



### ASTHMA EDUCATION OF CHILDREN AND FAMILIES IN JHCH

Sites where Local Guideline and Procedure	JHCH Wards H1, J1, J2
applies	
This Local Guideline and Procedure applies to:	
1. Adults	No
2. Children up to 16 years	Yes
3. Neonates – less than 29 day	No
Target audience	Nurses, physicians, residents, medical officers, registrars,
	Wards H1, J1, J2A, J2 Day stay
Description:	Children admitted to JHCH with asthma

Hyperlink to Guideline

Keywords	Asthma, Education, Children, Self-Management	
Document registration number	JHCH 6.1	
Replaces existing document?	Yes	
Registration number and dates of documents	superseded JHCH 6.1 December 2017	
Related Legislation, Australian Sta	andard, NSW Ministry of Health Policy Directive or Guideline, National	
Safety and Quality Health Service	Standard (NSQHSS) and/or other, HNE Health Document, Professional	
Guideline, Code of Practice or Eth	ics:	
National Asthma Council of Australia	<u>. 2019. Australian Asthma Handbook</u>	
Local Guideline and Procedure	This document reflects what is currently regarded as safe and appropriate	
note	practice. The guideline section does not replace the need for the application	
	of clinical judgment in respect to each individual patient but the procedure(s)	
	requires mandatory compliance. If staff believe that the procedure(s) should	
	not apply in a particular clinical situation they must seek advice from their	
	unit manager/delegate and document the variance in the patient's health	
	record	
Position responsible for and	JHCH Clinical Quality and Patient Care Committee	
document authorised by		
Contact person	Bernadette Goddard, Paediatric Asthma CNC	
Contact details	Bernadette.Goddard@health.nsw.gov.au	
Date authorised	18 <sup>th</sup> December 2020	
This document contains advice	Yes, Approval gained from JHH Quality Use of Medicines Committee on 10 <sup>th</sup>	
on therapeutics	September 2020	
Issue date	December 2020	
Review date	December 2023	

#### TABLE OF CONTENTS

RISK STATEMENT	3
GLOSSARY	3
GUIDELINE	3
OUTCOMES	3
INTRODUCTION	3
REFERRAL TO THE ASTHMA EDUCATION SERVICE	4
EDUCATION RESOURCES FOR THE PATIENT AND FAMILY	4
What is asthma?	5
Preventing asthma	5
STAGE 1 PREVENTER USE: Regular daily medication	6
STAGE 2: SYMPTOM MANAGEMENT: When the child is unwell	7
STAGE 3: EMERGENCY MANAGEMENT: If Symptoms get worse i.e. If Needing Reliever	
Medication	8
HOW TO USE A SPACER DEVICE	8
APPENDIX 1	.10
APPENDIX 2	.11
APPENDIX 3: ASTHMA ACTION PLAN – 6 puffs of Salbutamol	
APPENDIX 3: ASTHMA ACTION PLAN – 12 puffs of Salbutamol	.13
APPENDIX 4: ASTHMA TREATMENT AFTER GOING HOME FROM HOSPITAL PLAN – 6 puffs of	
Salbutamol	.14
APPENDIX 4: ASTHMA TREATMENT AFTER GOING HOME FROM HOSPITAL PLAN – 12 puffs of	
Salbutamol	.15
IMPLEMENTATION AND MONITORING COMPLIANCE	.16
REFERENCES	.16
AUTHOR	.16
USEFUL LINKS	.16
FEEDBACK	.16
CONSULTATION	.17

Note: Over time, links in this document may cease working. Where this occurs, please source the document in the PPG Directory at: <u>http://ppg.hne.health.nsw.gov.au/</u>

#### **RISK STATEMENT**

This clinical guideline has been developed to provide direction to staff and to ensure that the risks of harm to patients and staff associated with the education of parents and children diagnosed with asthma are minimised.

