ASTHMA EDUCATION OF CHILDREN AND FAMILIES IN JHCH

Sites where Local Guideline and Procedure applies
JHCH Wards H1, J1, J2

This Local Guideline and Procedure applies to:
1. Adults: No
2. Children up to 16 years: Yes
3. Neonates – less than 29 days: No

Target audience:
Nurses, physicians, residents, medical officers, registrars, Wards H1, J1, J2A, J2 Day stay

Description:
Children admitted to JHCH with asthma 1, 2, 4 & 9.

Keywords: Asthma, Education, Children, Self-Management

Document registration number: JHCH 6.1

Replaces existing document?: Yes

Registration number and dates of superseded documents: Guideline 6.10, June 2016

Related Legislation, Australian Standard, 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 Ethics:
NSW Health Policy Directive 2012_056 Infants and Children – Acute management of Asthma

Local Guideline and Procedure note:
This document reflects what is currently regarded as safe and appropriate 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 patients’ health record.

Position responsible for and document authorised by:
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Date authorised:

This document contains advice on therapeutics:
Yes

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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.

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 Incident Information Management System and managed in accordance with the Ministry of Health Policy Directive: Incident management PD2007_061. This would include unintended injury that results in disability, death or prolonged hospital stay.

Risk Category: Clinical Care

GLOSSARY

<table>
<thead>
<tr>
<th>Acronym or Term</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>JHCH</td>
<td>John Hunter Children’s Hospital</td>
</tr>
<tr>
<td>CNC</td>
<td>Clinical Nurse Consultant</td>
</tr>
<tr>
<td>AEC</td>
<td>Asthma Education Clinic</td>
</tr>
<tr>
<td>POPD</td>
<td>Paediatric Outpatient Department</td>
</tr>
<tr>
<td>AAP</td>
<td>Asthma Action Plan</td>
</tr>
</tbody>
</table>

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 and families admitted to the John Hunter Children’s Hospital with asthma.

Provide health professionals with information and skills to become an effective patient educator 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


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.

The Asthma Action Plan and an Asthma Treatment after Going Home from Hospital Plan must be discussed with the patient and family prior to discharge 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).

Advice parents to seek further medical attention should their child’s condition deteriorate hence they were requiring their maximum dose of Salbutamol more than 3rd 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 the 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 is short sentences or words
- Anxious
- Pale and sweaty

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.

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 decreasing the inflammation during an asthma flare-up¹.

**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 symptoms¹.

The child and family will receive an Asthma Treatment after Going Home from Hospital Plan and AAP with either 6 puff or 12 puff dose of Salbutamol (blue puffer). The plan with 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) to 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”
“One 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 self-management. 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 and parent’s spacer technique.

The child and family will receive an AAP with either 6 puff or 12 puff dose of Salbutamol (blue puffer). The plan with 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.

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 3rd to 4th hourly or closer than 3rd 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**, even if symptoms are not present and to be stopped only on medical advice. 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 to shake the puffer 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:
- 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 develops, runny nose, sore throat –

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 puffer via a spacer every morning and every night until the cold is over. Emphasise to 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 documented on the plan of Salbutamol or blue puffer via a spacer if coughing. Again emphasise to have 1 puff from canister at a time then take 4 breaths.

**If breathless, difficulty in breathing, muscles sucking in around rib cage, throat and chest** –
Breathlessness may be accompanied with wheezing and persistent coughing.
Discuss with parents how to identify signs of respiratory distress in their child. That is, recession, see saw breathing, tracheal tug, talking is short sentences or words, anxious, pale and sweaty.

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 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…3rd to 4th hourly:
If the child is becoming breathless every 3 or 4 hours give the child the prescribed amount of puffs, either 6 or 12 puffs of Salbutamol or blue puffer via a spacer

Empathise to the parents that if the child is well between 3rd or 4th hourly Salbutamol they can remain at home but to consult their doctor if not improving.

If needing reliever medication…More than 3rd hourly:
It is very important to stress that they seek medical attention if the child needs Salbutamol more frequently than 3rd 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 is short sentences or words, anxious, pale and sweaty.

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.

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.

A small volume spacer with a mask – recommended for children aged less than 4 years
View video demonstration here
Remove cap and shake the puffer.

2. Fit the puffer into the end of the spacer.

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 - recommended for children aged over 4 years

– View video demonstration here

* The below diagram 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 2-3 remembering to shake puffer before each dose

Illustrations courtesy of Medical Illustrations Unit. UNSW Faculty of Medicine and Teaching Hospital, Randwick. NSW.
APPENDIX 1

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
30 minute appointments and no referral needed

Monday 1pm – 4pm

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 49213000, page 5711

Appointment time:.........................

Appointment date:.........................
APPENDIX 2

REFERRAL TO
PAEDIATRIC ASTHMA EDUCATOR

Date referred: ____________________________________________________

Referred by: ______________________________________________________

Has a clinic appointment been booked? _______________________________

Reason for referral _________________________________________________
________________________________________________________________
________________________________________________________________

Please send referral to Bernadette Goddard, Ward H1
APPENDIX 3: ASTHMA ACTION PLAN – 6 PUFFS OF SALBUTAMOL

Regular Daily Medicine

Preventer Medicine: DO NOT STOP GIVING THIS MEDICINE

If a cold develops; runny nose, sore throat

2 puffs Airomir/Asmol/Epaq/Ventolin (Blue Puffer) via a spacer every morning and night.

