

ASTHMA MANAGEMENT - STRETCHING INHALED SALBUTAMOL PRACTICE GUIDELINE[®]

DOCUMENT SUMMARY/KEY POINTS

The following guidelines are for Registered Nurses (RNs) caring for children with asthma who have been assessed to stretch inhaled salbutamol.

- The asthma clinical guidelines must be followed in the prescription and administration of inhaled salbutamol
- The frequency of inhaled salbutamol may only be adjusted by a Medical Officer or Nurse Practitioner

A Registered Nurse with 12 months paediatric experience who has completed all aspects of respiratory assessment and or/attended a recognised asthma course if required and is deemed competent by one of the following: Clinical Nurse Educator, Nurse Practitioner or Clinical Nurse Consultant can safely stretch salbutamol.

Information for Asthma Management:

eMM quickstart guideline

- <https://learning.schn.health.nsw.gov.au/asthma-action-plan-asthma-stretching-nurse>
- <https://learning.schn.health.nsw.gov.au/medication-frequencies>
- <https://learning.schn.health.nsw.gov.au/asthma-management-powerplan>

This document reflects what is currently regarded as safe practice. However, as in any clinical situation, there may be factors which cannot be covered by a single set of guidelines. This document does not replace the need for the application of clinical judgement to each individual presentation.

Approved by:	SCHN Policy, Procedure and Guideline Committee	
Date Effective:	1 st July 2020	Review Period: 3 years
Team Leader:	Clinical Nurse Consultant	Area/Dept: Respiratory Medicine

CHANGE SUMMARY

- Review of this practice guideline with minor changes to wording
- Registered Nurses (RN) with 12 **months paediatric experience or more** and who have completed all aspects of respiratory assessment and or/attended a recognised asthma course if required are able to stretch patients prescribed inhaled salbutamol.
- Respiratory assessment to be performed prior to the next scheduled dose of salbutamol.
- 23/6/20: Minor review. Clarifying *Indications* and *Nil Improvement* sections.

READ ACKNOWLEDGEMENT

- CHW Training/Assessment Required for Registered Nurses to stretch salbutamol by meeting the performance criteria in the clinical respiratory assessment tool.
- AT SCH the competency of the RN to stretch salbutamol is assessed by the Clinical Nurse Educator.
- All staff who administer stretched inhaled salbutamol should read and acknowledge this document.

This document reflects what is currently regarded as safe practice. However, as in any clinical situation, there may be factors which cannot be covered by a single set of guidelines. This document does not replace the need for the application of clinical judgement to each individual presentation.

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TABLE OF CONTENTS

1	Introduction	4
1.1	Purpose/Scope	4
1.2	Responsibilities.....	4
2	Prescription	4
3	Indications	4
3.1	Improvement.....	4
3.2	Nil improvement.....	5
3.3	The sleeping child.....	5
4	Documentation	5
5	References	5
	Appendix 1 Respiratory Assessment and Stretching of Inhaled Salbutamol	6
	Appendix 2 Signs & Symptoms of Acute Severity	7

1 Introduction

1.1 Purpose/Scope

The purpose of this guideline is to ensure that the frequency of administration of prescribed salbutamol promotes a timely, safe and appropriate management of patients in respiratory distress. Weaning or stretching salbutamol is where the RN performs a full respiratory assessment to determine if salbutamol can be given less frequently. Only Registered Nurses (RNs) with at least 12 months paediatric experience, who have completed all aspects of respiratory assessment (as indicated by the Clinical Nurse Educator) and or/attended a recognised asthma course are able to stretch prescribed inhaled salbutamol.

1.2 Responsibilities

Managers are responsible for ensuring that registered nurses who undertake this practice are provided with the appropriate knowledge and training.

Registered Nurses are responsible for ensuring they are professionally accountable and work within their own scope of practice

2 Prescription

Salbutamol can only be prescribed by a Medical Officer and/or Nurse Practitioner. The order must be prescribed as per the [Medication Handling in NSW Health Public Health Facilities Policy](#) in the patient's Electronic Medication Management record (eMM) or on the Paediatric National Inpatient Medication Chart ((PNIMC)

The order must clearly state the medication, dose and frequency, for example: *"6 puffs of salbutamol via spacer every 1 – 3 hours as per the stretching inhaled salbutamol guideline"*

For further information on doses refer to [Acute Asthma Management Guideline](#)

3 Indications

RNs can stretch inhaled salbutamol only after the child has reached hourly salbutamol. Prior to the administration of each dose of inhaled salbutamol the child must have a Respiratory Assessment. (See Appendix 1)

3.1 Improvement

If the respiratory assessment indicates a level of improvement, then the frequency of the inhaled salbutamol may be stretched as deemed appropriate by the clinical and respiratory assessment by no more than 1 hourly interval at a time, for example 1-2 hours, 2-3 hours, 3-4 hours. The exception to this would be if the Medical Officer or Nurse Practitioner has documented in the clinical progress notes that the child's salbutamol is not be stretched until next review.

