change <input type="checkbox"/>	New Policy <input checked="" type="checkbox"/>	No Longer Needed <input type="checkbox"/>				
Approval	As Mersey Care’s Executive Director / Lead for this document, I confirm that this document: a) complies with the latest statutory / regulatory requirements, b) complies with the latest national guidance, c) has been updated to reflect the requirements of clinicians and officers, and d) has been updated to reflect any local contractual requirements								
	Signature:						Date:		

Part B – Changes in Terminology (used with ‘Minor Change’, ‘Major Changes’ & ‘New Policy’ only)

Terminology used in this Document	New terminology when reading this Document

Part C – Additional Information Added (to be used with ‘Major Changes’ only)

Section / Paragraph No	Outline of the information that has been added to this document – especially where it may change what staff need to do

Part D – Rationale (to be used with ‘New Policy’ & ‘Policy No Longer Required’ only)

Please explain why this new document needs to be adopted <u>or</u> why this document is no longer required

Part E – Oversight Arrangements (to be used with ‘New Policy’ only)

Accountable Director	
Recommending Committee	
Approving Committee	
Next Review Date	

LCH Policy Alignment Process – Form 1

SUPPORTING STATEMENTS

This document should be read in conjunction with the following statements:

SAFEGUARDING IS EVERYBODY'S BUSINESS

All Mersey Care NHS Foundation Trust employees have a statutory duty to safeguard and promote the welfare of children and adults, including:

- being alert to the possibility of child / adult abuse and neglect through their observation of abuse, or by professional judgement made as a result of information gathered about the child / adult;
- knowing how to deal with a disclosure or allegation of child / adult abuse;
- undertaking training as appropriate for their role and keeping themselves updated;
- being aware of and following the local policies and procedures they need to follow if they have a child / adult concern;
- ensuring appropriate advice and support is accessed either from managers, *Safeguarding Ambassadors* or the trust's safeguarding team;
- participating in multi-agency working to safeguard the child or adult (if appropriate to your role);
- ensuring contemporaneous records are kept at all times and record keeping is in strict adherence to Mersey Care NHS Foundation Trust policy and procedures and professional guidelines. Roles, responsibilities and accountabilities, will differ depending on the post you hold within the organisation;
- ensuring that all staff and their managers discuss and record any safeguarding issues that arise at each supervision session

EQUALITY AND HUMAN RIGHTS

Mersey Care NHS Foundation Trust recognises that some sections of society experience prejudice and discrimination. The Equality Act 2010 specifically recognises the *protected characteristics* of age, disability, gender, race, religion or belief, sexual orientation and transgender. The Equality Act also requires regard to socio-economic factors including pregnancy /maternity and marriage/civil partnership.

The trust is committed to equality of opportunity and anti-discriminatory practice both in the provision of services and in our role as a major employer. The trust believes that all people have the right to be treated with dignity and respect and is committed to the elimination of unfair and unlawful discriminatory practices.

Mersey Care NHS Foundation Trust also is aware of its legal duties under the Human Rights Act 1998. Section 6 of the Human Rights Act requires all public authorities to uphold and promote Human Rights in everything they do. It is unlawful for a public authority to perform any act which contravenes the Human Rights Act.

Mersey Care NHS Foundation Trust is committed to carrying out its functions and service delivery in line with a Human Rights based approach and the FREDA principles of **F**airness, **R**espect, **E**quality **D**ignity, and **A**utonomy

Policy 72

Policy for the Administration of Low Molecular Weight Heparin (LMWH) by Registered Nurses

Based on North Devon Healthcare NHS Trust - Use and monitoring of Low Molecular Weight Heparins in
Community Hospitals and Community Nursing Clinical Guidelines

