Patient Group Direction for

Administration of

Lidocaine Hydrochloride 1% and 2% Injection

by Physiotherapists

Valid from: 1st October 2023
Review date: 31st August 2025
Expiry date: 1st October 2025

Version number: 6

THIS PATIENT GROUP DIRECTION HAS BEEN AGREED BY THE FOLLOWING ORGANISATIONS:

East Coast Community Healthcare and Norfolk and Waveney ICB

YOU MUST BE AUTHORISED BY NAME, UNDER THE CURRENT VERSION OF THIS PGD BEFORE WORKING UNDER IT	
CLINICAL DETAILS	
Indication	Treatment of adults with local inflammation of joints and soft tissues. Peripheral musculoskeletal disorders that would benefit from the use of a local anaesthetic. This may be as an element of treatment or to aid diagnosis. Frequently, Lidocaine Hydrochloride (Lidocaine) will be administered alongside a local glucocorticoid. Where this is the case, the Patient Group Direction (PGD) for that glucocorticoid must also be referred to and adhered to. Physiotherapists working under this PGD must administer Lidocaine and glucocorticoids separately and without mixing (CSP 2016).
Inclusion criteria	Patients aged 18 years and over that have given valid informed consent with benign joint or soft tissue pain including: • Rheumatoid arthritis or osteoarthritis with an inflammatory component in any joint • Bursitis • Capsulitis • Entrapment neuropathy • Impingement syndromes • Ganglia • Ligamentous injury/lesions • Tendonitis/Tendinosis/Tendinopathy • Tenosynovitis • Enthesopathy • Epicondylitis • Myofascial Pain
Exclusion criteria	Where Lidocaine Hydrochloride (Lidocaine) is being injected in isolation, the following exclusion criteria apply: • Patients under the age of 18 years old • Pregnancy • Breast feeding • Presence of, or suspicion of active local or systemic infection, including Tuberculosis (Within the last 10 years) • Presence of symptoms suggestive of COVID-19: Cough, Temperature ≥ 37.8, Loss of smell or taste, Flu-like symptoms • Adjacent osteomyelitis

	• Hypersensitivity / allergic reactions to lidocaine or any other local anaesthetic or any of the ingredients • Not into a Prosthetic joint itself or another site if joint replacement • Surgery performed in the area to be injected within the last 12 months • Reluctant / non-consenting patient • Poorly controlled respiratory disorders • Porphyria • Hypoxia • Poorly controlled cardiovascular disorders including congestive heart failure, bradycardia, conduction disturbances and complete heart block • Unstable blood pressure • Hypovolaemia • Feeling of illness/malaise • Recent vomiting, bleeding, or diarrhoea **Note** when administered with glucocorticoid the exclusions of both PGDs apply.
Precaution	Where Lidocaine Hydrochloride (Lidocaine) is being injected in isolation, the following precautions apply. • Always refer to the accompanying product information leaflet. • Liver or kidney dysfunction • Broken skin, eczema, history of infection in the area or adjacent to the area to be injected • Anxious patients with signs of vagal over activity/ needle phobia • Bleeding disorders or Anticoagulant Therapy **Anticoagulants:** Warfarin (or any other Vitamin K antagonist): • Patients must be on a stable dose with an INR result between 2 and 3 in the 7 days prior to treatment. • It is advisable to check the INR again 3-4 days after the injection as corticosteroids may increase or decrease anticoagulant action Direct Oral Anti-Coagulants (DOAC): • Rivaroxaban, apixaban, Edoxaban and dabigatran • Patients should not have taken their DOAC in the 12 hours preceding their injection • The DOAC can be resumed at the previous dosing schedule when their next dose is due • Epilepsy • Myasthenia gravis

