

# ASTHMA MANAGEMENT - STRETCHING INHALED SALBUTAMOL - SCHN

## PRACTICE GUIDELINE<sup>®</sup>

### DOCUMENT SUMMARY/KEY POINTS

The following guidelines are for Registered Nurses (RNs) caring for children with asthma who have either been assessed to stretch inhaled salbutamol or as a guide for other nurses on the guidelines for stretching.

- The asthma clinical guidelines must be followed in the prescription and administration of inhaled salbutamol
- The frequency of the 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, Nursing Unit Manager

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.

<b>Approved by:</b>	SCHN Policy, Procedure and Guideline Committee	
<b>Date Effective:</b>	1 <sup>st</sup> March 2017	<b>Review Period:</b> 3 years
<b>Team Leader:</b>	CNC	<b>Area/Dept:</b> Respiratory Medicine

## CHANGE SUMMARY

- Review of this practice guideline with minor changes to wording
- Changes from Australian Asthma Handbook 2015 in regards to the use of age instead of weight for bronchodilator doses and refer to the relevant facility Acute Asthma Management Guideline ([Children's Hospital at Westmead](#) and [Sydney Children's Hospital – Randwick](#))

## READ ACKNOWLEDGEMENT

- CHW Training/Assessment Required for Registered Nurses to stretch salbutamol by meeting the performance criteria in the clinical assessment tool
- All staff who administer stretched inhaled salbutamol should read and acknowledge this document

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## Inhaled Salbutamol Order and Respiratory Assessment

- Salbutamol can only be prescribed by Medical Officer and or Nurse Practitioner who can prescribe Salbutamol. The eMM or written medication order must clearly state the medication, dose and frequency. For example 6 puffs of Salbutamol via spacer every 1 – 3 hours and to stretched by an accredited RN. Salbutamol doses are now based on age as vs. weight refer to [Acute Asthma Management Guideline](#)
  - Refer to Medication Handling in NSW Public Hospitals  
<http://chw.schn.health.nsw.gov.au/o/documents/policies/policies/2014-9027.pdf>
- RNs can stretch the inhaled Salbutamol when the child has reached hourly Salbutamol.
- Prior to the administration of each dose of inhaled Salbutamol, the child must have a Respiratory Assessment. The minimum respiratory assessment attended to is hourly, regardless of when inhaled Salbutamol is due.
- 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 but by no more than 1 hourly intervals at time for example 1-2 hours, 2-3 hours, 3-4 hours. The exception to this would be if the Medical Specialist or Nurse Practitioner has documented in the clinical progress notes that the child's Salbutamol is not be stretched until next review.
- If the respiratory assessment indicates no and or little improvement then inhaled Salbutamol administration should be continued at the same dose and frequency with medical review based on Standard Paediatric Observation Chart (SPOC).
- If the respiratory assessment indicates any deterioration see [appendix 1](#). The Medical Officer needs to be notified of the deterioration so that the frequency of Salbutamol can be altered. For further information on asthma assessment see [appendix 2](#)

### 1.1 When the child is sleeping

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 or is in the white zone of the SPOC, a Medical Officer and or Nurse Practitioner should be asked to review the child 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.
- At any stage if the child is noted to have respiratory deterioration to call for a **Clinical Review or Rapid Response when observations fall into the yellow or red zones of the SPOC.**

## Documentation in Clinical Notes

The outcome of the respiratory assessment and clinical decision making process:

- Note any changes including improvements or deterioration in respiratory assessment, frequency of the inhaled Salbutamol, delivery device- spacer and or nebuliser and if there is any oxygen requirements.
- What action was taken as result of stretching and or not stretching the inhaled Salbutamol.
- Education on asthma that has been provided to the family for example: parent/s and child's technique with spacer or appropriate inhaled delivery device.

## References

- Practice Guideline CHW & SCH Asthma- Acute Management 2016
- National Asthma Council, Australian Asthma Handbook 2016 v 1.2  
<http://www.astmahandbook.org.au/>

Please also refer to the Accreditation and Clinical Assessment tool (in 'Assessment Tool' tab on document page in ePolicy)

## Appendix 1 Respiratory Assessment and Stretching Inhaled Salbutamol

Assessment	Indications for Stretching Inhaled Salbutamol
Work of breathing activity level/ level of distress	<ul style="list-style-type: none"> <li>• Decrease effort of breathing</li> <li>• Increase in activity level</li> </ul>
Respiratory rate	<ul style="list-style-type: none"> <li>• Look for increase or decrease in respiratory rate</li> </ul>
Heart rate	<ul style="list-style-type: none"> <li>• Decrease in heart rate <b>Note:</b> Salbutamol does <i>increase</i> heart rate</li> </ul>
Signs of Respiratory Distress	<ul style="list-style-type: none"> <li>• Reduction in use of accessory muscles, subcostal/intercostal recession, tracheal tug, and nasal flaring</li> </ul>
Speech	<ul style="list-style-type: none"> <li>• Able to speak in sentences</li> </ul>
Auscultation – air entry, wheeze	<ul style="list-style-type: none"> <li>• Increase in air entry – equal, improvement, reduction</li> <li>• Note the intensity of the wheeze – variable, moderate, loud, absent.</li> <li>• Note the reduction in wheeze, however may not disappear for some time</li> </ul> <p><i>Comments:</i> The intensity of the wheeze may not indicate that it is safe to stretch. The absent wheeze and reduced air entry (above) would indicate deterioration.</p>
Cough	<ul style="list-style-type: none"> <li>• Listening for a reduction, change in character of cough</li> </ul>
Oxygen saturation	<ul style="list-style-type: none"> <li>• Decrease or increase in oxygen requirement</li> <li>• Oxygen saturations above 90%</li> </ul>

## Appendix 2 Signs & Symptoms 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 <sub>2</sub> )	>95% ( White/ Yellow Zone)	90-95% (Yellow Zone)	<90% (Red Zone)

\*\*\* **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**