University Hospitals of Derby and Burton NHS Foundation Trust

PATIENT GROUP DIRECTION (PGD)

Administration of COMPOUND SODIUM LACTATE (Hartmann's) infusion By NURSES in CRITICAL CARE OUTREACH / CSPs

Documentation details

Reference no:	UHDB175
Version no:	1
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Change history

Version number	Change details	Date
1	First version	
2	Updated	3/7/17
3	Update to new trust format. Cautions, drug storage and drug interaction information updated as per summary of product characteristics.	26/5/2020

Glossary

Abbreviation	Definition
MHRA	Medications and Healthcare products Regulatory Agency

1. PGD template development (PGD Working Group)

PGD Working Group Membership (minimum requirement of consultant, pharmacist and a registered professional who can work under a PGD (or manages the staff who do). If this is a review of existing PGD, replace previous names with the individuals involved for this version

Name	Designation
Dr Paul Smith	ITU Lead Consultant
Janice Fialhoesymons	Pharmacist, Critical Care
Christopher Ball	Registered Nurse

Where an antimicrobial is included, confirm the name, designation and date of the antimicrobial pharmacist who has reviewed this version

Name of antimicrobial pharmacist	Designation	Date Reviewed
n/a	n/a	n/a

2. Organisational authorisations

The PGD is not legally valid until it has had the relevant organisational authorisation.

University Hospitals of Derby & Burton NHS Foundation Trust authorises this PGD for use by the services or providers listed below:

Authorised for use by the following organisation and/or services
Critical Care Outreach Team (UHDB) and Clinical Site Practitioners at QHB who meet the "staff characteristics" (section 3) for this CCOT-led PGD
Limitations to authorisation
n/a

Organisational approval (legal requirement).			
Role	**Name**	**Sign**	**Date**
Medicines Safety Officer *Pharmacist: Medicines Safety Officer, Chief Pharmacist or assigned deputies)*	James Hooley	Signed copy held by Pharmacy	**04/08/2022**

Additional signatories (required as per legislation and locally agreed policy)			
Role	**Name**	**Sign**	**Date**
Pharmacist, Critical Care *Clinical Pharmacist from PGD working group*	Janice Fialhoesymons	Signed copy held by Pharmacy	**09/06/2022**
Consultant, Critical Care *Doctor*	Dr Adilah Miraj	Signed copy held by Pharmacy	**26/07/2022**
Sister, CCOT team *Registered Professional representing users of the PGD*	Kate Willshaw	Signed copy held by Pharmacy	**12/04/2022**

Local enquiries regarding the use of this PGD may be directed to UHDB.PGDgovernance@nhs.net

Section 7 provides a registered health professional authorisation sheet. Individual professionals must be authorised by name to work to this PGD.

3. Characteristics of staff

Qualifications and professional registration	NMC Registered Nurses
Initial training	- Completion of all Essential-to-role training as outlined in the UHDB PGD policy. - Individual has read and understood full content of this PGD and signed authorisation (section 7) - Completion of Medicines Management Drug Assessment
Competency assessment	Staff operating under this PGD are encouraged to review their competency using the NICE Competency Framework for health professionals using patient group directions Individuals operating under this PGD are personally responsible for ensuring they remain up to date with the use of all medicines included in the PGD - if any training needs are identified these should be discussed with either authorising manager (section 7) or the manager within the PGD working group (section 1) so that further training can be provided as required.
Ongoing training and competency	Annual performance reviews. Regular CPD updates as per NMC code. UHDB IV infusion competency.
The decision to supply any medication rests with the individual registered health professional who must abide by the PGD and any associated organisation policies.	

4. Clinical condition or situation to which this PGD applies

Clinical condition or situation to which this PGD applies	• Patients with, or at risk of, hypovolaemia or hypotension *Note an alternative PGD is also available at UHDB for fluid bolus in medical emergencies; suitable for staff who possess ALS certification*
Criteria for inclusion	• Adults over 16 years old who are dehydrated or are not taking sufficient oral fluids.
Criteria for exclusion	• Hypersensitivity to any of the ingredients • Hypervolemia • Uncontrolled hypertension • Cardiac Failure • Hyperkalaemia or Hypercalcaemia • Severe renal impairment (with oliguria/anuria) • Metabolic alkalosis • Ascitic cirrhosis or severe liver disease • Lactic acidosis or severe metabolic acidosis • Concurrent treatment with digoxin
Cautions including any relevant action to be taken	Consider the following cautions and if unsure whether to proceed, obtain medical advice and prescription: • Electrolyte disturbances and acid-base imbalance • Heart disease • Hepatic impairment • Hypernatraemia Compound Sodium Lactate solution should only be administered to patients with hypernatraemia after careful consideration of the underlying cause and alternative intravenous fluids. • Use in patients with diabetes lactate is a substrate for gluconeogenesis. Therefore, glucose levels should be carefully monitored in patients receiving Compound Sodium Lactate. • Use in patients with renal impairment Compound Sodium Lactate solution should be administered with particular caution to patients with renal impairment (and see exclusions related to severe renal impairment and hyperkalaemia). • Oedema / fluid overload An excessive volume or too high a rate of administration of Compound Sodium Lactate solution may lead to fluid and sodium overload with a risk of oedema
Action to be taken if the patient is excluded	Document clearly and discuss with parent team
Action to be taken if the patient or carer declines treatment	Advise patient on importance of medication and document advice clearly in notes. Seek potential alternatives. Inform parent team
Arrangements for referral for medical advice	Discuss with parent team

