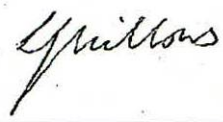
NHS Grampian NHS Shetland

Patient Group Direction For The Administration Of Sodium Chloride 0.9% Intravenous Infusion By Haemodialysis Nurses Working Within NHS Grampian And NHS Shetland

Lead Author: Senior Charge Nurse, Banff and Buchan Renal Units	**Consultation Group**: See relevant page in the PGD	**Approver:** Medicines Guidelines and Policies Group **Authorisation:** NHS Grampian

Signature: 		**Signature:** 

NHSG Identifier: MGPG/PGD/NaCl_Haemo/1496	**Review Date:** May 2026 **Expiry Date:** May 2027	**Date Approved:** May 2024

NHS Grampian and NHS Shetland have authorised this Patient Group Direction to help individuals by providing them with more convenient access to an efficient and clearly defined service within the NHS Boards. This Patient Group Direction cannot be used until Appendix 1 and 2 are completed.

Uncontrolled when printed

Version 7

Revision History:

PGD that has been superseded	PGD supersedes NHSG/PGD/NaCl/haemo/MGPG1166, Version 6	
Date of change	**Summary of Changes**	**Section heading**
April 2024	2 year review of PGD.	

NHGS Identifier: MGPG/PGD/NaCl_haemo/1496
Keyword(s): PGD Patient Group Direction Sodium Chloride, Haemodialysis, Nurses

Policy Statement: It is the responsibility of the individual healthcare professionals and their line managers to ensure that they work within the terms laid down in this PGD and to ensure that staff are working to the most up to date PGD. By doing so, the quality of the services offered will be maintained, and the chances of staff making erroneous decisions which may affect individual, staff or visitor safety and comfort will be reduced. Supervisory staff at all levels must ensure that staff using this PGD act within their own level of competence.

The lead author is responsible for the review of this PGD and for ensuring the PGD is updated in line with any changes in clinical practice, relevant guidelines, or new research evidence.

Review date: The review date for a PGD needs to be decided on a case-by-case basis in the interest of safety. The expiry date should not be more than 3 years, unless a change in national policy or update is required.

Document:	Drafted:	March 2024
	Completed:	April 2024
	Approved:	May 2024 (published – June 2024)
	Amended and re-authorised:	

Organisational Authorisations

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

PGD Developed/Reviewed by;

Medical practitioner	**Name:** Dr Carol Brunton **Title:** Consultant Nephrologist, ARI **Contact email:** carol.brunton@nhs.scot **Signature:** ..... **Date:** 27/05/2024
Senior representative of the professional group who will provide care under the direction	**Name:** Denise Edgar **Title:** Senior Charge Nurse, ARI **Contact email:** denise.edgar@nhs.scot **Signature:** ..... **Date:** 31/05/2024
Lead author	**Name:** Linda Willows **Title :** Senior Charge Nurse, Banff and Buchan Renal Units **Contact email:** linda.willows@nhs.scot **Signature:** ..... **Date:** 22/05/2024
Pharmacist	**Name:** Brian Porteous **Title :** Renal Pharmacist, ARI **Contact email:** brian.porteous@nhs.scot **Signature:** ..... **Date:** 22/05/2024

Approved and authorised for use within NHSG by;

Medicines Guidelines and Policies Group Chair	Signature	Date Signed
Lesley Coyle		04/06/2024

Management and Monitoring of Patient Group Direction

PGD Consultative Group

The consultative group is legally required to include a medical practitioner, a pharmacist and is best practice to have a representative of the professional group who will provide care under the direction.

