

# Roman Road Primary School Asthma and Allergy Policy Reviewed May 2022 To review May 2024

# **Asthma and Allergy**

# Recommendations for Nurseries, Schools and Colleges

Produced in collaboration between Children's Health 0-19 Service (CHS 0-19), London Borough of Newham, Children's Asthma Clinic, East London Foundation Trust with support from WEL CCG.

## Roman Road Primary has adapted this policy

- Adapted with permission from the Paediatric Respiratory and Allergy Departments, Royal London Hospital & Tower Hamlets School Health
- The Whole School Asthma Approach is an initiative designed by CHS 0-19 and ELFT.
- The materials available in this document have been produced by CHS 019 unless otherwise indicated.

#### Version control

Version	Description of Change	Reason for Change	Author	Date
1.0	New document	N/A	Heather Robinson	23/02/2021

#### **Contents**

1. Aim

- 2. Purpose
- 3. Background
- 4. Recognising poorly controlled asthma
- 5. What to do in an emergency
  - 5.1. Recognising an acute asthma attack
  - 5.2. Actions in the event of an asthma attack
- 6. Recognising mild-moderate allergic reactions
- 7. Recognising anaphylaxis
- 8. Asthma and allergy friendly schools and whole school asthma approach
- 9. Asthma and allergy register
- 10. Medications
  - 10.1. Inhalers and spacers
  - 10.2. Spacer technique and care
  - 10.3. Emergency inhalers in schools
  - 10.4. Adrenaline Auto-Injectors (AAIs)
  - 10.5. Emergency Adrenaline Auto-Injectors in Schools
- 11. Individual Health Care Plans (IHCPs)
  - 11.1. Personal Asthma Action Plan (PAAPs)
  - 11.2. Allergy Action Plans
- 12. School environment and triggers
- 13. Emergency evacuations (i.e. fire alarms)
- 14. Exercise and activity
- 15. School trips
- 16. <u>Impact on education</u>
- 17. "Spare" Emergency Salbutamol Inhalers, Spacers and Adrenaline Auto-Injector (AAI) in school
  - 17.2. Who can use the emergency kits?
  - 17.1. Each emergency kit contains
  - 17.3. Maintaining the emergency kit
- 18. Asthma and allergy lead(s) responsibilities
- 19. All Staff Training
- 20. Local contacts
- 21. Appendices

Appendix A: School Asthma Action Plans (Nursery, Primary, Secondary)

Appendix B: Record of administration

Appendix C: Children's Health 0-19 Service Asthma Review Consultation Checklist

Appendix D: Children's Health 0-19 Service Allergy IHCP Consultation Checklist

Appendix E: Recognising signs of an allergic reaction and anaphylaxis poster

Appendix F: Whole School Asthma Checklist

Appendix G: Whole school asthma letter to parent/guardian and consent to use emergency

kits

Appendix H: Asthma and Allergy Register

Appendix I: Monkey Wellbeing Personal Asthma Action Plan (5 years and under)

Appendix J: Asthma UK Personal Asthma Action Plan (6-11 years)

Appendix K: Asthma UK Personal Asthma Action Plan (12 years +)

Appendix L: Spacer and inhaler technique, mask and mouthpiece

Appendix M: Allergy Action Plan with Jext Pen

Appendix N: Allergy Action Plan with EpiPen

Appendix O: Allergy Action Plan without AAI

Appendix P: Letter to pharmacist for spare inhaler

Appendix Q: Letter to pharmacist for spare AAI

Appendix R: Location of emergency kits poster

Appendix S: Emergency kits checklist

- 22. References
- 23. <u>Useful websites</u>
- 24. Locally made teaching films

#### 1. Aim

This document aims to provide nurseries, schools and colleges with recommendations for the care of children and young people (CYP) who have asthma and allergies.

This document can be localised and used in part to supplement existing asthma and allergy policies or adopted in full where no policy previously existed.

Every nursery, school and college should have a policy for supporting pupils with medical conditions (DfE, 2015), due to the prevalence of asthma and allergies in CYP, is it is recommended that there is a standalone asthma policy. It is also a minimum standard of the Whole School Asthma Approach and Asthma Friendly Schools.

For ease, throughout the remainder of this document when the word school(s) refers to all educational provisions (nurseries, schools, sixth forms, pupil referral units and colleges etc.).

#### 2. Purpose

- Manage CYP with asthma and food allergies effectively and safely at school.
- Support the appropriate use of salbutamol inhalers, spacers and AAIs (AAI) in emergencies.
- Reduce school absence and indirectly improve academic performance.
- Empower school staff to identify CYP with poorly controlled asthma.
- Improve asthma and allergy-related communication between education and health services.

#### 3. Background

3.1. In the UK, there are 1.1 million CYP (1 in 11) who are receiving treatment for asthma (Asthma UK, 2021). This equates to 1-3 in every classroom. In the London Borough of Newham, we estimate there to be 6000 CYP receiving treatment for asthma.

3.2. Asthma is a condition that affects the small tubes (airways) that carry air in and out of the lungs. When a person with asthma comes into contact with something that irritates their airways (an asthma trigger), the muscles around the walls of the airways tighten so that the airways become narrower. Secondly, the lining of the airways becomes inflamed and starts to swell. Sometimes, sticky mucus or phlegm builds up, which can further narrow the airways. These reactions make it

difficult to breathe, leading to symptoms of asthma. To treat these symptoms CYP need to take an inhaler (usually Salbutamol, 'the blue pump', 'rescue inhaler', 'reliever') through a spacer (plastic tube with mouthpiece that ensures correct delivery of the medicine to the lungs and reduces side effects).

- 3.3. Wheeze is the high-pitched, whistling sound made by the small airways when they become inflamed.
- 3.4. Viral wheeze is a common condition whereby preschool CYP become wheezy only when they have a cold. Most CYP will grow out of this with age. It does not necessarily mean they will go on to develop asthma.
- 3.5. Acute attacks of both viral wheeze and asthma can be life threatening. Thankfully, the emergency treatment is broadly the same for each condition; similarly, preventative treatment of recurrent viral wheeze mirrors that of asthma.

#### 4. Recognising poorly controlled asthma (see appendix A)

- 4.1. We recognise that some of the most common day-to-day symptoms of asthma are:
  - Dry cough
  - Wheeze (a 'whistle' heard on breathing out)
  - Excessive shortness of breath on exercise or when exposed to a trigger 

    Tight chest
- 4.2. These symptoms are usually responsive to the use of the CYP's Salbutamol inhaler and rest (e.g. stopping exercise).

If the CYP is displaying these symptoms give them the appropriate number of puffs as listed below.

The number of Salbutamol puffs given when a CYP is displaying common symptoms of asthma are presented as a range. This means to start with the lowest number of puffs in the range and add further puff as the condition dictates up to the upper limit, which is age dependant.

- Nursery age, 1-2 puffs
- Primary age, 2-5 puffs
- Secondary age and above, 5-10 puffs
- 4.3. CYP do not need to be sent home from school or urgent medical attention sought if their symptoms improve after taking their (or school's emergency) salbutamol inhaler (DfE, 2015).
- 4.4. However, if the CYP requires their Salbutamol three or more times in the space of a week (including at home), this is a sign of poor asthma control and the school's asthma lead will need to be informed.

We recognise that it is challenging to know the frequency of Salbutamol use at home and in school for those CYP who carry their Salbutamol on their person. For this reason, we encourage regular dialogue with parent/guardians regarding Salbutamol inhaler usage and with the CYP themselves when it is noted/observed that they have using their Salbutamol inhaler in school. Where known, all medication administered in school should be recorded (see appendix B).

The asthma lead should advise the parent/guardian to seek a GP appointment (or with the asthma clinic if already under their care) and refer the CYP to the CYP's Health 0-19 Service (Health Visiting and School Health Service) using their online referral form <a href="https://www.newham.gov.uk/schoolhealthreferral">www.newham.gov.uk/schoolhealthreferral</a>.