Any unplanned event resulting in, or with the potential for, injury, damage or other loss to patients/staff/visitors as a result of this guideline must be reported through the NSW Health Incident Management system – ims+, in accordance with NSW Health Policy PD2020\_020. This would include any unintended injury that results in disability, death or prolonged hospital stay **Risk Category:** Clinical Care and Patient Safety

#### GLOSSARY

Acronym or Term	Definition
AAP	Asthma Action Plan
AEC	Asthma Education Clinic
CNC	Clinical Nurse Consultant
JHCH	John Hunter Children's Hospital
POPD	Paediatric Outpatient Department

#### GUIDELINE

This Guideline does not replace the need for the application of clinical judgment in respect to each individual patient.

In this document the term child will be used for all ages in the paediatric population, infants to adolescents.

#### OUTCOMES

To ensure that asthma education and information is consistently provided to all patients with asthma admitted to the John Hunter Children's Hospital and their families.

Provide health professionals with information and skills to become effective patient educators and enable health promotion.

#### INTRODUCTION

Effective health education is fundamental to achieving successful self-management of asthma for the child and family. Admission to hospital is an opportunity for children and parents to gain knowledge and practical skills for ongoing asthma management.

Asthma education is the responsibility of all health professionals and should involve medical and nursing staff on the ward. Not all children with asthma are able to be seen by the paediatric asthma

clinical nurse consultant (CNC). Some complex patients and their families may need to be seen by the paediatric asthma CNC or referred to the asthma education clinic.

#### **REFERRAL TO THE ASTHMA EDUCATION SERVICE**

If the child and family need to be seen by the paediatric asthma CNC, an appointment is to be made to the asthma education clinic (AEC) in the paediatric outpatient department (POPD).

If the referral is outside business hours, the family is to be given a clinic information flyer containing the asthma education clinic details and asked to book their appointment (see Appendix 1). This flyer is kept in the asthma folder in the ward.

If an appointment cannot be made by staff or parent/patient, a referral is to be made to the paediatric asthma CNC for follow up. Referral forms are kept in the asthma folder in the ward (see Appendix 2).

#### EDUCATION RESOURCES FOR THE PATIENT AND FAMILY

The asthma resource kit is to be given to families on admission. The asthma resource kit is kept in Ward H1 handover room or can be downloaded from the HNEkidshealth website under Factsheets <a href="http://www.hnekidshealth.nsw.gov.au/site/content.cfm?page\_id=713766&current\_category\_code=16117">http://www.hnekidshealth.nsw.gov.au/site/content.cfm?page\_id=713766&current\_category\_code=16117</a>

All patients with asthma and their families must be given an Asthma Action Plan (see Appendix 3), and an Asthma Treatment after Going Home from Hospital Plan (see Appendix 4) and discharge summary prior to discharge.

The child is **not to be discharged unless their or their carer's inhaler technique is assessed** as competent by the discharging nurse or doctor.

Prior to discharge, the Asthma Action Plan and an Asthma Treatment after Going Home from Hospital Plan must be discussed with the patient and family by either the discharging doctor or nurse.

All patients are encouraged to see their local general practitioner following an acute admission to hospital with asthma.

All families are to receive the paediatric asthma CNC's business card, which is located in the asthma folder, with instructions to phone the paediatric asthma CNC with any questions once discharged.

An asthma education clinic information flyer should be given to all families in case they wish to make an appointment (see Appendix 1).

Advise parents to seek further medical attention should their child's condition deteriorate such that they were requiring their maximum dose of salbutamol less than 3<sup>rd</sup> hourly.

#### CHECKLIST FOR DISCHARGE PAPERWORK

- Asthma resource kit
- Asthma action plan

- Asthma treatment after going home from hospital plan
- Discharge summary
- Paediatric Asthma CNC's business card
- Asthma education clinic information flyer

#### **ASTHMA EDUCATION**

When educating the child and family in self-management, there are three areas that need to be addressed:

- Description of asthma
- How to prevent asthma
- How to manage exacerbations

#### WHAT IS ASTHMA?

Asthma is obstruction of the airways which occurs from:

- Muscle contraction
- Inflammation
- Mucous formation

These 3 mechanisms result in asthma symptoms:

- Difficulty in breathing
- Wheeze
- Cough
- Recession
- See-saw breathing
- Tracheal tug
- Talking in short sentences or words
- Anxiety
- Pallor and sweating

#### **PREVENTING ASTHMA**

Triggers can cause muscle contraction and inflammation which result in asthma symptoms. Discuss with the child and parent the triggers that cause their child's asthma and strategies to avoid these triggers. Direct the child and parent to the page 'What can trigger asthma?' in the children's asthma resource pack for parents and carers<sup>1</sup>.