Title	Policy for the Administration of Low Molecular Weight Heparin (LMWH) by Registered Nurses	
Guideline reference number	72	
Aim and purpose of clinical document	To provide Mersey Care Community staff with direction and clarity relating to the changes in administration times of LMWH to patients post hospital discharge	
Author's title	Medicines Safety Support Manager	
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Review date	June 2020	
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Issue date	26 th June 2018	
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Equality Impact Assessment Undertaken	Yes	<input checked="" type="checkbox"/>
	Date:	<input type="checkbox"/>
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Version Number:	Version 1.0
Ratified by:	Clinical Standards Group
Original Date of Approval:	26/6/2018
Name of originator/author:	Debbie Bowden
Approving Body / Committee:	Clinical Standards Group
Date issued (Current version):	26/6/2018
Review date (Current Version):	June 2020
Target Audience:	All registered Nurses working in Liverpool and South Sefton Community Division employed by Mersey Care who are involved in the administration of LMWH to patients in the community
Name of Lead Director / Managing Director:	Trish Bennet Sylvia Carney (joint deputy Director of Nursing)
Changes / Alterations Made To Previous Version:	Previous document was a guideline and now a policy

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Policy for the Administration of Low Molecular Weight Heparin by Mersey Care Liverpool and South Sefton Community Division Registered Nurses

EXECUTIVE SUMMARY

The purpose of this document is to provide clear guidance for staff on the administration of Low Molecular Weight Heparins (LMWHs) for patients in the care of Mersey care NHS Foundation Trust.

LMWHs are classed as a critical medicine and must be given within 2 hours of prescribed administration time. Failure to do so will put the patient at risk of a thrombolytic event.

Patients transferring from hospital back to the community who are unable or unwilling to self-administer will need support from the district nursing teams to continue safely with their treatment. Geographical distribution of patients, shifts and workload will impact on the times there will be staff available to manage the caseload of LMWH patients. Caseload managers will need to have contingency plans to organise work schedules and patient visits but there may be a need from time to time to change the administration time of the injection. This policy seeks to clarify the procedure for staff.

1. Purpose

The purpose of this document is to provide clear guidance for staff on the administration of Low Molecular Weight Heparins (LMWHs) for patients in the care of Mersey Care NHS Foundation Trust.

2. Scope

This policy is applicable to all registered nurses employed by Mersey Care NHS Foundation Trust working in the Liverpool and Sefton Community Division who are involved in the administration of Low Molecular Weight Heparin (LMWH) injections to patients in the community following discharge from hospital.

3. Background

LMWHs are indicated for venous thromboembolism prophylaxis or for the treatment of Deep Vein Thrombosis (DVT) or Pulmonary Embolism (PE). They are administered by registered nurses employed by Mersey Care.

LMWHs are also used in the management of myocardial infarction and unstable angina and in the management of venous thromboembolism in pregnancy.

LMWHs are classed as a critical medicine and must be given within 2 hours of prescribed administration time. Failure to do so will put the patient at risk of a thrombolytic event (<https://www.sps.nhs.uk/articles/npsa-rapid-response-report-reducing-harm-from-omitted-and-delayed-medicines-in-hospital-a-tool-to-support-local-implementation/>)

Patients transferring from hospital back to the community who are unable or unwilling to self-administer will need support from the district nursing teams to continue safely with their treatment. Geographical distribution of patients, shifts and workload will impact on the times there will be staff available to manage the caseload of LMWH patients. Caseload managers will need to have contingency plans to organise work schedules and patient visits but there may be a need from time to time to change the administration time of the injection. This policy seeks to clarify the procedure for staff.

4. Definitions

LMWH	Low Molecular Weight Heparin
DVT	Deep vein Thrombosis
PE	Pulmonary Embolism
SC	Sub Cutaneous
DN	District Nurse
GP	General Practitioner
EMIS	EMIS Health, formerly known as Egton Medical Information Systems, supplies electronic patient record systems and software used in primary care
CrCl	Creatinine Clearance

5. Low Molecular Weight Heparin preparations

There are a number of different LMWH preparations. The majority of referrals for administration will be for

- Dalteparin sodium (Fragmin[®])
- Enoxaparin sodium (Clexane[®])

It is important to ensure that the correct named product is entered into the patient's records

5.1. Dalteparin sodium (Fragmin[®])

Dalteparin is supplied as pre-filled syringes of 2,500 units, 5,000 units, 7,500 units, 10,000 units, 12,500 units, 15,000 units and 18,000 units.

5.1.1. Indications

Prophylaxis of Venous Thromboembolism

The dose is not weight related and is prescribed at dalteparin 2500 or 5000 units subcutaneously (SC) once daily.