5. Description of treatment

Name, strength & formulation of drug	1000ml Compound Sodium Lactate IV infusion Also known as: • Hartmann's Solution • Potassium chloride (5mmol/litre potassium) with calcium chloride (2mmol/litre calcium), sodium chloride (131mmol/litre sodium) and sodium lactate • Ringer Lactate solution
Legal category	Prescription Only Medicine
Route / method of administration	Intravenous infusion
Indicate any off-label use (if relevant)	*n/a*
Dose and frequency of administration	1000mls
Duration of treatment	6-8 hours under this PGD *Note an alternative PGD is also available at UHDB for fluid bolus in medical emergencies; suitable for staff who possess ALS certification*
Quantity to be supplied	*n/a – administration only under this PGD*
Storage	No special precautions for storage.
Drug interactions	Drug interactions are primarily related to potassium, calcium and sodium content which may be additive to effects of other drugs which affect these electrolytes (e.g. ACE inhibitors or potassium sparing diruetics). These effects are minimised within this PGD by authorising only a single infusion. Risk of fatal cardiac arrhythmias with: • Digoxin (see contraindications) Increased risk of hypercalcaemia with: • Thiazide diuretics • Vitamin D Increase renal clearance of: • Salicylates • Barbiturates • Lithium Risk of hyperkalaemia with: • Potassium-sparing diuretics • ACE inhibitors • Angiotensin II Receptor antagonists • Tacrolimus • Ciclosporin Risk of hypertension or oedema with: • Corticosteroids Do not infuse alongside: • Ceftriaxone • Blood products

	A detailed list of drug interactions is available in the SPC, which is available from the electronic Medicines Compendium website: www.medicines.org.uk
Identification & management of adverse reactions	Potential adverse reactions: • Hypersensitivity reaction • Hyperkalaemia or other electrolyte imbalances • Hospital-acquired hyponatraemia • Acute hyponatraemic encephalopathy • Hypervolaemia • Panic attack • Infusion site reaction A detailed list of adverse reactions is available in the SPC, which is available from the electronic Medicines Compendium website: www.medicines.org.uk
Management of and reporting procedure for adverse reactions	• Observe site of infusion for signs of infection or extravasation. Re-site cannula if necessary • Hypersensitivity reactions may result in anaphylaxis and appropriate treatment options must be available. • Serious or unusual adverse reactions that could conceivably be attributable to the drug should be reported to a doctor and documented in the patient notes. An incident form and an MHRA 'yellow card' (www.mhra.gov.uk/yellowcard) should also be completed as appropriate.
Written information to be given to patient or carer	**Nil routinely required. Patient information can be printed from** www.medicines.org.uk if requested
Patient advice / follow up treatment	Advise patient to report any pain or irritation at site of infusion Ask parent team to review and prescribe continuing therapy if required.
Records	For inpatients, the record of administration must be documented in the ePMA system or medicines chart used in your area. For other areas, an ePMA system should be used if implemented in your area as this will ensure all legal criteria are fulfilled and auditable. Otherwise, records can be made in the medical notes or within the patient pathway (e.g. in daycase or triage where a pathway booklet is in use) but must include the legal requirements below. Either the system holding the record, or the healthcare practitioner working under the PGD, must capture/document all of the following: • name of individual, address, date of birth and GP with whom the individual is registered (if relevant) • name of registered health professional • name of medication supplied/administered • date of supply/administration • dose, form and route of supply/administration • quantity supplied/administered

	• batch number and expiry date (if applicable e.g. injections and implants) • advice given, including advice given if excluded or declines treatment • details of any adverse drug reactions and actions taken • Confirm whether supplied and/or administered via Patient Group Direction (PGD) Records should be signed and dated (or a password controlled e-records). All records should be clear, legible and contemporaneous.

6. Key references

Key references	• *Electronic Medicines Compendium* http://www.medicines.org.uk/ • *Electronic BNF* https://bnf.nice.org.uk/ • *NICE Medicines practice guideline "Patient Group Directions"* https://www.nice.org.uk/guidance/mpg2

7. Registered health professional authorisation sheet

PGD Name & Version **Administration of Compound Sodium Lactate Infusion (Hartmanns) by nurses in Critical Care Outreach/CSPs [v3]**
PGD ref: **UHDB175**
Valid from: 04/08/2022 **Expiry date: 03/08/2025**

Before signing check that the document you have read is published on Koha or is an in-date hard-copy with all necessary authorisations signed in section 2. The Name/Version/Ref of the document you have read MUST match this authorisation form.

Registered health professional
By signing this patient group direction you are indicating that
a) You agree to and understand all content and commit to only work within this framework.
b) You have completed the PGD e-Learning package via My Learning Passport (or ESR).
c) You meet the staff characteristics and have completed any additional learning/competency outlined in Section 3 of this PGD.

Patient group directions do not remove inherent professional obligations or accountability.
It is the responsibility of each professional to practise only within the bounds of their own competence and professional code of conduct.

I confirm that I have read and understood the content of this Patient Group Direction and that I am willing and competent to work to it within my professional code of conduct.			
Name	**Designation**	**Signature**	**Date**

Authorising manager / Assessor

I confirm that the registered health professionals named above have declared themselves suitably trained and competent to work under this PGD. I give authorisation on behalf of University Hospitals of Derby & Burton NHS Foundation Trust for the above named health care professionals who have signed the PGD to work under it.			
Name	**Designation**	**Signature**	**Date**

Note to authorising manager

Score through unused rows in the list of registered health professionals to prevent additions post managerial authorisation.

This authorisation sheet should be retained in the clinical department where the PGD is in-use to serve as a record of those registered health professionals authorised to work under this PGD.