Preventers may be prescribed when children need to use their reliever medicine frequently for control of asthma symptoms (generally on more than 2 days per week), despite effective management of triggers and good device technique. Unlike reliever medicine, which is taken when symptoms are present or prior to exercise, **preventer medicine is taken on a regular daily basis.** Preventer medicine helps to control underlying airway inflammation resulting in the airways being less sensitive to trigger factors, as well as decrease the inflammation during an asthma flare-up<sup>1</sup>.

#### HOW TO MANAGE EXACERBATIONS

At the time of discharge, the child and family will receive an Asthma Action Plan (see Appendix 3) and an Asthma Treatment after Going Home from Hospital Plan (see Appendix 4). The Asthma Treatment after Going Home from Hospital Plan has specific instructions to follow for 5 days after discharge and provides a transition to the child's asthma action plan. The AAP is a tool to aid the family with the ongoing self-management of asthma symptoms<sup>1</sup>.

The child and family will receive an Asthma Treatment after Going Home from Hospital Plan and AAP with either a 6-puff or a 12-puff dose of salbutamol (blue puffer). The plan with the dosage of 6 puffs of salbutamol is for children under 6 years of age and the plan with 12 puffs of salbutamol is for children 6 years or over.

#### EXPLAINING THE ASTHMA TREATMENT AFTER GOING HOME FROM HOSPITAL PLAN

When discussing the Asthma Treatment after Going Home from Hospital Plan (see Appendix 4) with a child and parent you need to highlight a number of issues:

"As your child has needed regular salbutamol (blue puffer) while in hospital you need to reduce it slowly over the next 5 days"

"If your child's symptoms worsen, go back one day on the plan"

"You do not need to wake your child at night if settled and sleeping"

"You will need to follow up with your GP once you have completed this plan and the symptoms resolve" "Once you have completed this short-term plan follow your regular AAP"

#### EXPLAINING THE ASTHMA ACTION PLAN (AAP)

Every child and family is to be given an AAP on discharge as it is a tool to aid the family with selfmanagement. It includes baseline medications that the child may need to take daily to prevent asthma and a plan for managing flare-ups.

When explaining the AAP you must review the child's and parent's spacer techniques.

The plan identifies 3 stages of asthma self-management (see AAP in Appendix 3).

When explaining their AAP to the family it is best to divide your discussion into 3 parts for ease of delivery:

- Regular daily medication
- When the child is unwell
- If symptoms get worse i.e. If needing reliever medication 3<sup>rd</sup> to 4<sup>th</sup> hourly or more frequently than 3<sup>rd</sup> hourly

#### STAGE 1 PREVENTER USE: REGULAR DAILY MEDICATION

This is usually the preventer medication and nasal spray for allergic rhinitis if required.

Preventer medication is used to reduce the risk of an asthma attack by decreasing airway inflammation.

To be effective, preventers **need to be taken every day**, and to be stopped only on medical advice even if symptoms are not present. It is important to stress that this **medication is not to be missed**.

A preventer may take up to 2 to 3 weeks before the medication starts working.

If the child is taking a preventer that contains an inhaled corticosteroid such as Flixotide or Seretide, recommend that the **child rinses their mouth with water**, spits out and/or cleans their teeth after taking their inhaled corticosteroid to prevent the possible side effect of thrush. The child does not need to rinse their mouth if their preventer is a non-steroidal montelukast chewable tablet (Singulair).

Discuss with parents the dose and frequency of preventer medication.

# Explain and demonstrate shaking the metered dose inhaler for 5 seconds before actuating the puffer. Take 1 puff from canister at a time then take 4 breaths. Shake the puffer between each actuation.