The Children's Health 0-19 Service will not provide urgent care but will follow up with the CYP to ensure that help was sought, observe inhaler and spacer techniques and if indicated perform an asthma control test (ACT) (see appendix C and D).

If asthma is cited as a reason for a school absence, the above course of action should also be followed by the school's asthma lead.

#### 5. What to do in an emergency (see appendix A)

#### 5.1. Recognising an acute asthma attack

- Persistent cough (when at rest)
- A wheezing sound coming from the chest (when at rest)
- Difficulty breathing (the CYP could be breathing fast and with effort, using the accessory (supporting) muscles in the upper body)
- · Nasal flaring
- Unable to talk or complete sentences. Some CYP will become very quiet.
- May try to tell you that their chest 'feels tight' (younger CYP may express this as tummy ache)

We also recognise that we need to call an ambulance immediately and commence the asthma attack procedure without delay if the CYP

- · Appears exhausted
- Is going Blue
- Has collapsed

#### 5.2. Actions in the event of an asthma attack:

- 1. Keep calm and reassure the CYP.
- 2. Encourage the CYP to sit up and slightly forward.
- 3. Use the CYP's own blue inhaler if not available, use the emergency inhaler.
- 4. Remain with the CYP while the blue inhaler and spacer are brought to them.
- 5. Shake the blue inhaler, remove the cap and place blue inhaler in spacer.
- 6. Place the mouthpiece of the spacer between the lips of the CYP or place the facemask over the CYP nose and mouth pressing gently. Make sure there is a good seal.
- 7. Press the blue inhaler once for one puff and get the CYP to take 10 breaths
- 8. If there is no improvement, repeat these steps until the CYP feels better, up to a maximum of 10 puffs (100 breaths).

If the CYP does not feel better or you are worried at ANYTIME before you have reached 10 puffs:

- 1. Call 999 FOR AN AMBULANCE and then call their parents/guardians.
- 2. If an ambulance does not arrive in 15 minutes give another 10 puffs.

- 3. If the CYP also has allergies and is either prescribed an AAI or has consent to been given an AAI in an emergency, administer an AAI. Anaphylaxis could be the cause of their breathing issues.
- 4. A member of staff will always accompany a CYP taken to hospital by ambulance and will stay with them until a parent or guardian arrives.

#### If the CYP does feel better:

- Stay with the CYP until they no longer cause concern.
- The CYP can return to school activities when they feel better.
- Inform the parents/guardians and advise that they should make an appointment with the GP or their asthma nurse.

#### 6. Recognising mild-moderate allergic reactions (see appendix E)

We recognise that the signs and symptoms of a mild to moderate reaction are:

- Swollen lips, face or eyes
- Itchy/tingling mouth
- Hives or itchy skin rash
- · Tummy pain or single episode of vomiting
- Sudden change in behaviour

Actions in the event of a mild-moderate allergic reaction

- Stay with the CYP and call for help if necessary
- Locate the CYP's adrenaline pen (AAI) and the emergency kit ☐ Give antihistamine according to the CYP's allergy action plan
- Phone parent / emergency contact
- Watch for signs of anaphylaxis

The CYP does not normally need to be sent home from school, nor do they require urgent medical attention. However, mild reactions can develop into anaphylaxis: CYP having a mild-moderate (nonanaphylactic) reaction should therefore be monitored for any progression in symptoms for one hour or until symptoms resolve, whichever is the shorter.

### 7. Recognising anaphylaxis (see appendix E)

We recognise that the signs and symptoms of an anaphylactic reaction are:

- Persistent cough (interfering with breathing)
- Hoarse voice
- Difficulty swallowing / swollen tongue
- · Difficult or noisy breathing
- Wheeze
- Persistent dizziness
- Becoming pale or floppy
- Sudden sleepiness / collapse / loss of consciousness

Actions in the event of anaphylaxis

If ANY ONE (or more) of the above signs are present:

- 1. Lie the CYP flat with legs raised (if breathing is difficult allow the CYP to sit up) 2. Use AAI WITHOUT DELAY. Take note of the time given.
- 3. Dial 999 to request ambulance and say ANAPHYLAXIS (AN-A-FIL-AK-SIS). Give clear and precise directions to the emergency operator, including the postcode of your location.
- 4. Stay with the CYP until ambulance arrives. DO NOT stand the CYP up.
- 5. If there are no signs of life commence CPR
- 6. Phone parent / emergency contact
- 7. If there is no improvement after 5 minutes, give a further dose of adrenaline using a second auto-injector device. Take note of the time given.
- 8. Make a second call to the emergency services to confirm that an ambulance has been dispatched.
- 9. Send someone outside to direct the ambulance paramedics when they arrive.

Always use an AAI FIRST in someone with known food allergy who has developed SUDDEN BREATHING DIFFICULTIES (persistent cough/ hoarse voice/ wheeze), even if no skin symptoms are present.

#### 8. Asthma and allergy friendly schools and whole school asthma approach

Our school welcomes all CYP with asthma and allergies and we aim to support them to participate fully in school life.

We will do this by being an asthma and allergy friendly school and take the whole school asthma approach, this means we have:

- ✓ An asthma policy including the use of emergency inhalers and AAIs
- ✓ A register of all CYP with asthma and allergies and includes all those who have been prescribed a Salbutamol inhaler, antihistamine or AAI
- ✓ An asthma emergency kit that includes salbutamol inhalers and spacers
- ✓ An anaphylaxis emergency kit that includes AAIs
- ✓ A system to refer CYP to the Children's Health 0-19 Service who are:
  - Absent from school due to asthma
  - O Unable to fully take part in PE (and playtime) due to asthma
  - And those who have used their salbutamol inhaler three or more times in the space of a week (including at home)
- ✓ An asthma lead in school who is responsible for the adherence to the asthma and allergy friendly standards

- ✓ Annual Asthma and Allergy Management training for key staff in school i.e. asthma lead, first aiders, medical office staff etc.
- ✓ Annual Asthma Awareness for ideally 100% of the school workforce but a minimum of 85%
- ✓ The school based asthma action plan displayed in each area of the school (classrooms, staff room, school hall, reception areas etc.)

We review the above annually as a minimum in collaboration with the Children's Health 0-19 Service (see appendix F). We will notify them if we have less than 85% of our school workforce trained in asthma awareness at any point during the academic year and release staff to attending training sessions.

Our parent/guardians are aware that we take a whole school asthma approach and have been advised of what this means for their child (see appendix G).

#### 9. Asthma and Allergy Register

9.1. An asthma and allergy register of children is held in the school and is updated yearly and when required (see appendix H).

Parent/guardian of new CYPs will be required to complete a medical declaration form when joining school and at the start of each new school year. This will specifically document:

- Any physician-diagnosed of asthma and viral wheeze o Any prescription of a reliever inhaler (salbutamol/terbutaline, *blue pump*) in the preceding 12 months.
- Any previous severe allergic reactions including any associated acute
   triggers/allergens
   Any prescription of an adrenaline pen (AAI) in the preceding 24 months.

Parents/guardians are responsible for informing the school if there are any changes to their child's needs, so that the register maintained (see appendix G).

9.2. Each CYP on the asthma and allergy register must have:

#### Asthma

✓ A Personal Asthma Action Plan (PAAP) completed by a health care professional (GP, Practice Nurse, Asthma Clinic, A&E staff or hospital doctor). All CYP under the care of the asthma clinic must have a PAAP (see appendix I, J and K).

OR

✓ Access to the school based asthma action plan (see appendix A).

All CYP under the care of the asthma clinic must have a PAAP; this will be given to the parent/guardian to bring a copy into school. Parent/guardians should contact their GP or asthma clinic to review their PAAP annually as a minimum or more frequently if required.

✓ Individual salbutamol inhaler and an age and ability appropriate spacer. These are stored out of the reach of other CYP but are easily accessible and remain in date. CYP will be encouraged to carry their own inhaler and spacer if deemed appropriate.