	• Local anaesthetic administered in previous 24 hours e.g. for dental procedure. • If in doubt, always refer to accompanying product information leaflet. • Therapy with Lidocaine does not obviate the need for the conventional measures usually employed. Although this method of treatment will temporarily ameliorate symptoms, it is in no sense a cure and has no effect on the underlying pathology. • For infiltration analgesia only. • Doses should be reduced in elderly or debilitated patients. • Patients taking drugs with significant drug interactions with lidocaine. <u>These include:</u> • Beta-blockers e.g., propranolol • Cimetidine (used for ulcers and heartburn) • Anti-virals e.g. atazanavir, darunavir, fosamprenavir, lopinavir, ritonavir, saquinavir, tipranavir • Antipsychotics • This list is not exhaustive - refer to the current British National Formulary (BNF) and/or manufacturer's Summary of Product Characteristics (SPC) for full list of drug interactions. **Note** when administered with glucocorticoid the precautions of both PGDs apply.
Management of excluded patients	Consider alternative treatment. Document in patient physiotherapy record. Inform patient's GP and referrer (if different) in discharge summary or earlier if appropriate. If no alternative treatment within physiotherapy available, refer to General Practice with a Special Interest (GPwSI), Orthopaedic Consultant, Pain Clinic, Back Pain Service, other provider or back to GP depending clinical relevance and patient choice.
Action for patients not wishing to receive care under this PGD	Consider alternative treatment. Document in patient physiotherapy record. Inform patient's GP and referrer (if different) in discharge summary or earlier if appropriate. If no alternative treatment within physiotherapy available, refer to GPwSI, Orthopaedic Consultant, Pain Clinic, Back Pain Service, other provider or back to GP depending clinical relevance and patient choice.

DESCRIPTION OF TREATMENT	
Name of medicine	Lidocaine Hydrochloride 1% and 2% solution for injection
Formulation and route	1% and 2% solution for injection. Using aseptic technique: • Intra-articular injection • Peri-articular • Soft Tissue Injection **DO NOT ADMINISTER VIA THE INTRATHECAL OR INTRAVENOUS ROUTES**
Strength	1% w/v and 2%w/v
Dosage	The dose is dependent on the size of the joint to be treated, severity of the pain/ condition and previous response (if appropriate). • **Doses should be reduced in elderly or debilitated patients.** • Lidocaine Hydrochloride 2% is suggested for small joints and soft tissues where 1.5ml or less is being administered. • Lidocaine Hydrochloride 1% w/v is suggested for medium and large joints and soft tissues where 2ml or greater is being administered (Saunders and Longworth 2016) o 0.5 -0.75ml of Lidocaine 2% is recommended for smaller joints o 1.5 - 2ml of Lidocaine 1% is recommended for medium joints o 3 - 5ml of Lidocaine 1% is recommended for larger joints. • Dosages of 0.25 - 4ml of Lidocaine 2% are recommended for periarticular, intrabursal and tendon sheath injections dependent on their size, severity of the pain / condition and previous response (if appropriate). Specific recommendations for dosages can be found within Saunders and Longworth (2006).
Repeated dose instructions	• Injections may be administered at intervals of not more frequently than 1 week for each individual anatomical area. • Repeat injections are used as infrequently as possible in accordance with accepted clinical practice. • Referral for specialist opinion should be considered when the patient's condition does not respond positively to the injection.

Duration of treatment	See sections above and below.
Quantity to administer	• The total MAXIMUM dose to be used is 200mg per treatment as a single dose (20ml of Lidocaine Hydrochloride 1% or 10ml of 2%) • The maximum number of injections per episode, per anatomical structure except bursae will be three • Injections to bursae may be conducted as often as necessary providing significant relief results • Injections are not repeated if there is no benefit or change in condition • Referral for specialist opinion should be considered when the patient's condition does not respond positively to the injection
Legal status	Prescription only medicine (POM) **Note:** The use of Lidocaine for joint or soft tissue injections is outside the terms of its summary of product characteristics.
Special Precautions	Always check patient's allergy status before treatment. Facilities for treating anaphylaxis must be available.
Adverse effects	**Potential adverse drug reactions**: • Transient flushing and dizziness/light headedness • Anaphylaxis • Confusion • Convulsions **This list is not exhaustive. Refer to BNF and SPC via www.medicines.org.uk/emc for complete list.** Use the Yellow Card System via www.mhra.gov.uk/yellowcard to report adverse drug reactions directly to the MHRA. Yellow Cards and guidance on its use are available at the back of the BNF.
Advice to be given	**Written / Verbal advice for patient before */* after treatment:** • Advice that Lidocaine is not licensed to be given as joint or soft tissue injections. It is however an accepted clinical practice to administer by this route • Assessment and preceding interventions will lead to a clinical decision that injection therapy may be of benefit to the patient.