Discuss strategies to enable adherence to preventer medication, for example:

- If the child cleans their teeth twice a day, keep the preventer next to their toothbrush
- Set a reminder on their phone
- Keep the preventer on the meal table to take prior to breakfast and dinner

# You need to emphasise that children cannot be responsible for taking their medication without parental supervision.

#### STAGE 2: SYMPTOM MANAGEMENT: WHEN THE CHILD IS UNWELL

#### If a cold, runny nose or sore throat develops:

Explain that this is before any sign of asthma i.e. coughing, wheezing or shortness of breath

Commence taking the prescribed amount of salbutamol or blue (reliever) puffer via a spacer every morning and every night until the symptoms pass. Emphasise they must have 1 puff from canister at a time then take 4 breaths.

Use the salbutamol before any asthma symptoms have developed to help support the child throughout the cold.

#### If a cough or wheeze develops:

The child can have the prescribed amount of puffs of salbutamol or blue (reliever) puffer via a spacer documented on the plan. Again, emphasise they must have 1 puff from canister at a time then take 4 breaths.

If breathlessness, difficulty in breathing, muscles sucking in around rib cage, throat or chest: Breathlessness may be accompanied by wheezing and persistent coughing.

Discuss with parents how to identify signs of respiratory distress in their child. That is, recession, seesaw breathing, tracheal tug, talking in short sentences or words, anxiety, pallor and sweating. If the child is short of breath, direct parent to give the child the prescribed amount of puffs documented on their plan, either 6 or 12 puffs of salbutamol or blue (reliever) puffer via a spacer 3 to 4 hourly

### STAGE 3: EMERGENCY MANAGEMENT: IF SYMPTOMS GET WORSE I.E. IF NEEDING RELIEVER MEDICATION

#### If needing reliever medication 3<sup>rd</sup> to 4<sup>th</sup> hourly

If the child is becoming breathless give the child the prescribed amount of puffs every 3 or 4 hours; either 6 or 12 puffs of salbutamol or blue puffer via a spacer.

Emphasise to the parents, if the child is **well** while on between 3<sup>rd</sup> and 4<sup>th</sup> hourly salbutamol they can remain at home but they need to consult their doctor if not improving.

#### If needing reliever medication less than 3rd hourly

It is very important to stress that they need to seek medical attention if the child needs salbutamol more frequently than 3<sup>rd</sup> hourly.

#### SEE A DOCTOR IMMEDIATELY OR CALL AN AMBULANCE

Reiterate how to identify signs of respiratory distress in their child. That is, recession, see-saw breathing, tracheal tug, talking in short sentences or words, anxiety, pallor and sweating.

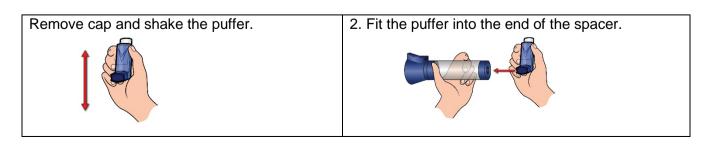
Again, emphasise to have 1 puff from canister at a time then take 4 breaths. Shake the canister between each puff

#### **EVERY CHILD AND FAMILY IS TO HAVE THEIR SPACER TECHNIQUE ASSESSED THROUGHOUT THE ADMISSION AND PRIOR TO DISCHARGE. ALLOW THE CARER TO ADMINISTER THE PUFFERS UNDER SUPERVISION.** A mask may be used with a spacer in hospital for older children during the night to avoid disturbing their sleep. In the home situation, children who are capable are encouraged to use the mouthpiece of the spacer<sup>1</sup>.

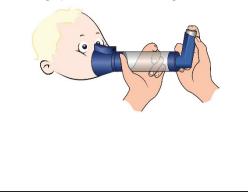
#### HOW TO USE A SPACER DEVICE

A spacer device is a holding chamber that helps children with asthma to use their aerosol inhalers or metered dose inhalers (puffers) effectively. It is highly recommended that spacers be used by all children who require a puffer as this will allow more medication to be delivered directly to the airways<sup>1</sup>.

