Patient Group Direction For The Administration Of Salbutamol Via A Spacer By Nurses And Midwives Working Within Primary Care And Community Hospitals In NHS Grampian

Lead Author: Medicines Management Specialist Nurse NHSG	**Consultation Group**: See relevant page in the PGD	**Approver:** Medicines Guidelines and Policies Group **Authorisation:** NHS Grampian
Signature: 		**Signature:** 
NHSG Identifier: MGPG/PGD/Sal_Emergency/ 1643	**Review Date:** April 2027 **Expiry Date:** April 2028	**Date Approved:** April 2025

NHS Grampian 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 Board. This Patient Group Direction cannot be used until Appendix 1 and 2 are completed.

Uncontrolled when printed

Version 7

Revision History:

Reference and approval date of PGD that has been adapted and/or superseded	NHSG/PGD/Sal_Emergency/MGPG1249, Version 6	
Date of change	**Summary of Changes**	**Section heading**
December 2024	Review and update to new PGD template.	
December 2024	Updated.	Storage requirements
December 2024	Statement added regarding dosing as per SIGN Guideline.	Is the use out with the SmPC?
December 2024	Updated.	References
January 2025	Tables updated - Levels of Severity.	Appendix 3 and 4
January 2025	Information added about assessing severity of symptoms in children as per SIGN 158.	Additional information
April 2025	Information amended regarding child's age for face mask use and availability of various sized of Aerochamber plus flow vu antistatic chambers for up to and including 5 year olds.	Route/Method of administration

NHGS Identifier: MGPG/PGD/Sal_Emergency/1643
Keyword(s): PGD Patient Group Direction salbutamol spacer nurse midwife midwives primary care community hospital

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:	December 2024
	Completed:	January 2025
	Approved:	April 2025 (published – April 2025)
	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 Kris Mclaughlin **Title:** GP and Respiratory MCN Clinical Lead **Contact email:** kris.mclaughlin@nhs.scot **Signature:** ..... **Date:** 23/04/2025
Senior representative of the professional group who will provide care under the direction	**Name:** Jackie Leggat **Health Board:** NHSG **Title:** Senior Charge Nurse Casualty Fraserburgh **Contact email:** jackie.leggat@nhs.scot **Signature:** ..... **Date:** 24/04/2025
Lead author	**Name:** Jodie Allan **Title :** Medicines Management Specialist Nurse **Contact email:** jodie.allan@nhs.scot **Signature:** ..... **Date:** 17/04/2024
Pharmacist	**Name:** Paula Thomson **Health Board:** NHSG **Title :** Respiratory Pharmacist, RACH **Contact email:** paula.thomson@nhs.scot **Signature:** ..... **Date:** 22/04/2025

Approved and authorised for use within NHSG by;

Medicines Guidelines and Policies Group Chair	Signature	Date Signed
Lesley Coyle		18/04/2025

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:
Jodie Allan	**Lead Author:** Medicines Management Specialist Nurse
Jackie Leggat	**Senior Representative:** Senior Charge Nurse Fraserburgh Casualty
Paula Thomson	**Pharmacist:** Respiratory Pharmacist , RACH
Dr Kris Mclaughlin	**Medical Professional:** GP and Respiratory MCN Clinical Lead
Birgit Teismann	Pharmacist: Lead Pharmacist Aberdeenshire HSCP

Patient Group Direction For The Administration Of Salbutamol Via A Spacer By Nurses And Midwives Working Within Primary Care And Community Hospitals In NHS Grampian

Clinical indication to which this PGD applies

Definition of situation/ Condition	This Patient Group Direction (PGD) will authorise nurses and midwives working in primary care or in community hospitals to administer salbutamol via a spacer for the relief of acute wheezing, experienced during an asthma attack to those over 1 year of age. This PGD should be used in conjunction with the recommendations in the current British National Formulary (BNF), British National Formulary for Children (BNFC), the individual Summary of Product Characteristics (SmPC) and local policies and procedures as applicable.
Inclusion criteria	• Salbutamol may be administered to adults and children over 1 years of age who present with acute airway obstruction without life threatening features, for example, an acute asthma attack where there is wheezing. • Clinical features for assessment of severity can be found in Appendix 3 for those aged over 12 years and Appendix 4 for those aged 1 to 12 years. 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.
Exclusion criteria	Individuals over 1 year of age may be administered salbutamol via a spacer under this PGD unless they: • Have known anaphylactic hypersensitivity to any of the components. • Present with acute airways obstruction with life-threatening features, this should be assessed immediately by a doctor as they may require treatment not covered under this PGD. **Note: Contraindications are relative as this product is intended for use in emergencies.** Individuals for whom no valid consent has been received.
Precautions and special warnings	Salbutamol via a spacer should be used with caution in individuals who have the following conditions, however it should be noted that these conditions do not exclude individuals from receiving therapy in an emergency:

	Hyperthyroidism Hypertension Cardiovascular disease Thyrotoxicosis Arrhythmias Diabetes Susceptibility to QT-interval prolongation Pregnancy: Therapy should be given as for a non-pregnant woman with acute asthma. Salbutamol inhalation may rarely cause paradoxical bronchospasm with an immediate increase in wheezing after administration. Medical advice should be sought immediately if this occurs. Hypersensitivity reactions including angioedema, urticaria, bronchospasm, hypotension and collapse are very rare. Individuals should never be sedated and the possibility of pneumothorax should be considered in those aged over 12 years.
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/person with parental responsibility 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	Salbutamol 100microgram metered dose inhaler. Pressurised inhalation, suspension. Each metered dose (ex-valve) contains 100micrograms salbutamol (as sulphate).
Legal status	Salbutamol 100microgram metered dose inhaler is a Prescription-Only Medicine (POM).
Is the use out with the SmPC?	The dose is in accordance to SIGN guideline 158, November 2024.

Dosage/Maximum total dose	Variable according to individual's response. **Adults and Children aged 1 year and over:** Initial dose of 200micrograms (2 puffs), inhaled as 2 separate puffs via an appropriate spacer up to a maximum of 1000micrograms (10 puffs). **Total maximum dose for both adults and children under this PGD is 1000micrograms (10 puffs).**
Frequency of dose/Duration of treatment	**Adults and Children aged 1 year and over:** Commonly two puffs are given, inhaled as 2 separate puffs, and the individual assessed after 2 to 3 minutes, if there is no improvement (respiratory rate and respiratory effort) then a further two puffs should be given and the individual reassessed. When administered in this way ten doses should take up to 15 minutes to administer. The response to treatment should be monitored for 15 minutes. If the individual is not improved then medical attention should be sough and the individual constantly observed (ideally including pulse oximetry). In children under 2 years of age who have a poor initial response to salbutamol administered with adequate technique, consider an alternative diagnosis (e.g. lower respiratory tract infection) and other treatment options (e.g. nebulisation).
Maximum or minimum treatment period	Variable according to individual's response. See Dosage/Maximum total dose and Frequency sections above.
Route/Method of administration	Children aged between 1 and 3 years are likely to require a close-fitting facemask for use with the spacer, however a mask should be considered for all children unless they can breathe reproducibly using the spacer mouthpiece. Aerochamber plus flow vu antistatic chambers should be used for up to and including 5 year olds. Varying masks and mouthpieces are available depending on the childs size Anti-static spacers should be used in individuals >5 years of age. Ideally the nurse/midwife should enquire as to what size and type of spacer the individual uses at home. The same spacer should ideally be used (unless this is obviously incorrect).

	Always shake inhaler before dose/puff (this ensures the correct dose is administered).
Quantity to be administered	Variable according to individual's response. See Dose/Maximum total dose section above.
Storage requirements	Store below 30°C. Protect from frost and direct sunlight. As with most inhaled medications in aerosol canisters, the therapeutic effect of this medication may decrease when the canister is cold. This canister contains a pressurised liquid. Do not expose to temperatures higher than 50ºC. The canister should not be broken, punctured or burnt, even when empty. Spacers are intended for single use only and after the use should be either given to the individual for home use (if the presence of respiratory disease is confirmed) or discarded.
Additional Information	Before children can receive appropriate treatment for an acute asthma attack in any setting, it is essential to assess accurately the severity of their symptoms. The following clinical signs should be recorded: • Pulse rate increasing tachycardia generally denotes worsening asthma; a fall in heart rate in life-threatening asthma is a pre-terminal event • Respiratory rate and degree of breathlessness, i.e. too breathless to complete sentences in one breath or to feed • Use of accessory muscles of respiration best noted by palpation of neck muscles • Amount of wheezing which might become biphasic or less apparent with increasing airways obstruction • Degree of agitation and conscious level always give calm reassurance.
Follow-up (if applicable)	Recipients of salbutamol via a spacer should remain under observation until they have been seen to recover from the episode of airways obstruction. **Note:** Medical staff must review the individual after an episode of acute onset reversible airways obstruction as this may indicate deterioration in chronic illness. The individual/person with parental responsibility should be advised not to leave the premises until seen by a doctor.