Name:	**Title:**
Linda Willows	**Lead Author:** Senior Charge Nurse Banff and Buchan Renal Units
Brian Porteous	**Pharmacist:** Clinical Pharmacist, ARI
Dr Carol Brunton	**Medical Practitioner:** Consultant Nephrologist, ARI
Denise Edgar	**Senior Representative:** Senior Charge Nurse, Renal Unit, ARI

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Clinical indication to which this PGD applies

Definition of situation/ Condition	This Patient Group Direction (PGD) will authorise approved healthcare professionals as detailed in the characteristics of staff authorised to work under this PGD, to administer sodium chloride 0.9% infusion to individuals, aged 16 years or over who require haemodialysis treatment This PGD should be used in conjunction with the recommendations in the current British National Formulary (BNF), British National Formulary for Children (BNFC), and the individual Summary of Product Characteristics (SmPC).
Inclusion criteria	Prior to the administration of the medicine, valid consent to receiving treatment under this PGD must be obtained. Consent must be in line with current NHSG consent policy. All patients aged 16 years and over undergoing haemodialysis treatment. **Prime and wash back of lines** • Where there is a problem with the machine and the automatic option to prime and wash back are not available then sodium chloride 0.9% infusion can be used. **Intravenous infusion/intravenous flush when the bolus of dialysate function is not available then sodium chloride 0.9% infusion can be used** • Patients who become hypotensive during the haemodialysis treatment. • Patients who are dehydrated. • To prevent clotting of the extra-corporeal circuit.
Exclusion criteria	Individuals for whom no valid consent has been received. • Individuals under 16 years of age. • Individuals who are hypernatraemic (sodium equal to or greater than 150mmol/L). • Individuals who are suffering from hyperchloraemia (Chloride equal or greater than 110mEq/L).

Precautions and special warnings	Sodium chloride 0.9% intravenous infusion should be used with caution in patients receiving corticosteroids or corticotropin, because of potential sodium retention. Sodium chloride 0.9% intravenous infusion should be used with particular caution, if at all, in patients with or at risk for hyperchloraemia, hypervolemia and conditions that may cause sodium retention, fluid overload and oedema (central and peripheral). Caution is advised in patients treated with lithium. Renal sodium and lithium clearance may be increased during administration of sodium chloride 0.9% intravenous Infusion, therefore intravenous infusion may result in decreased lithium levels.
Action if excluded from treatment	Medical advice must be sought – refer to relevant medical practitioner. Document the reason for exclusion under the PGD and any action taken in the individual's appropriate clinical records.
Action if treatment is declined	Inform/refer to the relevant medical practitioner if individual declines treatment. Document that the administration was declined, the reason and advice given in appropriate clinical records.

Description of treatment available under the PGD

Name form and strength of medicine	Sodium chloride 0.9% intravenous infusion is available in infusion bags containing 100mL, 250mL, 500mL and 1000mL. Each mL contains 9mg sodium chloride.
Legal status	Sodium chloride 0.9% intravenous infusion is a Prescription-only Medicine (POM).
Is the use out with the SmPC?	N/A
Dosage/Maximum total dose	**When the option to use dialysate is not available then priming lines;** 1000mL of sodium chloride 0.9% is used to prime the dialysis circuit prior to dialysis. If an individual has had a presumed membrane reaction on a previous dialysis, 2000mL sodium chloride 0.9% may be used.

	The maximum quantity of sodium chloride 0.9% that can be used to prime lines prior to dialysis is 2000mLs. **Hypotension** 100mL to 500mL sodium chloride 0.9% is used to correct hypotension as required during haemodialysis. **The maximum quantity of sodium chloride 0.9% that can be given to correct hypotension during dialysis, before the need to contact medical staff, is 500mL.** **The maximum quantity of sodium Chloride 0.9% that can be administered to correct dehydration is 500mL.** **Prevention of Clotting** Where anticoagulation is not appropriate, sodium chloride 0.9% can be given as 25mL to 100mL flushes every 15 to 30 minutes during dialysis or as a slow infusion at a rate of 100mL/hour throughout the dialysis to prevent clotting of the extra-corporeal circuit. **The maximum quantity of sodium chloride 0.9% that can be given as a slow infusion during dialysis to prevent clotting is 500mL.** **Wash Back** 300mL to 500mL sodium chloride 0.9% is used to wash back blood in the dialysis circuit at termination. **The maximum quantity of sodium chloride 0.9% can be given for wash back upon completion of treatment is 500mL.**
Frequency of dose/Duration of treatment	See Dosage/Maximum total dose section above.
Maximum or minimum treatment period	Not applicable.
Route/Method of administration	Intravenous infusion or flush. It is the responsibility of the nurse to check the strength, the expiry date and to record the batch numbers of the solution on the dialysis documentation.
Quantity to be administered	See Dosage/Maximum total dose section above.