A small volume spacer with a mask is recommended for children aged less than 4 years. View video demonstration here: <u>https://www.rch.org.au/kidsinfo/fact\_sheets/asthma-videos/#how-to-use-a-puffer-with-a-spacer-and-mask</u>.



3. Gently place the attached facemask over the mouth and nose of the child. Ensure there are no gaps around the edges of the mask.



4. Release one puff of medicine into the spacer by pressing down on the top of the puffer. Watch the child breathe normally in and out 4 to 6 times before removing the mask.

If more than one puff (dose) is required repeat step 4, remembering to shake puffer before each dose.



# A small or large volume spacer WITHOUT a mask is recommended for children aged over 4 years.

View video demonstration here: <u>https://www.rch.org.au/kidsinfo/fact\_sheets/asthma-videos/#how-to-use-a-puffer-with-a-spacer</u>.

# \*The diagram below shows a large volume spacer however a small volume spacer can also be used.

Remove cap and shake the puffer. Insert puffer into the spacer as shown.	
Place mouthpiece between the teeth and close lips around it. Release 1 puff of medication into the spacer by pressing down on the top of the puffer.	
3. Breathe in and out normally through the mouth 4 times.	
If more than one puff is required, repeat steps 2 and 3 remembering to shake puffer before each dose	A C C C C C C C C C C C C C C C C C C C

Illustrations courtesy of Medical Illustrations Unit. UNSW Faculty of Medicine and Teaching Hospital, Randwick. NSW.



# **PAEDIATRIC ASTHMA CLINIC**

# Located at John Hunter Children's Hospital Paediatric Outpatient Department

To make an appointment with the Paediatric Asthma Educator Phone **4921 3750, option 5** 30-minute appointments and no referral needed

Monday 1-4 pm

Paediatric Outpatient Department John Hunter Children's Hospital Lookout Rd, New Lambton Heights

Your appointment is with:

Bernadette Goddard Paediatric Asthma Clinical Nurse Consultant Phone 4921 4792

Appointment time:....

Appointment date:....



# REFERRAL TO PAEDIATRIC ASTHMA EDUCATOR

	Patient Label
Date referred: _	
Referred by:	
	pintment been booked?
Reason for refer	ral

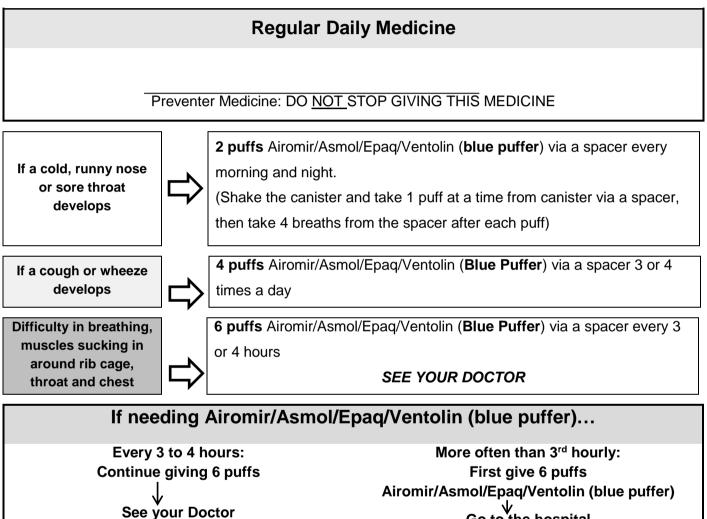
# Please send referral to Bernadette Goddard, Ward H1

#### **APPENDIX 3: ASTHMA ACTION PLAN – 6 PUFFS OF SALBUTAMOL**



# **ASTHMA ACTION PLAN CHILDREN LESS THAN 6 YEARS**

FAMILY NAME		MRN	
GIVEN NAMES			FEMALE
D.O.B//	M.O.		
ADDRESS			
LOCATION			
COMPLETE ALL DETAILS	OR AFFIX P	ATIENT LA	BEL HERE



