University Hospitals of Derby and Burton NHS Foundation Trust

PATIENT GROUP DIRECTION (PGD)

Administration of SALBUTAMOL nebules
By NURSES in CRITICAL CARE OUTREACH / CSPs

Documentation details

Reference no:	UHDB176
Version no:	1
Valid from:	04/08/2022
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Expiry date:	03/08/2025

Change history

Version number	Change details	Date
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.
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	Reversible airway obstructive conditions: • Acute asthma • Bronchospasm unresponsive to treatment with bronchodilator via aerosol and spacer • Hyperkalaemia

Criteria for inclusion	Adult patients over 16 years old presenting with one of the following indications:
	• Reversible airways obstructions with Oxygen saturations <92% and signs of respiratory distress including:
	  ○ Use of accessory muscles of breathing
	  ○ Cyanosis
	  ○ High respiratory rate (>16 breaths/minute)
	• Bronchospasm unresponsive to treatment with bronchodilator via aerosol and spacer
	• Hyperkalaemia: where there is a delay to prescription of primary agents or if these fail to provide a response (K+ >6.5mmol/L or > 6.0mmol/L with T wave changes on ECG as per UHDB guidelines)

Criteria for exclusion	Hypersensitivity to any of the ingredients. • Patients under 16 years old • Previous sensitivity or intolerance to the drug or any ingredient
Cautions including any relevant action to be taken	Seek expert advice with the following conditions: • Hyperthyroidism or thyrotoxicosis • Hypokalaemia • Serious cardiac disorders such as severe heart failure, ischaemic heart disease, recent myocardial infarction or arrhythmias • Severe and untreated hypertension • Aneurysm • Diabetes which is difficult to control (monitor glucose) • Pheochromocytoma • Pregnancy and breast-feeding. • Patients taking non-selective beta-blockers e.g., Propranolol
Action to be taken if the patient is excluded	Discuss with parent team and document clearly in notes. If serious deterioration of asthma seek immediate medical advice
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. If serious deterioration of asthma seek immediate medical advice
Arrangements for referral for medical advice	Discuss with parent team

5. Description of treatment

Name, strength & formulation of drug	Salbutamol 2.5mg Nebules Salbutamol 5mg Nebules

Legal category	POM
Route / method of administration	Inhaled as nebulised solution. To prolong administration time to more than 10 minutes, the nebule solution may be diluted with 0.9% Sodium Chloride for injection or a sodium chloride 0.9% nebule.
Indicate any off-label use (if relevant)	Treatment of hyperkalaemia is off-label but supported by national publications (e.g. BNF) and guidelines. Local UHDB guidelines also support use.
Dose and frequency of administration	Usually 4-6 hourly but can be every 20-30 minutes if required (for hyperkalaemia, check potassium after 20mg cumulative dose). Maximum normal dose is 40mg in 24 hours.
Duration of treatment	Until cessation of symptoms up to a maximum of 40mg via this PGD. Seek prescription at the earliest opportunity.
Quantity to be supplied	n/a – This is an administration-only PGD
Storage	Stock must be securely stored according to UHDB medicines policy and in conditions in line with SPC as detailed below: Store below 25 °C. Store in the original packaging. Ampoules should be opened immediately before use and any solution remaining after use should be discarded.
Drug interactions	• Use with caution in patients receiving other sympathomimetics. • Should not be prescribed alongside non-selective β-receptor blocking drugs • Hypokalaemia can be worsened when used alongside drugs such as: xanthine derivatives, glucocorticoids, diuretics and digoxin. The BNF provides a full list of agents which may predispose to hypokalaemia in combination with salbutamol. • Tricyclic antidepressants may increase the risk of cardiovascular side effects. • Corticosteroids may increase the risk of hyperglycaemia. • Combination of nebulised salbutamol and ipratropium bromide has rarely given rise to cases of acute angle-closure glaucoma.
Identification & management of adverse reactions	Potential adverse reactions: • Headache • Local reaction (mouth/throat/tongue irritation) • Fine tremor • Dizziness • Restlessness • Nausea • Taste alteration • Hypersensitivity reaction • Hypokalaemia • Hyperglycaemia • Tachycardia/Arrhythmias/Palpitations • Myocardial Ischaemia • Lactic Acidosis (with high doses) • Muscle cramps • Peripheral vasodilation • Paradoxical bronchospasm

	Monitor patients complaining of chest pain as this could be a sign of precipitated or exacerbated heart disease. Monitor pulse before and 15-30 minutes after treatment Monitor blood glucose in diabetic patients due to risk of hyperglycaemia.
Management of and reporting procedure for adverse reactions	• Treatment of adverse effects/overdose is symptomatic and depends on individual circumstances – urgent medical advice should be sought. • 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	Not routinely required for single dose administration. However consider providing marketing authorisation holder's patient information leaflet (PIL) provided with the product (or print these via www.medicines.org.uk
Patient advice / follow up treatment	Advised to seek medical advice in the event of an adverse reaction.
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	• *UHDB – Hyperkalaemia Guideline – Accessed via Koha 17/03/2022 https://derby.koha-ptfs.co.uk/cgi-bin/koha/opac-detail.pl?biblionumber=1269* • *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 Salbutamol nebuliser by nurses in Critical Care Outreach/CSPs [v3]
PGD ref: UHDB176
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.