✓ Parental consent to use the emergency inhaler and spacer, we capture this at the point of the CYP with asthma starting at our school or when they are diagnosed. We review this annually.

#### **Allergies**

- ✓ An Allergy Action Plan completed by a health care professional (Allergy Clinic, GP, Practice Nurse, School Nurse, Health Visitor, A&E staff or hospital doctor). This will be given to the parent/guardian at the point of diagnosis and clinic appointments and a copy should be brought into school.
- ✓ Individually prescribed anti-histamine and two AAIs. These are stored out of the reach of other CYP but are easily accessible and remain in date. CYP will be encouraged to carry their own AAI if deemed appropriate. Where fewer than two AAIs are prescribed then the school's emergency AAI is a suitable alternative.
- ✓ Parental consent to use the emergency AAI (this is obtained and documented on the allergy action plan and is reviewed annually).
- ✓ Parent/guardians should contact their GP/allergy clinic to update their Allergy Management Plan if any changes are reported.

We advise that all children prescribed a salbutamol inhaler within the last 12 months but without a formal diagnosis of asthma are also included on the register, so that the emergency inhaler and spacer can be made available to them with the consent of their parents/guardian.

#### 10. Medications

#### 10.1. Inhalers and spacers

All CYP with asthma should have immediate access to their reliever (usually the salbutamol, blue inhaler<sup>1</sup>) at all times. The reliever inhaler is a fast-acting medication that relaxes the airway muscles, opening them up and making it easier for the CYP to breathe. It is always taken through an age appropriate spacer (with a mask under 4 years of age, and a mouthpiece over 4 years of age or those developmentally unable to use a mouthpiece).

Most CYP will also have a preventer inhaler (brown/orange/purple/red), which is usually taken morning and night, as prescribed by the doctor/nurse. This medication needs to be taken regularly for maximum benefit. CYP should not routinely bring their preventer inhaler to school as it should be taken regularly at home as prescribed by their doctor. Medication should only be administered at school when it would be detrimental to the CYP's health or school attendance not to do so (DfE, 2015).

<sup>&</sup>lt;sup>1</sup> Occasionally Symbicort (red/white) or Terbutaline (blue/white), these do not require a spacer.

If the CYP is going on a residential trip, they will need to take their preventer inhaler (and other prescribed asthma medication) with them for use at the start and end of the day. It is not helpful during an acute asthma attack.

School staff are not usually required to administer asthma medicines to CYPs unless they are developmentally unable to take their inhalers by themselves or they are severely unwell during an asthma attack or anaphylaxis. Those who have poor inhaler and spacer technique should be observed and supported by a trained member of staff.

Failure to receive their medication promptly could, in extreme circumstances, result in hospitalisation or even death. Staff who have had asthma training and are happy to support CYP as they use their reliever inhaler, can be essential for the well-being and safety of the child. If there are concerns over a CYP's ability to use their inhaler advice will be given to the parents/guardians to arrange a review with their GP and/or discuss this with the community asthma nurse. In addition, a referral can be made to the Children's Health 0-19 Service.

#### 10.2. Spacer technique and care

There is a specific inhaler and spacer technique that should be used to ensure the maximum benefit of using the medication is achieved, all staff have been shown this in the asthma awareness and asthma and allergy management training sessions (see appendix L).

Spacers need to be replaced yearly and washed half-termly or more regularly with frequent use. Spacers should be kept free from dust and liquids, and replaced if scratches or cloudiness are noted. They should not be stored in plastic bags. The following method should be used to ensure the spacers deliver ensure the full benefit of the spacer is received.

Washing a spacer - <a href="https://youtu.be/NblqBgmfTFE">https://youtu.be/NblqBgmfTFE</a>

#### 10.3. Emergency Inhalers in Schools

In 2014, government legislation was introduced allowing schools to purchase salbutamol inhalers and spacers that would be owned and managed by the school. They can be used if a CYPs salbutamol inhaler is not available, expired, runout or obtaining it would case delay (see chapter 17).

#### 10.4. Adrenaline Auto-injectors (AAIs)

Antihistamines can be useful for mild allergic reactions but are ineffective in severe reactions.

First line treatment for a severe allergic reaction is administration of an AAI (AAI) as an injection into the thigh muscle. If there are any signs of a severe reaction the AAI should be administered immediately, and should not be delayed until after inhalers or antihistamines have been given.

- How to give an EpiPen
- How to give a Jext Pen

Employing a "wait-and-see" policy will delay effective treatment and may result in serious illness or death. AAI devices (current brands available in the UK are EpiPen®, Emerade®, Jext®²) contain a single fixed dose of adrenaline (size of dose dependent on age), which can be administered by

<sup>&</sup>lt;sup>2</sup> Please note: Emerade AAIs have currently been withdrawn from use however we expect them to be available in the future.

nonhealthcare professionals such as family members, teachers and first-aid responders. The use of adrenaline pen as described is safe and can be life-saving.

CYP who are considered at a higher risk of anaphylaxis will have been prescribed AAIs by their GP for use in an emergency. The consensus recommendation from multiple bodies has been that an individual should have two AAIs available at all times. This is because on occasion an AAI device may be used incorrectly or may misfire, additionally; severe reactions may require more than one dose of adrenaline. CYP may initially improve but then deteriorate later; therefore, it is essential to call 999 for an ambulance whenever a severe allergic reaction occurs, even if the CYP has apparently completely recovered.

#### The MHRA recommends that those prescribed AAIs should have TWO devices available at all times.

Ideally, CYPs – particularly those in secondary schools – should be encouraged to be independent and keep their own prescribed AAIs with them at all times (school, family/guardian and CYP must all be in agreement). This is also achievable with many primary school-aged children, although for the youngest children, AAIs should either be kept in the classroom, or in a safe and suitably central and accessible location nearby. AAIs should not be located more than five minutes away from where they may be needed.

Schools may find it easier to request AAIs are kept on school premises during term time, as CYPs/families can forget to send the AAI(s) into school. However, CYP at risk of anaphylaxis should always have access to AAI(s), so parents/guardians need to ensure AAI(s) are available on the journey to/from school.

Healthcare professionals may therefore need to prescribe more than two AAIs to school-aged CYP: one or two AAIs to be kept near/with the CYP at all times, and a further device held centrally on the school premises, where this is requested by the school.

Depending on understanding and competence, older children and young people may be permitted to carry their own AAI(s) on their person while in school (DfE, 2015). This arrangement must be with complete agreement of the school, the parent/guardian, and the individual CYP.

CYPs who do not carry their own AAI will therefore have two options dependent on school arrangements, either:

AAI devices kept in a central location in a container marked clearly with the CYP's name (but NOT locked in a cupboard or an office where access is restricted), or.

In an emergency, a CYP whose parent has given consent may be treated with devices from the school's emergency supply of AAIs if such have been made available.

#### **10.5.** Emergency Adrenaline Auto-injectors in Schools

In 2017, government legislation was introduced allowing schools to purchase AAIs that would be owned and managed by the school. The idea was to increase the provision of AAIs in the school

environment and that these devices could be used on any CYP suffering a severe allergic reaction (see chapter 17).

#### 11. Individual Health Care Plans (IHCPs)

#### 11.1 Personal Asthma Action Plans (PAAPs)

Research completed by Asthma UK shows that someone with asthma is four times less likely to be admitted to hospital due to their asthma if they use their PAAP. Therefore, all CYP with asthma should have a PAAP which should be completed and reviewed by a healthcare professional (GP, Practice Nurse, Asthma Clinic, A&E staff or hospital doctor). This should be reviewed at asthma related appointments, when there are changes in a CYPs condition or treatment and annually as a minimum.

PAAPs support to ensure that CYPs asthma is managed effectively within school and to prevent hospital admissions. Whilst we maintain that all CYP should have a PAAP there are instances where they are not always completed in some healthcare settings or there is a delay in obtaining the PAAP or delay in bringing it into school.

As we are a whole school asthma school, our CYP have access to a school based asthma action plan. If a CYP has a PAAP in school this should be used in the first instance but where this is not available the school asthma action plan can be utilised.