Storage requirements	100mL bags: Do not store above 30°C. 250mL, 500mL and 1000mL bags: This medicinal product does not require any special storage conditions.
Additional Information	N/A
Follow-up (if applicable)	Individuals should not leave if they are feeling unwell without speaking to the healthcare professional who administered the medicine first. If necessary a doctor or the individuals GP should be contacted for advice.
Advice (Verbal)	• Advise individual what to expect and of the possible side effects and their management. • If serious adverse or persistent effects occur, the individual/parent/carer should be advised to contact their GP/Accident and Emergency department/NHS24. • Individuals/carers should be advised to report suspected adverse reactions to the Medicines and Healthcare products Regulatory Agency (MHRA) using the Yellow Card reporting scheme.
Advice (Written)	The Patient Information Leaflet (PIL) contained in the medicine(s) should be made available to the individual. Where this is unavailable, or unsuitable, sufficient information should be given in a language that they can understand.
Identifying and managing possible adverse reactions	Include relevant warnings, list common side effects and Adverse Drug Reactions (ADRs), refer to PIL, SmPC and current BNF for full list of side effects and ADRs. **This list is not exhaustive. Please also refer to current BNF/BNFC and manufacturers SmPC for details of all potential adverse reactions.** **BNF/BNFC**: BNF British National Formulary - NICE BNF for Children British National Formulary - NICE **SmPC/PIL/Risk Minimisation Material:** Home - electronic medicines compendium (emc) MHRA Products | Home RMM Directory - (emc) If an adverse reaction does occur give immediate treatment and inform relevant medical practitioner as soon as possible.

	Document in accordance with locally agreed procedures in the individual's record. Report any suspected adverse reactions using the Yellow Card System. Yellow Card Scheme - MHRA
Facilities and supplies required	The following are to be available at sites where the medicine is to be administered: • Appropriate storage facilities • An acceptable level of privacy to respect individual's right to confidentiality and safety • Basic airway resuscitation equipment (e.g. bag valve mask) • Immediate access to Epinephrine (Adrenaline) 1 in 1000 injection • Access to a working telephone • Another competent adult, who can summon urgent emergency support if required should ideally be present • Access to medical support (this may be via the telephone) • Approved equipment for the disposal of used materials • Clean and tidy work areas, including access to hand washing facilities or alcohol hand gel • A copy of this current PGD in print or electronically.

Characteristics of staff authorised to administer medicine(s) under PGD

Professional qualifications	Registered Nurses as recognised by the Nursing and Midwifery Council (NMC).
Specialist competencies	**Approved by the organisation as:** • Competent to assess the individual's capacity to understand the nature and purpose of the medicine administration in order to give or refuse consent • Aware of current treatment recommendations and be competent to discuss issues about the medicine with the individual • Having undertaken appropriate training to carry out clinical assessment of individuals identifying that treatment is required according to the indications listed in the PGD • Competent in the recognition and management of anaphylaxis or under the supervision of persons able to respond appropriately to immediate adverse reactions • Competent to undertake administration of the medicine • Competent in the recognition and management of anaphylaxis or under the supervision of persons able to respond appropriately to immediate adverse reactions • Competent to work under this PGD and authorised by name as an approved person to work under the terms of the PGD.

Ongoing training and competency	**All professionals working under this PGD must:** • Have undertaken NoS PGD module training on TURAS Learn • Have attended basic life support training either face to face or online and updated in-line with Board requirements • Have undertaken NHS e-anaphylaxis training or equivalent which covers all aspects of the identification and management of anaphylaxis in-line with Board requirements • Maintain their skills, knowledge and their own professional level of competence in this area according to their individual Code of Professional Conduct. **Note:** All practitioners operating under the PGD are responsible for ensuring they remain up to date with the use of the medicine. If any training needs are identified these should be discussed with those responsible for authorisation to act under the PGD • Have knowledge and familiarity of the following; ○ SmPC for the medicine(s) to be administered in accordance with this PGD.
Responsibilities of professional manager(s)	**Professional manager(s) will be responsible for;** Ensuring that the current PGD is available to all staff providing care under this direction. Ensuring that staff have received adequate training in all areas relevant to this PGD and meet the requirements above. Maintain up to date record of all staff authorised to administer the medicine(s) specified in this direction.

