Complex Care Hub Manual Section: Asthma

Table of Contents

1  What is Asthma? ................................................................. 2
2  What causes asthma? .......................................................... 2
   2.1  Triggers .......................................................................... 2
3  Signs and Symptoms .......................................................... 2
4  Treatment ............................................................................ 2
   4.1  Relievers ........................................................................ 2
   4.2  Preventers ...................................................................... 3
5  Spacers ................................................................................ 3
   5.1  Large Volume Spacers .................................................... 3
   5.2  Small Volume Spacer ..................................................... 4
6  When to get help ............................................................... 4
7  Asthma action plans ............................................................ 5
   7.1  Four-step action plan ..................................................... 5

Version 4.0  

Date revised January 2017

Next revision date January 2019
1  **What is Asthma?**

Asthma is a common condition caused by the narrowing of the small air passages (breathing tubes/bronchi) in the lungs. The narrowing occurs because the air passages become swollen and inflamed which makes it harder for the air to get through, making it harder to breathe. Asthma affects each child differently is unpredictable.

General changes to the airway during an asthma attack.

- Constriction (tightening) of the smooth muscle of the airway
- The lining of the airway becomes swollen
- Mucus secretion increases

2  **What causes asthma?**

- The cause of asthma is unknown
- Asthma can be genetic and often runs in families
- It can be related to other conditions such as eczema, hay fever and allergies.

2.1  **Triggers**

There are many different things that can trigger the start of an asthma attack. It is not always possible to know when an attack will occur, some common trigger factors are:

- Viral chest Infection (this is the most common trigger)
- Exercise
- Changes in the weather
- Cigarette smoke
- House dust mites
- Pollens
- Pets
- Hayfever
- Aerosols/ perfumes

It is helpful to know what triggers the child’s asthma, so that if possible, they can be avoided.

3  **Signs and Symptoms**

The most common signs of asthma are:

- Cough: Coughing usually happens at night, during the early hours of the morning, when the weather is cool and during exercise.
- Wheeze: Breathing sounds like whistles.
- Breathing problems: Increased work of breathing, easily seen at collar bone, below the ribs and in between the ribs.

4  **Treatment**

Asthma can be well controlled with the right medication in nearly all children. The two types of medication commonly used by children are:

4.1  **Relievers**

Relievers help during an asthma attack by relaxing the alveoli and bronchioles (breathing tubes) making it easier for air to get through. The child must have their reliever medication with them at all times.

Commonly known names of relievers are: Ventolin, Bricanyl, and Respolin.
4.2 Preventers

Preventers are taken every day to stop attacks from happening. Not all children will have a preventer. Commonly known names of preventers are: Singulair, Flixotide, Symbicort, and Pulmicort

Medication is usually delivered by breathing in (inhaling) the medication. Relievers and preventers are usually given (delivered) by ‘puffers’ (inhalers). Some preventers can be in a tablet form.

5 Spacers

Spacers are special devices used to help give the medication (reliever or preventer) to the child. They are used together with the child’s puffer, this is better than using just a puffer as more medication gets to the lungs where it is needed.

Used for children over 6 years, Large Volume Spacers are not commonly used anymore.

5.1 Large Volume Spacers

5.1.1 How to Use the Large Volume Spacer

1. Put together the spacer as shown in the picture
2. Remove the protective cap from the puffer
3. Shake the puffer well and insert it firmly into the end of the spacer.
4. Place the mouth piece of the spacer in the child’s mouth, ensuring that the child seals their lips around it. Hold the spacer level
5. Press the puffer once to release a dose (puff) of medication into the spacer. Do not remove the puffer
6. Get the child to breathe in and out slowly and deeply, 4 or 5 times (do not remove the child’s mouth from the mouth piece in between each breath. There is a 2 way valve system which will prevent any medication from escaping from the chamber)
7. Administer 6-12 puffs for children 6 years and older (or as per the child’s individual asthma action plan)
8. If needed repeat steps 5 to 7
5.2 Small Volume Spacer

(E.g. Aerochamber or Space Chamber)

5.2.1 How to use the small volume spacer

1. Put together the spacer
2. Remove the protective cap from the puffer
3. Shake the puffer well and insert it firmly into the end of the spacer
4. Place the mask over the child’s face, making sure that it covers the mouth and the nose. Try to get a good seal on the skin, so that no air can get in/out. In older children you may wish to use the mouth piece on the spacer rather than the mask
5. Press the puffer once to release a dose (puff) of the medicine in the spacer. Do not remove the puffer
6. Allow the child to breathe in and out 4 or 5 times. This usually means leaving the spacer in position for about 15-20 seconds (do not remove the mask between each breath there is a 2 way valve system which will prevent any medication from escaping the chamber)
7. Administer 2-6 puffs for a child under 6 years or 6-12 puffs for a child over 6 years (or as per the child’s individual asthma action plan).
8. If further puffs are needed, repeat steps 4-7.

5.2.2 How to care for the spacer

- The spacer should be cleaned once a week
- Take the spacer to bits and wash it in warm water containing a little dishwashing liquid
- Do not rinse, and allow too drip dry. Do not rub dry
- Store in a cloth bag (eg. Library bag) and avoid plastic bags

6 When to get help

- If the child has a bad attack or you are worried
- If the child needs their reliever more often than every 3 hours see your GP or local emergency department (Ventolin remains in the body for 3-4 hours therefore if your child is requiring it more frequently they need a medical review)
- If the child needs their reliever more often than every 2 hours go to your local emergency department
- If the reliever isn’t helping
- Wheezing lasts more than 24 hours and is not getting better
- If the child has a very severe attack: Follow the child’s asthma action plan/emergency plan or revert to the four step action plan and call an ambulance
7 Asthma action plans

A child with asthma should have an ‘Asthma action plan’. The plan will tell you how to prevent asthma attacks and how to manage asthma attacks when they happen. The plan should be kept in the care manual. If the child is finding it difficult to breathe, or is unable to talk, or turning blue when coughing, follow the child’s Action Plan or the four-step action plan.

Always give the child their ‘reliever’ medication if they need it or if you are not sure whether they need it or not.

7.1 Four-step action plan

1. Remain calm, comfort the child and sit the child down

2. Immediately shake a blue reliever puffer and give four separate puffs through a spacer. Give one puff at a time and ask the child to take four breaths from the spacer after each puff. Wait four minutes

3. If there is no improvement in the child’s asthma repeat step 2

4. If still no improvement after four minutes, call an ambulance immediately. State that the child is having an asthma attack. Continuously repeat steps 2 and 3 while waiting for the ambulance