#### 11.2. Allergy Action Plans

Allergy action plans are designed to facilitate first aid treatment of an allergic reaction by people \*without\* medical training. They provide medical and parental consent for schools to administer medicines in the event of an allergic reaction (including emergency AAIs if held at the school). They need to be completed by a healthcare professional and will be typed (not hand written) (see appendix M, N and O).

CYPs who have been assessed to have a low risk of having a severe allergic reaction (and so do not have adrenaline prescribed to them) will have a "mild/moderate" allergy management plan given to them and the school. The mild/moderate plans still mention when to give adrenaline (i.e. if there is a severe allergic reaction) as there is no 100% guarantee that an allergic person will never have a severe reaction. Therefore, guidance is placed on all allergy management plans in this country and abroad so that anyone attending a child who is having an allergic reaction can make an assessment of the severity of that reaction and act accordingly.

Not all children are prescribed an AAI, therefore if the person attending the child believes a severe allergic reaction is occurring then they must call 999 (for the UK) so that treatment can be administered as soon as possible. If there are emergency AAIs at school then these should be used (if parents have signed the consent on the allergy management plan) and this is why even the *mild/moderate* allergy management plans say to give an adrenaline device if there is one available.

#### 12. School environment and triggers

The school does all that it can to ensure that the school environment is favourable to CYPs with asthma and allergies.

The school has a definitive no-smoking policy.

CYP's asthma and allergy triggers will be recorded as part of their asthma and allergy action plans. The school will ensure that CYP's will not come into contact with their triggers, where possible.

We are aware that triggers for asthma can include:

- Colds and infection
- Dust and house dust mite
- Pollen, spores and moulds
- Feathers
- Furry animals
- · Exercise, laughing
- Stress
- Cold air, change in the weather
- · Chemicals, glue, paint, aerosols, perfume
- Food allergies
- Fumes, pollution and cigarette smoke

We are aware that common allergens that can trigger anaphylaxis are:

- Foods (e.g. nuts, milk/dairy foods, egg, wheat, fish/seafood, sesame, soya)
- Insect stings (e.g. bee, wasp)
- Medications (e.g. antibiotics, pain relief such as ibuprofen)
- Latex (e.g. rubber gloves, balloons, swimming caps)

#### 13. Emergency evacuations (i.e. fire alarms)

When we are required to evacuate the school premises, an emergency asthma and anaphylaxis kit is brought to each of the meeting points so they are available should any CYP with asthma and/or allergies require them.

#### 14. Exercise and activity

Taking part in sports, games and activities is an essential part of school life for all CYPs. This includes CYPs with asthma and allergies.

- ✓ All staff will know which CYP in their classes have asthma. This is particularly important for PE teachers.
- ✓ CYPs with asthma are encouraged to participate fully in all activities.
- ✓ PE staff will remind CYP whose asthma is triggered by exercise to take their reliever (usually Salbutamol, blue inhaler) via spacer if beneficial before the lesson, and to thoroughly warm up and down before and after the lesson.

- ✓ It is agreed with PE staff that CYP who are mature enough will carry their inhaler and spacer with them and those that are too young will have their inhaler and spacer labelled and kept in a box at the site of the lesson.
- ✓ If a CYP needs to use their inhaler during a lesson they will be encouraged to do so (using a spacer). The use of the inhaler will be documented.

If a CYP regularly has excess shortness of breath, chest tightness or cough with exercise, this will be communicated to the school asthma lead and referred to the Children's Health 0-19 Service. These are signs of poor asthma control and need review by a medical professional.

#### 15. School trips

Schools should conduct a risk-assessment for any CYP at risk of anaphylaxis and/or asthma/wheeze taking part in a school trip off school premises, in much the same way as they already do so with regards to safeguarding etc. CYPs at risk of anaphylaxis and/or asthma/wheeze should have their AAI/reliever inhaler and spacer with them, and there should be staff trained to administer AAI in an emergency. Schools may wish to consider whether it may be appropriate, under some circumstances, to take spare AAI(s)/reliever inhalers obtained for emergency use on some trips.

If it is a residential trip, arrangement for CYP care with asthma and allergies, must be made in advance, providing the parent/guardians and any health professionals with adequate time to organise an IHCP that includes instruction of medication and interventions that is not normally provided during the school day.

CYP with asthma must wash their mouth our after taking their preventer inhalers to minimise the unwanted side-effects.

#### 16. Impact on education

The school are aware that the aim of asthma and allergy medication is to allow CYP to live a normal life.

Asthma and/or allergies can impact on the life of a CYP by making them:

- unable to take part in normal activities (for example PE)
- tired during the day
- fall behind in lessons
- have significant school absence

If we recognise that a CYP's education is affected by their condition, we will:

- Discuss this with the parents/guardians
- With consent, inform the school nurse and/or their GP/asthma nurse

# 17. "Spare" Emergency Salbutamol Inhalers, Spacers and Adrenaline AutoInjectors (AAI) in school

As a school we are aware of the Department of Health guidance on the use of emergency salbutamol inhalers in schools and the use of adrenaline auto-injectors in schools from the Department of Health. We are aware as a school that we are able to purchase salbutamol inhalers, spacers and

adrenaline auto-injectors from community pharmacists without a prescription or online from reputable stockists (see appendix P and Q).

- ✓ Any emergency inhaler and AAI held by a school should be considered a back-up device and is not a replacement for a CYP's own medication as prescribed by their GP.
- ✓ The parents/guardian will always be informed if their CYP has used the emergency inhaler at school.
- ✓ Emergency services will be called immediately and parents/carers will be informed as soon as possible by phone if their CYP has received the emergency AAI.
- ✓ All staff are aware that we have access to spare inhalers, spacers and AAIs and where the emergency kits are stored. Posters are displayed in schools that list the locations these are stored (see appendix R).

#### 17.1. Each emergency kit contains:

- ✓ A salbutamol metered dose inhaler (MDI)
- ✓ At least two spacers compatible with this inhaler
- ✓ Two adrenaline auto-injectors at each available strength
- ✓ Instructions on using the inhaler with spacer
- ✓ Instructions on using the adrenaline auto-injector are on the side of the device and on the allergy management plan
- ✓ Instructions on cleaning and storing the inhaler
- ✓ Manufacturers' information for inhalers and adrenaline auto-injectors
- ✓ A checklist of inhalers and adrenaline auto-injectors, identified by their batch number and expiry date, with monthly checks recorded;
- ✓ A note of the arrangements for replacing the inhalers, spacers and adrenaline auto-injectors;
   ✓ The name of the CYP permitted to use the emergency kit
- ✓ A record of any medication administration

#### 17.2. Who can use the emergency kits?

The school will ensure that the emergency salbutamol inhaler will only be used by CYP who:

- ✓ Have asthma or who have been prescribed a Salbutamol inhaler AND
- ✓ For whom written parental consent has been given for use of the emergency kit.

We will ensure that the pupil's allergy management plan is followed and emergency adrenaline auto-injector will only be used if indicated.

- ✓ All allergy management plans MUST be signed by the parent/carer/guardian and held by the school as this represents signed consent to use the treatment if needed
- ✓ A "spare" adrenaline auto-injector will normally only be used on a CYP without the consent of parent/carer/guardian if emergency medical services (e.g. 999) or other suitably qualified person advises this.
- ✓ Where doubt exists then the AAI should be used as unnecessary delays have been associated with death.