Treatment of DVT or PE

The dose of dalteparin for the treatment of a thromboembolic event is based on the patient's body weight and renal function, up to a maximum of 18,000 units per day.

5.1.2. Administration

The pre-filled syringe is ready for use. Do not expel the air bubble from the syringe before giving the dose. If the syringe does not contain the correct dose, expel excess liquid by holding the needle downwards and measure the dose from the bottom of the air bubble.

Dalteparin should be administered by subcutaneous injection when the patient is lying down. The administration should be alternated between the left and right anterolateral or posterolateral abdominal wall, or into the lateral part of the thigh. The total length of the needle should be introduced vertically, not at an angle, into the thick part of a skin fold, produced by squeezing the skin between thumb and forefinger; the skin fold should be held throughout the injection. Do not rub the injection site after administration.

Dalteparin pre-filled syringes have a Needle-Trap to help prevent accidental needle stick injuries. The Needle-Trap must be correctly activated following injection to render the needle harmless

5.1.3. Timing of dose

The dose of dalteparin should be administered at approximately the same time each day.

Dose will vary according to indication, and frequency is either once or twice a day. Once a day means every 24 hours. Twice a day means every 12 hours

5.2. Enoxaparin sodium (Clexane®)

Enoxaparin is supplied in prefilled syringes of 20mg, 40mg, 60mg, 80mg, 100mg, 120mg and 150mg.

5.2.1 Indications

Prophylaxis of Venous Thromboembolism

The dose is not weight related and is prescribed at enoxaparin 20mg or 40mg subcutaneously once daily.

In severe renal impairment (creatinine clearance <30ml/min) prescribe 20mg daily.

Treatment of DVT or PE

Prescribed doses of enoxaparin for the treatment of a thromboembolic event are based on the patient's body weight and renal function.

5.2.2. Administration

The prefilled syringe is ready for use. Do not expel the air bubble from the syringe before giving the dose. If the syringe does not contain the correct dose, expel excess liquid by holding the needle downwards and measure the dose from the bottom of the air bubble.

Enoxaparin should be administered when the patient is lying down by subcutaneous injection. The administration should be alternated between the left and right anterolateral or posterolateral abdominal wall. The total length of the needle should be introduced vertically, not at an angle, into the thick part of a skin fold, produced by squeezing the skin between thumb and forefinger; the skin fold should be held throughout the injection. Do not rub the injection site after administration.

Enoxaparin pre-filled syringes have an automatic safety device to prevent accidental needle-stick injury. This is activated automatically once the plunger is fully pressed down to protect the used needle.

5.2.3. Timing of dose

The dose of enoxaparin should be administered at approximately the same time each day.

6. Transfer of Care

At transfer of care the following essential information must be given to ensure that future LMWH doses are safely managed:

1. Indication*
2. LMWH Product (e.g. dalteparin or enoxaparin)*
3. Dose and route*
4. Duration of treatment*
5. Allergy status*
6. Weight*
7. Renal function
8. Results of blood tests or any other appropriate investigations
9. Advice on dose alterations where appropriate

*1, 2, 3, 4, 5, 6 must be documented on referral and on prescription (authorisation to administer) sheet

7. Patient Education

During first visit for administration of LMWH patient must be informed of the importance of receiving LMWH and the risks if a dose is omitted or delayed. DNs must also reiterate to patient/carer/relative the importance of contacting the DN team if a nurse has failed to arrive at the expected time.

ALWAYS document conversation in patient notes

8. TIMINGS FOR ADMINISTRATION

8.1. Following discharge from hospital, the ward should be contacted to determine when the last dose was administered as this may not always match the “authorisation to administer/prescription” form.

8.2. Alteration of administration time should be done in exceptional circumstances only, as timely administration of the LMWH is essential for good maintenance of anticoagulant effect.

8.3. The administration of LMWH may be brought forward by one hour each day (A MAXIMUM OF 8 HOURS IN TOTAL IF NECESSARY) to facilitate administration at a convenient regular time by community nurses, where self-administration is not appropriate.

This is outside the product licence and is a clinical decision. The decision to make any further alterations to the administration time must be confirmed with the patient’s GP before the LMWH is administered.