	This clinical reasoning, alongside evidence-based practice, will be used to identify to the patient the suspected cause of their symptoms and why an injection may be of benefit as part of gaining valid informed consent. • The risks and benefits associated with injection therapy including the possible adverse effects listed above will be discussed with the patient including what to watch for in relation to anaphylaxis and infection (see below) • Advice regarding what to watch for in relation to anaphylaxis (itching acute skin changes, swelling, difficulty breathing, nausea, confusion), and infection (marked increase in pain accompanied by local swelling, further restriction of joint motion, fever, and malaise) • They will be given a patient information leaflet 'Information for patients receiving injection therapy' to reinforce what has been discussed and/or product information leaflet. • The leaflet will include details of local and systemic side effects. • Valid informed written consent will be gained prior to an injection being performed and a carbon copy of the consent form given to the patient • The patient will be advised that they can stop the procedure and withdraw their consent at any point during the procedure • The patient will be advised about 'relative rest' and how to manage between injection and follow-up appointment, advice will depend on clinical condition and aims of treatment. • Following the procedure the patient will be advised to remain in department for 30 minutes following injection to assess and monitor any adverse reactions. • The patient will be reminded of what to look for in relation to infection and advised to contact their GP for immediate assistance should infection occur. • A follow up appointment will be arranged, and the patient will be given a contact telephone number and advised to contact the department should they have any queries or concerns before their follow up appointment. • Patients will be given the manufacturer's Patient information leaflet and advised about possible side-effects.

RECORDS AND FOLLOW UP	
Referral arrangements	Refer to on-call doctor or accident and emergency department as appropriate
Records to be kept	The following information will be documented in the physiotherapy records: • Diagnosis or working diagnosis • Consent given • Drug name • Dose and form (amount/ strength/ total volume) • Batch number • Expiry date • Site injected and approach / technique • Advice given to patient (including side effects) • Signature/name of staff who administered or supplied the medication • Details of any adverse drug reaction and actions taken • Referral arrangements (including self-care) • The signed consent form will be kept in the physiotherapy record • A record of patients receiving injection therapy will be kept on systm1 and can be identified by Business Intelligence, alongside an MSk Services audit document for review purposes
Follow up	• A follow up appointment will be booked with the patient at a time that is mutually acceptable for the patient and physiotherapist to assess the outcome of treatment • The patient will be advised on what to look for in relation to infection and advised to contact their GP for immediate assistance should infection occur • Timescales for the follow up appointment will be determined according to clinical relevance (usually two weeks post injection) • The patient will be given a contact telephone number and advised to contact the department should they have any queries or concerns before their follow up appointment • Outcome of treatment will determine future management and the care pathway will be discussed with the patient as part of the valid informed consent process. Follow-up treatment may involve further injection therapy, physiotherapy, referral to secondary care provider or back to GP