#### 17.3. Maintaining the emergency kit

- ✓ Check monthly that the inhalers, spacers and AAIs are present and in working order, and that the inhaler has sufficient doses available and has greater than 3 months until expiry;
- ✓ Obtain replacement inhalers and AAIs if the expiry date is within 3 months
- ✓ The inhaler can be reused, so long as it hasn't come into contact with any bodily fluids.
  Following use, the inhaler canister will be removed, and the plastic inhaler housing and cap will be washed in warm running water and left to dry in air in a clean safe place. The canister will be returned to the housing when dry and the cap replaced. Return to emergency kit after cleaning and drying.
- ✓ The spacer cannot be reused. Replace spacers following use.
- ✓ Empty inhaler canisters will be <u>returned to the pharmacy</u> to be recycled.
- ✓ Before using a salbutamol inhaler for the first time, or if it has not been used for 2 weeks or more, shake and release 2 puffs of medicine into the air
- ✓ The AAI devices should be stored at room temperature (in line with manufacturer guidance), protected from direct sunlight and extremes of temperature.
- ✓ Once an AAI has been used it cannot be reused and must be disposed of according to manufacturer's guidance as it contains a needle
- ✓ Used AAIs can be given to ambulance paramedics on arrival or disposed of in a sharps bin (available from pharmacies or online) for collection by the local council

We have an emergency kit audit that is completed half termly by our asthma lead and any concerns are immediately addressed (see appendix S).

#### 18. Asthma and allergy lead(s) responsibilities

This school has asthma and allergy leads who are named above. It is the responsibility of these leads to:

- ✓ Update the asthma and allergy register,
- ✓ Update the asthma and allergy policy,
- ✓ Ensure measures are in place so that children have immediate access to their inhalers and AAIs.
- ✓ Maintain the emergency kits (see chapter above)
- ✓ Ensure the school's asthma action plan is displayed in all common areas (classrooms, staff room, school hall, reception areas etc.)
- ✓ Ensure there is an adequate number of staff trained in the management of asthma and allergies and asthma awareness

#### 19. All Staff Training

It would be reasonable for ALL staff to:

Know how to recognise:

- ✓ poorly controlled asthma
- ✓ an acute asthma attack
- ✓ an acute severe allergic reaction (anaphylaxis)

- ✓ Be aware of the asthma and allergy policy
- ✓ Know how to check if a pupil is on the asthma and allergy register
- ✓ Know how to access the pupil's own medications and the emergency kit
- ✓ Know which designated members of staff are trained to administer the medications and how to access their help.

NOTE – instructions on how to use an AAI are present on the device itself and on the allergy action plan

The following training can be obtained by contacting Children's Health 0-19 Service: schoolhealth@newham.gov.uk

- ✓ Annual Asthma and Allergy Management training for key staff in school i.e. asthma lead, first aiders, medical office staff etc.
- ✓ Annual Asthma Awareness for ideally 100% of the school workforce but a minimum of 85%

#### 20. Local Contact details

☐ Children's Health 0-19 Service and Head Start (Health Visiting, School Health Service, Family Nurse Partnership and Head Start)

Email: Schoolhealth@newham.gov.uk

Telephone: 0203 373 9983 or 07970 813 937

Online referral form: www.newham.gov.uk/schoolhealthreferral

☐ Asthma Nurse Specialist (Newham), East London NHS Foundation Trust

Telephone: 02037387063

☐ Newham Stop Smoking Service (Free)

Call: 020 7882 8230 / 0800 169 1943 Email: clinicbookings@qmul.ac.uk

#### 21. Appendices

Appendix A: School Asthma Action Plans





# Nursery Asthma Action Plan

For children with diagnosed asthma/wheeze

Do I have signs of

- Wheezing Shortness of breath
  Coughing Or saying that my chest hurts (I may express this by saying my tummy hurts) Stay with me and call for help if necessary. Give me 1-2 puffs of my \*rescue (blue) inhaler with my spacer following the guidance in the green box.
- Keep calm and reassure me
- Sit me up and slightly forward
- Shake my rescue (blue) inhaler before use, remove the cap and then place in my spacer
- I need to place the mask over my nose and mouth and apply gentle pressure to create a seal. I need to spray one puff and then take 10 breaths
- I will repeat the above steps for each puff of the rescue (blue) inhaler
- I may need help with these steps
- If I feel better but this has happened 3 or more times in the space of a week (including at home), refer me to my Health Visitor



If my rescue (blue) inhaler has had little or no effect

- I have difficulty walking
- I am unable to talk or complete sentences, I may go very quiet
  - I am breathing hard and fast

I am coughing and wheezing a lot more

My nostrils may be flaring

Give me up to 10 puffs of the rescue (blue) inhaler with my spacer using the guidance in the green box. You do not have to give the full 10 puffs before you call 999 if you are worried.

THINK ANAPHLAXSIS, DO I HAVE AN ADRENALINE PEN? IF YES, REFER TO THE **GUIDANCE IN YELLOW ALLERGIES BOX BELOW** 



Call 999 for an ambulance if

- There is little or no improvement
- If I am exhausted If I am going blue
- You are worried or unsure If I have collapsed
- Nursery postcode

Call my parent/carer. Continue to give me 10 puffs of my rescue (blue) inhaler every 15 minutes until medical help arrives or my symptoms improve.

If I'm feeling better (my symptoms have resolved) inform my parent/carer, advise them that I need to see my GP and I need my nursery to make a referral to the Health Visitor.

#### **ALLERGIES**

- Do I have an adrenaline pen?
- If I'm not getting any better I could be having an anaphylactic reaction causing inflammation in my lungs
- IF IN DOUBT FOLLOW MY ALLERGY MANAGEMENT PLAN AND \*INJECT.
- Call an ambulance and state you suspect I am having an ANAPHYLACTIC REACTION

\*If my own inhaler/spacer or adrenaline pen is not available or expired, use the Nursery's emergency inhaler/spacer and adrenaline pen.

Designed in conjunction with Heather Robinson, School Nurse and Emily Guilmant-Farry, Asthma Nurse Specialist, Oct 2020





# Primary School Asthma Action Plan

For children with diagnosed asthma

#### Do I have signs of

- Stay with me and call for help if necessary. Give me 2-5 puffs of my \*rescue (blue) inhaler with my spacer following the guidance in the green box
- Keep calm and reassure me
- · Sit me up and slightly forward
- Shake my rescue (blue) inhaler before use, remove the cap and then place in my spacer
- I need to place the mouth piece of the spacer between my teeth and lips to make a seal. I need to spray one puff and then take 10 breaths
- I will repeat the above steps for each puff of the rescue (blue) inhaler
- I may need help with these steps
- If I feel better but this has happened 3 or more times in the space of a week (including at home), refer me to my School Health Team



#### If my rescue (blue) inhaler has had little or no effect

- I have difficulty walking
- . I am unable to talk or complete sentences, I may go very quiet
- I am coughing and wheezing a lot more
- . I am breathing hard and fast
- My nostrils may be flaring

Give me up to 10 puffs of the rescue (blue) inhaler with my spacer using the guidance in the green box. You do not have to give the full 10 puffs before you call 999 if you are worried.

THINK ANAPHLAXSIS, DO I HAVE AN ADRENALINE PEN? IF YES, REFER TO THE GUIDANCE IN YELLOW ALLERGIES BOX BELOW



Call 999 for an ambulance if

- There is little or no improvement
- If I am exhausted
- If I am going blue You are womied or unsure . If I have collapsed

#### School postcode

Call my parent/carer. Continue to give me 10 puffs of my rescue (blue) inhaler every 15 minutes until medical help arrives or my symptoms improve.

If I'm feeling better (my symptoms have resolved) inform my parent/carer, advise them that I need to see my GP and I need my school to make a referral to the School Health Team

#### **ALLERGIES**

- Do I have an adrenaline pen?
- If I'm not getting any better I could be having an anaphylactic reaction causing inflammation in my lungs
- IF IN DOUBT FOLLOW MY ALLERGY MANAGEMENT PLAN AND \*INJECT
- Call an ambulance and state you suspect I am having an ANAPHYLACTIC REACTION

\*If my own inhaler/spacer or adrenaline pen is not available or expired, use the school's emergency inhaler/spacer and adrenaline pen.

signed in conjunction with Heather Robinson, School Nurse and Emily Guilmant-Farry, Asthma Nurse Specialist, Oct 2020





# Secondary School Asthma Action Plan

For children with diagnosed asthma

#### Do I have signs of

- inhaler with my spacer following the guidance in the green box



- Sit me up and slightly forward
- Shake my rescue (blue) inhaler before use, remove the cap and then place in my spacer
- . I need to place the mouth piece of the spacer between my teeth and lips to make a seal. I need to spray one puff and then take 10 breaths.
- . I will repeat the above steps for each puff of the rescue (blue) inhaler
- I may need help with these steps
- If I feel better but this has happened 3 or more times in the space of a week (including at home), refer me to my School Health Team



If my rescue (blue) inhaler has had little or no effect

- . I have difficulty walking
- · I am coughing and wheezing a lot more . I am breathing hard and fast
- I am unable to talk or complete sentences, I may go very quiet
- My nostrils may be flaring

Give me up to 10 puffs of the rescue (blue) inhaler with my spacer using the guidance in the green box. You do not have to give the full 10 puffs before you call 999 if you are worried.