**Go to the hospital** 

#### Call 000 for an AMBULANCE if you are worried that your child is getting worse

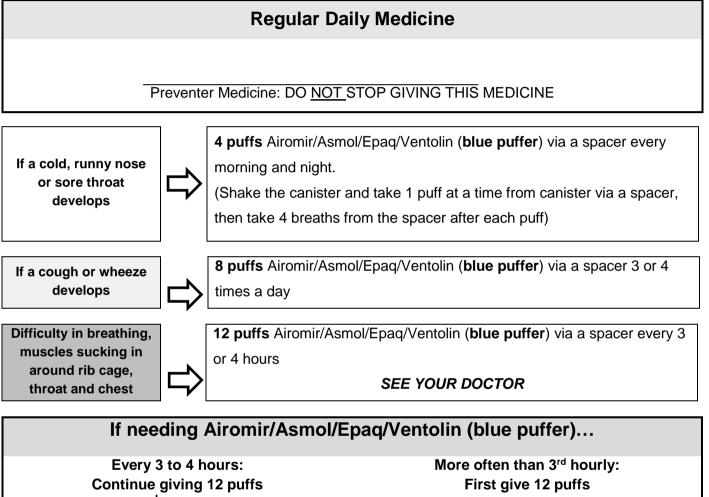
Date	Initial	Signature	Print Name	Designation

#### **APPENDIX 3: ASTHMA ACTION PLAN – 12 PUFFS OF SALBUTAMOL**



# ASTHMA ACTION PLAN CHILDREN 6 YEARS AND OLDER

FAMILY NAME	MRN
GIVEN NAMES	
D.O.B/ M.O.	
ADDRESS	
LOCATION	
COMPLETE ALL DETAILS OR A	FFIX PATIENT LABEL HERE



Continue giving 12 puffs

More often than 3<sup>rd</sup> hourly: First give 12 puffs Airomir/Asmol/Epaq/Ventolin (blue puffer) Go to the hospital

#### Call 000 for an AMBULANCE if you are worried that your child is getting worse

Date	Initial	Signature	Print Name	Designation

# APPENDIX 4: ASTHMA TREATMENT AFTER GOING HOME FROM HOSPITAL PLAN – 6 PUFFS OF SALBUTAMOL



ASTHMA TREATMENT AFTER GOING HOME FROM HOSPITAL

FAMILY NAME		MRN	
GIVEN NAMES			FEMALE
D.O.B//	M.O.		
ADDRESS			
LOCATION			
COMPLETE ALL DETAILS	OR AFFIX P	ATIENT LA	BEL HERE

#### Short-term plan for reducing Airomir/Asmol/Epaq/Ventolin (Reliever; blue puffer) for CHILDREN LESS THAN 6 YEARS OLD

DAY 1: 6 puffs of either Airomir/Asmol/Epaq/Ventolin (blue puffer) every 4 hours

DAY 2: 6 puffs of either Airomir/Asmol/Epaq/Ventolin (blue puffer) every 6 hours

DAY 3: 4 puffs of either Airomir/Asmol/Epaq/Ventolin (blue puffer) every 6 hours

DAY 4: 4 puffs of either Airomir/Asmol/Epaq/Ventolin (blue puffer) every 8 hours

DAY 5: 2 puffs of either Airomir/Asmol/Epaq/Ventolin (blue puffer) twice a day

If your child is settled and sleeping well, do not wake for Airomir/Asmol/Epaq/Ventolin (**blue puffer**) through the night.

If symptoms worsen go back one day.

Review by GP once symptoms resolve.

Follow regular Asthma Action Plan once Airomir/Asmol/Epaq/Ventolin (blue puffer) ceased.