	• Patient choice and valid informed consent processes will be complied with at all times. • The patient's medical practitioner will be informed of the injection procedure that includes date, drug name, dosage and site of administration in a timely manner.
PROFESSIONAL REQUIREMENTS	
STAFF CHARACTERISTICS	Qualifications required: • Registered Physiotherapist with a current Health Care Professions Council registration • Experienced extended scope physiotherapist in injection therapy OR any physiotherapist who has completed an injection therapy course accredited by Chartered Society of Physiotherapists OR is working towards a recognised certificate in injection therapy (requiring at least 10 mentored injections) whilst under the supervision of a named mentor. Additional requirements: • Has undertaken appropriate training/education for working under patient group directions for the supply and administration of medicines. • Understanding of pharmacology of drugs issued to patients and relevant medical condition. • **Immediate** access to Adrenaline/Epinephrine 1:1000 (1mg/mL) injection and trained in the treatment of anaphylaxis. • Access to Resuscitation Council (UK) Emergency Treatment of anaphylactic reactions Guidelines for healthcare providers https://www.resus.org.uk/anaphylaxis/emergency-treatment-of-anaphylactic-reactions/ Continued training requirements: • Annual mandatory training on cardio-pulmonary resuscitation (CPR) and anaphylaxis. • It is the responsibility of the individual to maintain competence and skills required to administer the medicine included in this PGD. • A commitment to relevant CPD to include updating of relevant knowledge from current edition of British National Formulary (BNF) and awareness of any change to the recommendations for the medicine listed. • It is the responsibility of the individual to keep up to date with continued professional development and to work within the limitations of individual scope of practice

REFERENCES / RESOURCES

Summary Product Characteristics Lidocaine 1% & 2% injection
1% https://www.medicines.org.uk/emc/product/4781/smpc (Updated 27th March 2023 accessed 05/09/2023) https://www.medicines.org.uk/emc/product/12800/smpc (Updated 27th March 2023 accessed 05/09/2023)

Chartered Society of Physiotherapy https://www.csp.org.uk/professional-clinical/professional-guidance/medicines-prescribing-and-injections

Injection Techniques in Musculoskeletal Medicine: A Practical Manual For Clinicians in Primary and Secondary Care. Saunders and Longworth, Churchill Livingstone Elsevier, 2016

PGD DEVELOPMENT

Details of Patient Group Direction owner	Name: Mr Martin MacDonald Position: Extended Scope Practitioner and Team Lead MSk Triage Service Contact Email: martin.macdonald@ecchcic.nhs.uk Contact Address: East Coast Community Healthcare (ECCH)

Patient Group Direction peer reviewed on behalf of ECCH by

Name	**Position**	**Date**
	Physio/ Podiatry development virtual group	
	Medicines Management Group	

This patient group direction must be agreed to and signed by all health care professionals involved in its use. East Coast Community Health Care CIC should hold the original signed copy. The PGD must be easily accessible in the clinical setting

Organisation	East Coast Community Healthcare
Lead Doctor	Name: Rupert Talboys Position: GP Associate Signature: *wet signature* Date:

Lead Pharmacist	Name: Ms Françoise Price Position: Head of Pharmacy and Medicines Optimisation Signature: *wet signature* Date:
Lead Practitioner of the professional group to supply medicines under this PGD	Name: Martin MacDonald Position: Extended Scope Practitioner and Team Lead MSK Triage Service Signature: *wet signature* Date:
This PGD has been agreed to be appropriate, necessary and an advantage to patient care by the East Coast Community Healthcare Medicines Management Group	

PGD AUTHORISATION

This PGD is authorised by

NHS NORFOLK AND WAVENEY ICB

Director of Nursing	Name: Tricia D'Orsi Signature:  Date 18/10/2023
Associate Director of Pharmacy and Medicines Optimisation (Chief Pharmacist)	Name: Michael Dennis Signature:  Date 20/10/2023

INDIVIDUAL AUTHORISATION

YOU MUST BE AUTHORISED BY NAME, UNDER THE CURRENT VERSION OF THIS PGD BEFORE WORKING UNDER IT

BY SIGNING THIS PATIENT GROUP DIRECTION YOU ARE INDICATING THAT YOU AGREE TO ITS CONTENTS AND THAT YOU WILL WORK WITHIN IT