(Shake the canister and take 1 puff at a time from canister via a spacer, then take 4 breaths from the spacer after each puff)

If a cough or wheeze develops

4 puffs Airomir/Asmol/Epaq/Ventolin (Blue Puffer) via a spacer 3 or 4 times a day

Difficulty in breathing, muscles sucking in around rib cage, throat and chest

6 puffs Airomir/Asmol/Epaq/Ventolin (Blue Puffer) via a spacer every 3 or 4 hours

SEE YOUR DOCTOR

If needing Airomir/Asmol/Epaq/Ventolin (Blue Puffer)…

Every 3 to 4 hours:

Continue giving 6 puffs

See your Doctor

Closer than 3rd hourly:

First give 6 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 3: ASTHMA ACTION PLAN – 12 PUFFS OF SALBUTAMOL

FACILITY………………………………………………….

ASTHMA ACTION PLAN
CHILDREN 6YEARS AND OLDER

Regular Daily Medicine

Preventer Medicine: DO NOT STOP GIVING THIS MEDICINE

If a cold develops; runny nose, sore throat

4 puffs Airomir/Asmol/Epaq/Ventolin (Blue Puffer) via a spacer every morning and night.
(Shake the canister and take 1 puff at a time from canister via a spacer, then take 4 breaths from the spacer after each puff)

If a cough or wheeze develops

8 puffs Airomir/Asmol/Epaq/Ventolin (Blue Puffer) via a spacer 3 or 4 times a day

Difficulty in breathing, muscles sucking in around rib cage, throat and chest

12 puffs Airomir/Asmol/Epaq/Ventolin (Blue Puffer) via a spacer every 3 or 4 hours
SEE YOUR DOCTOR

If needing Airomir/Asmol/Epaq/Ventolin (Blue Puffer)...

Every 3 to 4 hours:
Continue giving 12 puffs
See your Doctor

Closer than 3rd 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
---|---|---|---|---

FACILITY………………………………………………….

ASTHMA ACTION PLAN
CHILDREN 6YEARS AND OLDER

Date Initial Signature Print Name Designation
**Short Term Plan for Reducing Airomir/Asmol/Epaq/Ventolin (Reliever blue puffer) for CHILDREN LESS THAN 6 YEARS OLD**

<table>
<thead>
<tr>
<th>Day</th>
<th>Puffs of Airomir/Asmol/Epaq/Ventolin (Blue Puffer)</th>
<th>Interval</th>
</tr>
</thead>
<tbody>
<tr>
<td>Day 1</td>
<td>6 puffs</td>
<td>every 4 hours</td>
</tr>
<tr>
<td>Day 2</td>
<td>6 puffs</td>
<td>every 6 hours</td>
</tr>
<tr>
<td>Day 3</td>
<td>4 puffs</td>
<td>every 6 hours</td>
</tr>
<tr>
<td>Day 4</td>
<td>4 puffs</td>
<td>every 8 hours</td>
</tr>
<tr>
<td>Day 5</td>
<td>2 puffs</td>
<td>twice a day</td>
</tr>
</tbody>
</table>

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

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**FACILITY**

**ASTHMA TREATMENT AFTER GOING HOME FROM HOSPITAL**

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**FACILITY**

**ASTHMA TREATMENT AFTER GOING HOME FROM HOSPITAL**

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**FACILITY**

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

SHORT TERM PLAN FOR REDUCING AIROMIR/ASMOL/EPAQ/VENTOLIN
(Reliever blue puffer) for CHILDREN 6 YEARS AND OLDER

<table>
<thead>
<tr>
<th>DAY</th>
<th>Puffs</th>
<th>Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>12</td>
<td>every 4 hours</td>
</tr>
<tr>
<td>2</td>
<td>10</td>
<td>every 6 hours</td>
</tr>
<tr>
<td>3</td>
<td>8</td>
<td>every 6 hours</td>
</tr>
<tr>
<td>4</td>
<td>6</td>
<td>every 8 hours</td>
</tr>
<tr>
<td>5</td>
<td>4</td>
<td>twice a day</td>
</tr>
</tbody>
</table>

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
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 IIMS and complaints will be monitored.

REFERENCES

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

AUTHOR

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USEFUL LINKS

Children’s Asthma Resource Pack for Parents and Carers


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

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


FEEDBACK

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

- Margaret Allwood – Nurse Educator JHCH
- Camilla Askie – Clinical Improvement Coordinator
- Leanne Lehle – H1 NUM
- Derek Lowe – H1
- Dr Bruce Whitehead – Respiratory Staff Specialist JHCH

APPROVAL

- CPGAG – 12 June 2017
- JHH QUM – 14 June 2017
- JHCH CQ&PCC – 19th December 2017