THINK ANAPHLAXSIS, DO I HAVE AN ADRENALINE PEN? IF YES, REFER TO THE GUIDANCE IN YELLOW ALLERGIES BOX BELOW

Call 999 for an ambulance if

- There is little or no If I am exhausted improvement
  - If I am going blue
- You are worried or unsure If I have collapsed

School postcode

Call my parent/carer. Continue to give me 10 puffs of my rescue (blue) inhaler every 15 minutes until medical help arrives or my symptoms improve.

If I'm feeling better (my symptoms have resolved) inform my parent/carer, advise them that I need to see my GP and I need my school to make a referral to the School Health Team

#### **ALLERGIES**

- Do I have an adrenaline pen?
- . If I'm not getting any better I could be having an anaphylactic reaction causing inflammation in my lungs
- IF IN DOUBT FOLLOW MY ALLERGY MANAGEMENT PLAN AND \*INJECT
- Call an ambulance and state you suspect I am having an ANAPHYLACTIC REACTION

\*If my own inhaler/spacer or adrenaline pen is not available or expired, use the school's emergency inhaler/spacer and adrenaline pen.

Designed in conjunction with Heather Robinson, School Nurse and Emily Gullmant-Farry, Asthma Nurse Specialist, Oct 2020

## Appendix B: Record of Administration Example

Date and time	Child's name	Child's DOB	Name of medicine	Dose given (no. of puffs)	Own inhaler or school's emergency inhaler	Staff name and signature
01/01/21 09.30	Any Body	01/01/15	Salbutamol	2 puffs	Own	J Blogs

# Appendix C: Children's Health 0-19 Service Asthma Review Consultation Checklist <u>Children's Health 0-19 Service</u>

## Asthma review consultation checklist



		Please do not l	eave any fields blan	k	
Name:		DOB:			
NHS:		Nursery/school:			
Why has	this child/young person been refe	rred to you?			
-	using their rescue inhaler 3 or more ool combined)	e times in the space	of a week (home		
They hav	ve been absent from school due to a	sthma symptoms			
They are	unable to take part in PE due to ast	hma symptoms			
You have	e received an A&E notification that t	hey have been to A&	&E due to asthma		
Discuss t	he reason they were referred to you	u and gather more ir	formation for your a	ssessment	
Does this	s nursery/school have the 'Whole Sc	thool Asthma Approa	ach' in place?		
i	<ul> <li>Please discuss the whole school asthma approach with the nursery/school and refer the nursery/school to <u>schoolhealth@newham.gov.uk</u> for further information</li> </ul>				
•	<ul> <li>There will be a nursery/school asthma action plan in place and the workforce will have had asthma awareness training.</li> </ul>				
Is this ch	Is this child/young person known to the ELFT children's asthma clinic?				
Have you	Have you asked when they were last seen in the asthma clinic?				
Have you	u asked when they were last seen by	their GP for an asth	ıma review?		
				•	

#### **Asthma Control Test**

 $Has the \ child/young \ person \ and \ family \ completed \ an \ Asthma \ Control \ Test \ (ACT)?$ 

https://www.asthmacontroltest.com/en-gb/welcome/ once the test is complete you can download a PDF copy and upload to RIO and record their score.

Save your test results



General information and triggers	
Does the child/young person and their family know what asthma is?	
Does the child/young person and family know their triggers and how to avoid them (exercise, animals, cold, weather change, foods, dust, tobacco smoke, pollen, pollution, anxiety/excitement etc)?	
Have you advised the child/young person and their family that they should have an annual asthma review as a minimum and at the asthma review they should receive a personalised asthma action plan which a copy needs to be brought into nursery/school?	

Treatment	
Have you demonstrated correct inhaler and spacer technique?	
Have you observed their inhaler and spacer technique (advise them to demonstrate without taking an unnecessary puffs)?	
Does the child/young person and family know the importance of using the spacer when using their rescue and preventer inhaler?	
Does the child/young person and family know how to wash their spacer and keep it clean?	
Does the child/young person and family know the role of the rescue and preventer medication?	
Does the child/young person and family know the importance of taking the preventer medication regularly?	
Is their inhaler and spacer available during the nursery/school day, complete with prescription label?	
Have you discussed where their inhaler and spacer will be stored during the nursery/school day i.e. on their person, in the medical office etc.?	
Have you discussed access to their inhaler and spacer when travelling to and from nursery/school?	
Do they have allergies? If yes, ensure they have an in date allergy action plan in school and know to administer their auto adrenaline injector (AAI) and call 999, if their asthma symptoms are not resolving and if they are in any doubt.	

If you answer 'yes' to attach a copy of this c	-			hildren's asthm	a clinic and
They have an ACT scor					
They are using their re excluding when exerci		or more time	s in the space of a v	veek	
They have missed a lot	of school due t	to asthma/w	heeze symptoms		
They report that they a months (check HIE for			utamol inhalers in t	he last 12	
And/or					
They have had more the last 12 months and the following that admission	ey did not have				
If you answer 'yes' to checklist and the ACT	-		e refer to their GP a	nd attach a cop	y of this
They do not have a res	cue inhaler in s	chool and/or	home		
They do not have the o	correct spacer in	n school and,	or home		
They haven't been see they are not known to			eview for over a 12	months (if	
They have had more the			or A&E visit due to	asthma in the	
last 12 months and the following that admission	•	•			
They are not regularly	using their prev	venter inhale	r		
They report that they a	_		utamol inhalers in t	he last 12	
They would benefit from is in addition to the M			•		
They have had more th	nan one course	of prednisolo	one in the last 12 m	onths	
Down while your A. Nows or					
Parent/carer's Name:					
Signature:					
Date: ffice only					
Information sharing w	rith consent – d	locument na	me(s)/role of profe	ssionals on RIO	
8			- (-),		1

Professionals train	Professionals training				
School's training re	equirements discussed?				
Documentation					
Have you documer	nted your consultation on to RIO and uploaded any documents?				
Have you added a	medical alert to RIO?				
Have you added th	e child/young person's details on to the IHCP database?				
Have you changed UPP if clinically ind	the child/young person's referral in RIO to a UP caseload? (or icated)				
· ·	riew this child/young person again, if so have you added the n to the RIO waiting list?				
Completed by:					
Role:					
Date:					
Upload a copy of this checklist to the child/young person's RIO records					
This checklist is a guide and does not replace your clinical judgement, the list of assessment questions and referral reasons are not exhaustive.					

### Appendix D: Children's Health 0-19 Service Allergy IHCP Consultation Checklist



# <u>Children's Health 0-19 Service</u> <u>Allergy Action Plan (IHCP) consultation checklist</u> <u>Please do not leave any fields blank</u>

Name:	DOB:	
NHS:	Nursery/school:	

Teaching	
Does the child/young person and family know what they are allergic to and how to avoid it/them?	
Do the child/young person and the family know which signs/symptoms mean that the child/young person needs an antihistamine?	
Do the child/young person and family know which signs/symptoms mean that the child/young person needs to use their auto adrenaline injector (AAI)?	