3.2 Nil improvement

If both the respiratory assessment and Between the Flags assessment indicate little or no improvement, then the child should have a medical review. The administration of salbutamol should be continued at the same dose and frequency until the medical review is completed.

If the patient is noted to have a respiratory deterioration and/or their observations are documented in either the blue, yellow or red zone on the BTF care must be escalated as per the **Clinical Emergency Response (CERS) protocol**. For more information refer to the [Between the Flags- Clinical Emergency Response System](#) - SCHN Procedure.

3.3 The sleeping child

A respiratory assessment must be attended to regardless of the frequency of the inhaled salbutamol even if the child is sleeping. If the frequency of the inhaled salbutamol is required every 3-4 hours **AND** the:

- Child has been asleep for 3 hours or longer
- AND the respiratory assessment still indicates no worsening of respiratory distress
- AND the child is in the white zone of the SPOC, a Medical Officer and/or Nurse Practitioner should be asked to review the child.
- This is to determine if the child's frequency of inhaled salbutamol should remain at every 3- 4 hours and or stretched to 4 hours and beyond.

4 Documentation

Documentation of the respiratory assessment and clinical decision making process should include:

- Any changes including improvements or deterioration in respiratory assessment, frequency of the inhaled salbutamol, delivery device- spacer with or without a mask and or nebuliser and if there is any oxygen requirements.
- What action was taken i.e.: as result of stretching and or not stretching the inhaled salbutamol.
- If any education on asthma has been provided to the family for example: parent/s and child's technique with spacer or appropriate inhaled delivery device.

5 References

1. [Asthma- Acute Management](#) Practice Guideline
2. National Asthma Council, Australian Asthma Handbook 2019 V2.0 <http://www.astmahandbook.org.au/>
3. NSW Health Policy Directive 'Recognition and Management of Patients Who Are Deteriorating' ([PD2020_015](#))

Appendix 1 Respiratory Assessment and Stretching of Inhaled Salbutamol

Assessment	Indications for Stretching Inhaled Salbutamol
Work of breathing activity level/ level of distress	<ul style="list-style-type: none"> • Decrease effort of breathing • Increase in activity level
Respiratory rate	<ul style="list-style-type: none"> • Look for increase or decrease in respiratory rate
Heart rate	<ul style="list-style-type: none"> • Decrease in heart rate Note: Salbutamol does <i>increase</i> heart rate
Signs of Respiratory Distress	<ul style="list-style-type: none"> • Reduction in use of accessory muscles, subcostal/intercostal recession, tracheal tug, and nasal flaring
Speech	<ul style="list-style-type: none"> • Able to speak in sentences
Auscultation – air entry, wheeze	<ul style="list-style-type: none"> • Increase in air entry – equal, improvement, reduction • Note the intensity of the wheeze – variable, moderate, loud, absent. • Note the reduction in wheeze, however may not disappear for some time <p><i>Comments:</i> The intensity of the wheeze may not indicate that it is safe to stretch. The absence of wheeze and reduced air entry (above) would indicate deterioration.</p>
Cough	<ul style="list-style-type: none"> • Listening for a reduction, change in character of cough
Oxygen saturation	<ul style="list-style-type: none"> • Decrease in oxygen requirement • Oxygen saturations above 92%

Appendix 2 Signs & Symptoms of Acute Severity

PRESENTATION	MILD	MODERATE	SEVERE & LIFE THREATENING
Altered consciousness	No	No	Agitated ***Life threatening- confused, drowsy
Physical exhaustion	No	No	Yes
Talks in...	Sentences	Phrases	Words
Accessory muscle use	Normal	Mild (Blue Zone)	Moderate (Yellow Zone) ***Life threatening- severe (Red Zone)
Wheeze intensity	Variable	Moderate - loud	Often quiet *** Life threatening- silent chest
Pulse rate	Within normal range for age (White/ Blue Zone)	Tachycardia (Blue/Yellow Zone)	Marked tachycardia (Red Zone) ***Life threatening- Marked tachycardia or bradycardia
Central cyanosis*	Absent	Absent	Likely to be present
Oximetry on presentation (SaO ₂)	>95% (White/ Yellow Zone)	90-95% (Yellow Zone)	<90% (Red Zone)

* The signs of central cyanosis include blue lips and mouth mucosa

*** Life Threatening: The child should be assigned to the most severe grade in which any feature occurs. If the child has received treatment prior to arrival, manage as more severe than the clinical signs indicate. Note: colours refer to SPOC