8.4. ALL CHANGES MUST be documented in patient notes and EMIS.

8.5. Twice daily administration – if patient is prescribed LMWH twice a day then best practice is to leave a 12 hour gap between administrations. However, to facilitate District Nurse schedules, time period may be less, but must be a minimum of 10 hours between administrations.

Rational for prescribing twice daily is explained in appendix 1

Please Note

If a specific request has been received/prescribed from the hospital to move administration time daily i.e. by one hour each day until a specific time then this request would override the guidance above and should be followed.

ANY FURTHER CHANGES TO ADMINISTRATION TIMES MUST BE AUTHORISED BY THE RESPONSIBLE CLINICIAN AND MUST BE FULLY DOCUMENTED IN THE RECORDS

9. Incident Reporting

Clinical incidents or near misses must be reported and Datix must be completed i.e. if a wrong dose is given, if there is insufficient patient information on discharge, or a patient visit has been omitted.

9.1. Missed Visit

- Ascertain when patient last received their LMWH injection
- Inform patient /carer that a nurse will visit immediately
- Document advice in patient's health records
- Check in the patient home records that LMWH has not been administered
- Contact General Practitioner (GP) to inform of missed visit
- Contact anticoagulant service if patient also taking warfarin
- Inform line manager within the same working shift and complete Datix.

9.2. Failed Visit

If a nurse fails to gain access to a patient's home, the nurse would need to consider the following options:

- An appointment time had been agreed with the patient
- Check that the patient has not cancelled the visit
- Explore all avenues to ascertain location of patient or gain access e.g. Contact next of kin, neighbours, hospital. If unsuccessful follow up the next day
- Inform manager and complete Datix form

10. Monitoring compliance and effectiveness of the policy

This policy will be monitored as follows:

- Review of Datix reports relating to LMWH to identify key issues
- Each locality District Nursing Team will be responsible for ensuring that a clinical audit is undertaken annually. If key issues have been identified the frequency may need to be increased

11. Equality Impact Assessment

Equality impact assessment completed and approved

12. References

- Specialist Pharmacy Services - Reducing Harm from Missed or Omitted and Delayed Medicines in Hospitals May 2017. (<https://www.sps.nhs.uk/articles/npsa-rapid-response-report-reducing-harm-from-omitted-and-delayed-medicines-in-hospital-a-tool-to-support-local-implementation/>)
- Use and monitoring of Low Molecular Weight Heparins (LMWHs) in community hospitals and community nursing Clinical Guidelines
<http://www.northdevonhealth.nhs.uk/2015/08/use-and-monitoring-of-low-molecular-weight-heparins-lmwhs-in-community-hospitals-and-community-nursing-clinical-guidelines/>

13. Associated NHS & Mersey Care Policies

- 89 Overarching Medicines Policy
- 91 Consent to Treatment Policy
- LCH Corp 19 Records Manual Policy

Acknowledgements

Suggestions and comments gratefully received from Janet Davies, Anticoagulation Lead Nurse, The Royal Liverpool and Broadgreen University Hospitals Trust

Appendix 1

Low Molecular Weight Heparin (LMWH) Twice Daily Dosing Rationale

In most circumstances it is safe, effective and patient preferred to administer subcutaneous LMWH as a once daily dose. However; twice daily dosing may be used in patients with increased risk of bleeding complications.

Listed below, are risk factors for bleeding. Patients with 2 risk factors are considered to have a moderate risk of bleeding, 3 or more indicate high bleeding risk.

- Renal impairment (Dialysis patient, CrCl= <30 ml/min)
- Prior major bleeding or predisposition to bleeding
- Increased Alcohol consumption (>8 drinks/week)
- Liver Disease (Cirrhosis or Bilirubin >2 x Normal or AST/ALT/AP >3 x Normal)
- Medication Usage Predisposing to Bleeding (e.g. antiplatelets, NSAID's)
- Uncontrolled Hypertension (>160 mmHg systolic)
- History of Stroke

Patients with Mechanical heart valves are often requested to have twice daily dosing when used as bridging therapy.

If in doubt of appropriateness of twice daily dosing for an individual patient please contact Medicines Management and ask to speak to a Pharmacist