Have you demonstrated the administration of the AAI?	
Have you observed their administration of the AAI?	
Have you explained that if in doubt they should inject the AAI and call 999?	
Have you discussed where their AAI will be stored during the nursery/school day i.e. on their person, in the medical office etc.?	
Have you discussed allergy avoidance and school lunches/snacks/food technology/parties at school etc.?  • Access to school menus and lists of allergens?  • Schools meals labelled with allergens?  • Child or young person has packed lunches?	
Have you discussed access to their AAI when travelling to and from nursery/school?	
Does this nursery/school have 'spare' AAIs and 'spare' inhalers?  If yes:  Explain what the 'spare' AAI and inhalers means for children/young people with allergies.  'Spare' AAI and inhalers, may also be referred to as emergency allergy or asthma kits or emergency inhalers.	

IHCP				
Have you used the correct allergy action plan (IHCP) template?  Consider the following:				
<ul> <li>Did you use the templates available on SharePoint?</li> <li>Is it for the correct AAI type (Jext, EpiPen)?</li> <li>Is it the template for an individual assessed as not needing an AAI?</li> </ul>				
Do they have asthma? If yes:				
<ul> <li>Ensure the 'additional instruction' section is completed and refers to the child/YP's personal asthma action plan or nursery/school asthma action plan</li> <li>Ensure they are on the nursery/school's asthma register</li> </ul>				
Has the parent/carer signed the allergy action plan including providing consent to use the 'spare' AAI?				
Are they still awaiting allergy test results? If so, agree timeframe in which to contact parent/carer to get results and update IHCP, add to RIO waiting list to provide a reminder.				

Take child/young person's weight and record on their RIO records				
If you answer NO to any of the below please send a referral to the GP				
Do they have the correct dose of antihistamine in nursery/school?				

Is the antihista	mine pres	scribed correctly for	use in nur	sery/school	?			
1	e? (if the	vailable in nursery/s nursery/school has						
Do they have a	n AAI at h	ome that is the corr	ect dose f	or their wei	ght/age?			
Have they beer	seen in t	the Allergy Clinic in t	he last thr	ee years?				
further notice:	https://wv	ey have an Emerade ww.gov.uk/drug-devic m-solution-for-injection	e-alerts/cla	ss-2-medicir	<u>ies-recall-ei</u>	merade-		
Parent/carer's	Name:							
Signature:								
Date:								
Office only  IHCP shared wi	th – docu	ıment name(s)/role	of profess	sionals on F	RIO			
Parent/carer		Nursery/school		GP		Specialis	t	
Professionals t	raining							
School/Nursery	r's trainin	g requirements disc	ussed?					
Documentation	n							
Have you docui signed IHCP?	mented y	our consultation on	to RIO and	l uploaded	a copy of t	:he		
Have you adde	d a medic	al alert to RIO?						
Have you uploa	ided a cop	by of the allergy acti	on plan to	RIO?				
Have you adde	d the chile	d/young person's de	etails on to	the IHCP d	atabase?			
Have you chang	_	nild/young person's	referral in	RIO to a UF	o caseload	? (or		

If awaiting further i person to the RIO w	nformation from parent/carer, have you added child/young vaiting list?	
	•	
Completed by:		
Role:		
Date:		
Uploa	ad a copy of this checklist to the child/young person's RIO records	

This checklist is a guide and does not replace your clinical judgement, the list of assessment questions and referral reasons are not exhaustive.

#### Appendix E: Recognising signs of an allergic reaction and anaphylaxis poster

#### The signs of an allergic reaction are:

#### Mild-moderate allergic reaction:

- Swollen lips, face or eyes
- Itchy/tingling mouth
- Hives or itchy skin rash
- Abdominal pain or vomiting
  - Sudden change in behaviour

#### ACTION:

- Stay with the child, call for help if necessary
- Locate adrenaline autoinjector(s)
- Give antihistamine according to the child's allergy treatment plan
- Phone parent/emergency contact



#### Watch for signs of ANAPHYLAXIS (life-threatening allergic reaction):

AIRWAY: Persistent cough

Hoarse voice

Difficulty swallowing, swollen tongue

BREATHING: Difficult or noisy breathing

Wheeze or persistent cough

CONSCIOUSNESS: Persistent dizziness

Becoming pale or floppy

Suddenly sleepy, collapse, unconscious

#### IF ANY ONE (or more) of these signs are present:

 Lie child flat with legs raised: (if breathing is difficult, allow child to sit)

·-- /





- 2. Use Adrenaline autoinjector\* without delay
- 3. Dial 999 to request ambulance and say ANAPHYLAXIS

#### \*\*\* IF IN DOUBT, GIVE ADRENALINE \*\*\*

#### After giving Adrenaline:

- 1. Stay with child until ambulance arrives, do NOT stand child up
- 2. Commence CPR if there are no signs of life
- 3. Phone parent/emergency contact
- If no improvement after 5 minutes, give a further dose of adrenaline using another autoinjector device, if available.

Anaphylaxis may occur without initial mild signs: ALWAYS use adrenaline autoinjector FIRST in someone with known food allergy who has SUDDEN BREATHING DIFFICULTY (persistent cough, hoarse voice, wheeze) – even if no skin symptoms are present.





#### Whole School Asthma Approach

Eligib	oility Criteria che	ecklist 2020/2021	School/ Nursery	CHS 0
			ivuisery	15
Name of school/nursery:				
Asthma policy				
Asthma register				
Emergency asthma kit				
Emergency anaphylaxis kit				
Consent from parent/carer of all CYP with ast	thma to use the	emergency asthma and anaphylaxis kits		
System to identify and refer CYP to the Childre	en's Health 0-19	Service who are:		
Absent from school due to asthma				
Unable to take part in PE due to asthr	ma			
Using their rescue (blue) inhaler 3 or	more times in th	ne space of a week (including at home)		
An Asthma Lead				
Name and role				_
Key staff trained in the management of asthm	na and allergies			
A minimum of 85% of the school workforce tr	rained in asthma	awareness		
Date of training				
Size of school workforce				
Number of staff trained in asthma awareness				
Percentage of school staff trained	0%		- 1	
The second state of the second	070			
confirm that		has met all of the esse	ential criteria	a to
be eligible for the Whole School Asthma Appr	roach.			
		agrees to notify the Children's Heal	th 0-19 Serv	ice
(CHS 0-19) immediately if for any reason the a	above criteria is			
		intends to once again meet the esse	inda Citteria	Rec:
		is aware that this will be reviewed an	nnually.	
Signed:		Name:		
200				
	6			

V1.1 022021



#### Appendix G: Whole school asthma letter to parent/guardian and consent to use emergency kits

Dear Parent/Guardians of children with asthma and/or allergies,

#### RE: Asthma and allergy friendly schools and whole school asthma approach

Our school welcomes all children and young people with asthma and allergies and we aim to support them to participate fully in school life.

We will do this by being an asthma and allergy friendly school and take the whole school asthma approach, this means we have:

- ✓ An asthma policy including the use of emergency inhalers and Adrenaline Auto-Injectors
- ✓ A register of all children with asthma and allergies and includes all those who have been prescribed a Salbutamol inhaler, antihistamine or Adrenaline Auto-Injectors
- ✓ An asthma emergency kit that includes salbutamol inhalers and spacers
- ✓ An anaphylaxis emergency kit that includes Adrenaline Auto-Injectors
- ✓ A system to refer children to the Children's Health 0-19 Service, with your consent, who are:
  - Absent from school due to asthma
  - o Unable to fully take part in PE (and activity) due to asthma
  - And those who have used their salbutamol inhaler three or more times in the space of a week (including at home)
- ✓ An asthma lead in school who is responsible for the adherence to the asthma and allergy friendly standards
- ✓ Annual Asthma and Allergy Management training for key staff in school i.e. asthma lead, first aiders, medical office staff etc.
- ✓ Annual Asthma Awareness training for a minimum of 85% of our workforce

We review the above annually as a minimum in collaboration with the Children's Health 0-19 Service.