Date	Initial	Signature	Print Name	Designation

# APPENDIX 4: ASTHMA TREATMENT AFTER GOING HOME FROM HOSPITAL PLAN – 12 PUFFS OF SALBUTAMOL



# ASTHMA TREATMENT AFTER GOING HOME FROM HOSPITAL

FAMILY NAME		MRN			
GIVEN NAMES			FEMALE		
D.O.B//	M.O.				
ADDRESS					
LOCATION					
COMPLETE ALL DETAILS OR AFFIX PATIENT LABEL HERE					

#### Short-term plan for reducing Airomir/Asmol/Epaq/Ventolin

(Reliever; blue puffer) for CHILDREN 6 YEARS AND OLDER

DAY 1: 12 puffs of either Airomir/Asmol/Epaq/Ventolin (blue puffer) every 4 hours

DAY 2: 10 puffs of either Airomir/Asmol/Epaq/Ventolin (blue puffer) every 6 hours

DAY 3: 8 puffs of either Airomir/Asmol/Epaq/Ventolin (blue puffer) every 6 hours

DAY 4: 6 puffs of either Airomir/Asmol/Epaq/Ventolin (blue puffer) every 8 hours

DAY 5: 4 puffs of either Airomir/Asmol/Epaq/Ventolin (blue puffer) twice a day

If your child is settled and sleeping well, do not wake for Airomir/Asmol/Epaq/Ventolin (blue puffer) through the night.

If symptoms worsen go back one day.

Review by GP once symptoms resolve.

Follow regular Asthma Action Plan once Airomir/Asmol/Epaq/Ventolin (blue puffer) ceased.

Date	Initial	Signature	Print Name	Designation

#### IMPLEMENTATION AND MONITORING COMPLIANCE

This guideline will be available through HNE LHD PPG directory and HNEKidshealth website.

A copy of the guideline will be sent via work email to all the relevant stakeholders; this includes clinical staff working in paediatric specialty areas.

Policy will be reviewed at least every 3 years or sooner as needed.

Incidents via IMS+ and complaints will be monitored.

#### REFERENCES

- 1. Sydney Children's Hospital Network & John Hunter Children's Hospital. (2018) Children's asthma resource pack for parents and carers.
- NSW Health (2012) Infants and children: Acute Management of Asthma Clinical Practice Guideline, 3rd Ed, PD2012\_56. NSW Ministry of Health North Sydney. <u>https://www1.health.nsw.gov.au/pds/ActivePDSDocuments/PD2012\_056.pdf</u>
- HNE Local Health District Clinical Procedure Spacer technique and patient education HNELHD CP 16\_08. <a href="http://intranet.hne.health.nsw.gov.au/">http://intranet.hne.health.nsw.gov.au/</a> data/assets/pdf\_file/0009/100125/HNELHD\_CP\_16\_08 Spacer Technique Patient Education.pdf

### AUTHOR

Bernadette Goddard, Paediatric Asthma Clinical Nurse Consultant Bernadette.Goddard@health.nsw.gov.au

#### USEFUL LINKS

Children's Asthma Resource Pack for Parents and Carers

http://www.hnekidshealth.nsw.gov.au/site/content.cfm?page\_id=713766&current\_category\_code=16 117

NSW Health (2012) Infants and children: Acute Management of Asthma Clinical Practice Guideline, 3rd Ed,

PD2012\_56. NSW Ministry of Health North Sydney.

https://www1.health.nsw.gov.au/pds/ActivePDSDocuments/PD2012\_056.pdf

HNE Local Health District Clinical Procedure Spacer technique and patient education HNELHD CP 16\_08

http://intranet.hne.health.nsw.gov.au/ data/assets/pdf\_file/0009/100125/HNELHD\_CP\_16\_08\_Spacer\_ Technique\_Patient\_Education.pdf

Turbuhaler procedure see HNE Local Health District Clinical Procedure Turbuhaler® Technique Patient Education HNELHD CP 16\_09

http://intranet.hne.health.nsw.gov.au/\_\_data/assets/pdf\_file/0010/100126/HNELHD\_CP\_16\_09\_Tur buhaler\_Technique\_patient\_education.pdf

Australian Asthma Handbook www.asthmahandbook.org.au/

#### FEEDBACK

Any feedback on this document should be sent to the Contact Officer listed on the front page.

# CONSULTATION

- Linda Cheese, Paediatric Respiratory CNC
- Bruce Whitehead, Paediatric Respiratory Staff Specialist
- JHH Quality Use of Medicines