PGDs DO NOT REMOVE INHERENT PROFESSIONAL OBLIGATIONS OR ACCOUNTABILITY

IT IS THE RESPONSIBILITY OF EACH PROFESSIONAL TO PRACTICE ONLY WITHIN THE BOUNDS OF THEIR OWN COMPETENCE

IF THIS IS AN UPDATED OR REPLACEMENT PGD ENSURE THAT ALL OLDER VERSIONS ARE WITHDRAWN FROM USE WITH IMMEDIATE EFFECT

IT IS YOUR REPONSIBILITY TO MAKE SURE YOU ARE USING THE CURRENT VERSION

NOTE TO AUTHORISING MANAGERS: AUTHORISED STAFF SHOULD BE PROVIDED WITH AN INDIVIDUAL COPY OF THE CLINICAL CONTENT OF THE PGD AND A PHOTOCOPY OF THE AUTHORISATION SHEET SHOWING THEIR AUTHORISATION. BY SIGNING BELOW YOU ARE CONFIRMING THAT YOU HAVE ASSESSED THE STAFF MEMBER AS COMPETENT TO WORK UNDER THIS PGD AND THAT THEY HAVE THE ORGANISATIONAL APPROVAL TO DO SO

Name of Professional	Signature	Authorising Manager	Date

Appendix 1

Suggested Dosages for Common Lesions of the Upper Limb*

SITE / LESION	NEEDLE	DEPO-MEDRONE 40mg/ml	LIDOCAINE	TOTAL VOL
Glenohumeral joint	Green	40mg (1ml)	4ml 1%	5ml
Sub-acromial space	Green	20mg (0.5ml)	4ml 1%	4.5ml
Subscapularis bursa	Blue or Green	20mg (0.5ml)	1.5ml 2%	2ml
Elbow joint	Blue	20mg (0.5ml)	1.5ml 2%	2ml
Olecranon bursa	Blue	20mg (0.5ml)	1.5ml 2%	2ml
Wrist joint	Blue	20mg (0.5ml)	1.5ml 2%	2ml
Carpal Tunnel	Orange / blue	20mg (0.5ml)	Nil	0.5ml
Small joints: (ACJ, thumb, fingers).	Orange	10mg (0.25ml)	Up to 0.75ml 2% (dependent on available space)	1ml max
Common flexor / extensor origins of the elbow	Orange	10mg (0.25ml)	0.75ml 2%	1ml
Thumb tendons	Orange	10mg (0.25ml)	0.75ml 2%	1ml
Trigger finger	Orange	10mg (0.25ml)	0.25ml 2%	0.5ml

Suggested Dosages for Common Lesions of the Lower Limb*

AREA	NEEDLE	DEPO 40	LIDOCAINE	TOTAL VOL
Hip joint	Green / Spinal	40mg (1ml)	4ml	5ml
Gluteal Bursa	Spinal	40mg (1ml)	4ml	5ml
Trochanteric Bursa	Blue / Green	20mg (0.5ml)	1.5ml	2ml
Hip adductor tendon	Blue	20mg (0.5ml)	1.5ml	2ml
Knee Joint	Green	40mg (1ml)	4ml	5ml
Knee bursae (pes anseurine, iliotibial, infrapatella)	Blue	20mg (0.5ml)	1.5ml 2%	2ml
Medial collateral ligament of the knee	Blue	20mg (0.5ml)	1ml 2%	2ml
Ankle & Sub-Talar Joints	Blue	30mg (0.75ml)	1.25ml	2ml
Achilles Bursa	Blue	20mg (0.5ml)	1.5ml 2%	2ml
Toe joints	Orange	20mg (0.5ml)	1ml	1.5ml
Plantar Fascia.	Green	20mg (0.5ml)	1.5ml	2.0ml

Needle colour/length/gauge

ORANGE	BLUE	GREEN
13 -20 mm (25g)	25 – 30 mm (23g)	39 – 50 mm (21g)

These doses are guidelines only. Actual doses may need to be adjusted dependent on the patient's age, size and presentation. Total dosage must not exceed that stated within this PGD. These guidelines are based upon the recommendations of Saunders & Longworth (2006)