Documentation

Authorisation of administration	Nurses working in Haemodialysis Units working within NHS Grampian and NHS Shetland can be authorised to administer the medicine(s) specified in this PGD by their Professional Line Manager. All authorised staff are required to read the PGD and sign the Agreement to Administer Medicines Under PGD (Appendix 1). A Certificate of Authorisation (Appendix 2) signed by the authorising professional/manager should be supplied. This should be held in the individual health professional's records, or as agreed locally.

Record of administration	An electronic or paper record must be completed to allow audit of practice. An electronic/HEPMA record of the screening and subsequent administration, or not of the medicine(s) specified in this PGD should be made in accordance with individual Health Board electronic/HEPMA recording processes. If a paper record is used for recording the screening of individuals and the subsequent administration, or not of the medicine(s) specified in this PGD. This should include as a minimum: • Date and time of administration • Individuals name and CHI • Exclusion criteria, record why the medicine was not administered (if applicable) • Record that valid consent to treatment under this PGD was obtained • The name, dose, form, route (batch number, expiry date and anatomical site where appropriate for injectable medicines) of the medicine(s) administered • Advice given, including advice given if excluded or declined treatment under this PGD • Signature and name in capital letters of the healthcare professional who administered the medicine, and who undertook the assessment of the individual's clinical suitability for the administration/supply of the medicine • Record of any adverse effects and the actions taken (advise individuals' GP/relevant medical practitioner). Depending on the clinical setting where administration is undertaken, the information should be recorded manually or electronically, in one (or more) of the following systems, as appropriate: • Individual's GP records if appropriate • Secondary Care Medical Notes • HEPMA • Clinical Vision 5 Local policy should be followed with respect to sharing information with the individual's General Practitioner. All records should be clear, legible and contemporaneous and in an easily retrievable format.

Audit	All records of the medicine(s) specified in this PGD will be filed with the normal records of medicines in each practice/service. A designated person within each practice/service where the PGD will be used will be responsible for annual audit to ensure a system of recording medicines administered under a PGD.
References	Electronic Medicines Compendium http://www.medicines.org.uk Sodium Chloride – Date of revision of text 30/04/224, accessed 30/04/2024. British National Formulary and British National Formulary for Children https://www.bnf.org/products/bnf-online/ accessed 30/04/2024.

Appendix 1

Healthcare Professional Agreement to Administer Medicine(s) Under Patient Group Direction

I: _____ (Insert name)

Working within: _____ e.g. Area, Practice

Agree to administer the medicine(s) contained within the following Patient Group Direction:

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I have completed the appropriate training to my professional standards enabling me to administer the medicine(s) under the above direction. I agree not to act beyond my professional competence, nor out with the recommendations of the direction.

Signed: _____

Print Name: _____

Date: _____

Profession: _____

Professional Registration number/PIN: _____

Appendix 2

Healthcare Professionals Authorisation to Administer Medicine(s) Under Patient Group Direction

The Lead manager/Professional of each clinical area is responsible for maintaining records of all clinical areas where this PGD is in use, and to whom it has been disseminated.
The Senior Nurse/Professional who approves a healthcare professional to administer the medicine(s) under this PGD is responsible for ensuring that they are competent, qualified and trained to do so, and for maintaining an up-to-date record of such approved persons.
The Healthcare Professional that is approved to administer the medicine(s) under this PGD is responsible for ensuring that they understand and are qualified, trained and competent to undertake the duties required. The approved person is also responsible for ensuring that administration is carried out within the terms of the direction, and according to their individual code of professional practice and conduct.
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Local clinical area(s) where the listed healthcare professionals will operate under this PGD:

Name of Healthcare Professional	Signature	Date	Name of Manager	Signature	Date

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Name of Healthcare Professional	**Signature**	**Date**	**Name of Manager**	**Signature**	**Date**