	The individual/person with parental responsibility should be strongly advised to obtain immediate medical advice should a relapse occur within 3 to 4 hours of treatment and to seek review at their GP Practice within 48 working hours.
Advice (Verbal)	• Advise individual/parent/carer what to expect and of the possible side effects and their management. • The Patient Information Leaflet (PIL) contained in the medicine(s) should be made available to the individual/person with parental responsibility. Where this is unavailable, or unsuitable, sufficient information should be given in a language that they can understand. 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/parent/carer. Where this is unavailable, or unsuitable, sufficient information should be given in a language that they can understand.
Identifying and managing possible adverse reactions	Common side effects include headache, dizziness, fine tremor (particularly in hands) and tachycardia. As with other inhalation therapy, paradoxical bronchospasm may occur with an immediate increase in wheezing after dosing. This should be treated immediately with an alternative presentation or a different fast-acting inhaled bronchodilator. Salbutamol via anti-static spacer should be discontinued immediately, the individual assessed and if necessary, alternative therapy instituted. **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. Report any severe 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 or pharmaceutical refrigerator • 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 and midwives as recognised by the Nursing and Midwifery Council (NMC).
Specialist competencies	**Approved by the organisation as:** • Competent to assess the individual's/parents/carers 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 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 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 And Midwives working within NHS Grampian can be authorised to administer the medicine(s) specified in this PGD by their Professional Line Manager/Consultant/Practice GPs. 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/supplied • 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: • BadgerNet – Digital Maternity Notes • Individual's GP records if appropriate • Medical record or Electronic Patient record (EPR) • HEPMA • Individual service specific systems. 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 Salbutamol 100microgram metered dose inhaler (Ventolin® Evohaler®) – Date of revision of text 26/01/24, accessed 03/12/24 British National Formulary and British National Formulary for Children https://www.bnf.org/products/bnf-online/ accessed 03/12/24 SIGN Guideline 158 November 2024 British guideline on the management of asthma. Accessed 23/01/25

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:

Patient Group Direction For The Administration Of Salbutamol Via A Spacer By Nurses And Midwives Working Within Primary Care And Community Hospitals In NHS Grampian, Version 7

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.
Patient Group Direction For The Administration Of Salbutamol Via A Spacer By Nurses And Midwives Working Within Primary Care And Community Hospitals In NHS Grampian, Version 7
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

Patient Group Direction For The Administration Of Salbutamol Via A Spacer By Nurses And Midwives Working Within Primary Care And Community Hospitals In NHS Grampian, Version 7					
Name of Healthcare Professional	**Signature**	**Date**	**Name of Manager**	**Signature**	**Date**

Appendix 3

Levels of Severity in Adults (Including Children ≥12 Years of Age)

Moderate acute asthma	Increasing symptoms PEF >50–75% best or predicted No features of acute severe asthma	
Acute severe asthma	Any one of: - PEF 33–50% best or predicted - respiratory rate ≥25/min - heart rate ≥110/min - inability to complete sentences in one breath	
Life-threatening asthma	Any one of the following in a patient with severe asthma:	
	Clinical signs	Measurements
	Altered conscious level	PEF <33% best or predicted
	Exhaustion	SpO_2 <92%
	Arrhythmia	PaO_2 <8 kPa
	Hypotension	'normal' $PaCO_2$ (4.6–6.0 kPa)
	Cyanosis	
	Silent chest	
	Poor respiratory effort	
Near-fatal asthma	Raised $PaCO_2$ and/or requiring mechanical ventilation with raised inflation pressures[555-557]	

Reference: SIGN 158 - British guideline on the management of asthma 2003 Table 15 (Revised November 2024)

Appendix 4

Levels of Severity in Children (1 to 12 Years of Age)

Moderate acute asthma	Able to talk in sentences SpO_2 ≥92% PEF ≥50% best or predicted Heart rate ≤140/min in children aged 1–5 years ≤125/min in children >5 years Respiratory rate ≤40/min in children aged 1–5 years ≤30/min in children >5 years	
Acute severe asthma	Can't complete sentences in one breath or too breathless to talk or feed SpO_2 <92% PEF 33–50% best or predicted Heart rate >140/min in children aged 1–5 years >125/min in children >5 years Respiratory rate >40/min in children aged 1–5 years >30/min in children >5 years	
Life-threatening asthma	Any one of the following in a child with severe asthma:	
	Clinical signs	Measurements
	Exhaustion	PEF <33% best or predicted
	Hypotension	SpO_2 <92%
	Cyanosis	
	Silent chest	
	Poor respiratory effort	
	Confusion	

Reference: SIGN 158 - British guideline on the management of asthma 2003 Table 17 (Revised November 2024)