All children and young people with asthma require a personal asthma action plan (PAAP) that can be obtained from your GP (or asthma clinic if your child is under their care) and should be reviewed annually as a minimum. We advise you to contact your GP if your child does not yet have a PAAP or it has been more than a year since their asthma was last reviewed and to bring a copy of the PAAP into school.

As we take the whole school asthma approach, your child will have access to the school's asthma action plan that is displayed throughout our school. This school asthma action plan has been designed by the Children's Health 0-19 Service, London Borough of Newham and Children's Asthma Clinic, East London Foundation Trust and provides schools with asthma guidance to support your child.

This school asthma action plan will be used in the absence of your child's PAAP i.e. a copy of your child's PAAP has not yet been brought into school.

In ord	er to keep our rec	ords up to date please complete the form overleaf and return to yo	our child's
class t	eacher.		
Yours	faithfully,		
Chilo	l's name		
Chilo	l's date of birth		
Class	s/form		
Date			
Asthm	na/Wheeze:		
Tick al	II those that apply		
		en diagnosed with a viral wheeze or asthma	
	My child has bed inhaler)	en prescribed a reliever inhaler (usually a Salbutamol, blue	
	My child has an name, in school	in-date Salbutamol inhaler and spacer, clearly labelled with their	
shou	•	child to receive Salbutamol from the school's emergency kit symptoms of asthma/wheeze and their own inhaler is not ble.	
_	ice should the foll o My ch o My ch	child's school to refer my child to the Children's Health 0-19 owing occur: o My child is absent from school due to asthma ild is unable to fully take part in PE (and activity) due to asthma ild has used their salbutamol inhaler three or more times in the ek (including at home)	
Signe	ed:		
Print	name:		
Rela	tionship to child:		
Sever	e allergies		
Tick al	II those that apply My child has be	en diagnosed with severe allergies and has an allergy action plan ir	ı school
	My child has be	en prescribed an adrenaline auto-injector (EpiPen / Jext Pen)	
	correct dose for	in-date an adrenaline auto-injector (EpiPen / Jext Pen) in school, it their weight and is labelled with their name	is the
Mild t	o moderate allerg	ies	
	· ·	en diagnosed with mild to moderate allergies, they have an allergy nd has their prescribed antihistamine in school	action

I give consent for my child to receive the school's emergency adrenaline auto-injector from the emergency kit should my child show symptoms of a severe allergic reaction and their own adrenaline auto-injector is not available or is not usable. I am aware that this is also recorded on their allergy actio plan.						
Signed:						
Print name:						
Relationship to child:						

## Appendix H: Asthma and Allergy Register Example register

Child's Name	DOB	Class/form	Asthma (Yes/No)	Allergies (Yes/No)	Other conditions (list)	Consent to use school's emergency inhaler (Yes/No)	Consent to use school's emergency AAI (Yes/No)
Any Body	01/01/2015	Red class	Y	Y	N/A	Y	Y

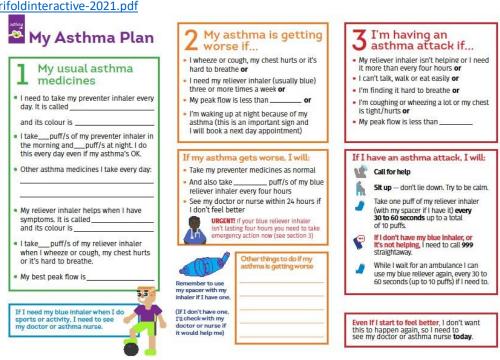
#### Appendix I: Monkey Wellbeing Personal Asthma Action Plan (5 years and under)

https://www.monkeywellbeing.com/wp-content/uploads/2020/03/MonkeyMyAsthmaPlanColourv2-1.pdf



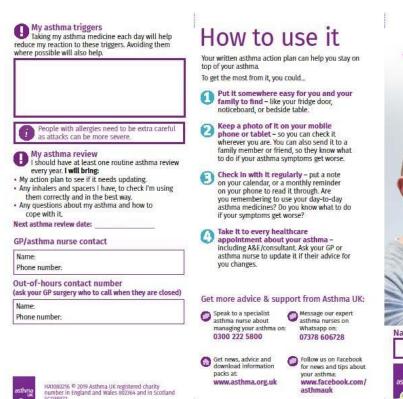
#### Appendix J: Asthma UK Personal Asthma Action Plan (6-11 years)

 $\frac{https://www.asthma.org.uk/21f2a977/globalassets/health-advice/resources/children/myasthmaplantrifoldinteractive-2021.pdf$ 



#### Appendix K: Asthma UK Personal Asthma Action Plan (12 years +)

https://www.asthma.org.uk/advice/manage-your-asthma/action-plan/



wed and updated 2019; next review 2022.

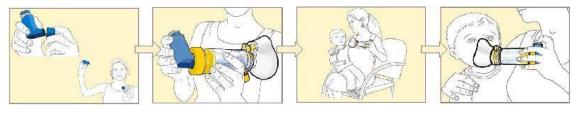
The step-by-step guide that helps you stay on top of your asthma

#### Appendix L: Spacer and inhaler technique, mask and mouthpiece





## Spacer and inhaler technique- Mask



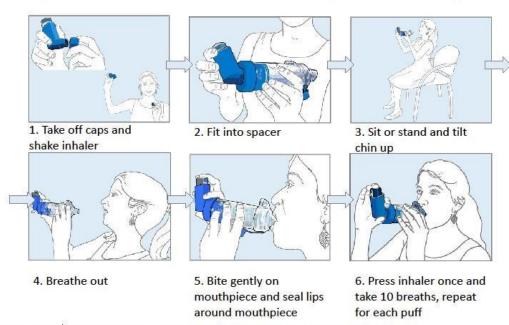
- 1. Take off caps and shake inhaler
- 2. Fit into spacer
- 3. Child can sit or stand (very young child may sit on lap) and get them to look up
- 4. Place mask over nose and mouth, apply gentle pressure to create a seal.

Press inhaler once for one puff, child to take 10 breaths Repeat for each puff

ted from UK AC 043 0320 Date of preparation: March 2020 Open Access Files from Trudell Medical UK Limited, Grove House, Lutyens Close, Chineham Court, RG248AG



# NHS Spacer and inhaler technique- Mouthpiece



## bsaci ALLERGY ACTION PLAN RCPCH AllergyUK





This child has the following allergies:

The pritish society for Allergy's Clinical Investorology 5/20%

Name:		(life-threatening a	THE RESIDENCE OF THE PARTY OF T	
DOB:			r without skin symptoms: ALW n food allergy who has SUDDE	
	Photo	A AIRWAY  • Persistent cough  • Hoarse voice  • Difficulty swallo  • Swollen tongue	noisy breathing	CONSCIOUSNESS  • Persistent dizziness  • Pale or floppy  • Suddenly sleepy  • Collapse/unconscious
		The second secon	MORE) OF THESE SIGNS As legs raised (if breathing is diff	
Swollen lip     Itchy/tingli     Hives or itc	oderate reaction: s, face or eyes ing mouth thy skin rash I pain or vomiting	3 Dial 999 for amb	nutoinjector without delay (eg. shance and say ANAPHYLAXIS (BT, GIVE ADRENALINE **	"ANA-FIL-AX-IS")
Action 1 Stay with ti if necessar Locate adre Give antihi	the child, call for help ry enaline autoinjector(s)	Commence CPR if th     Phone parent/emerg     If no improvement a     autoinjectilable devi	ambulance arrives, do <u>NOT</u> state tere are no signs of life tency contact fter 5 minutes, give a further at ce, if available toe, even if there is no credit left on a mob	drenaline dose using a second
Emergency	contact details:	How to give Jext®	Additi	onal instructions:
•		1		
) Name:		Jext® and PULL agai OFF YELLOW (with	CE BLACK END nst outer thigh n or without	
<b>3</b>		3_10 4	ang)	
dminister the medicine ack-up adrenaline autor	t: I hereby authorise sohool staff to es listed on this plan, including a 'spare' injector (AAB) if available, in accordance th Guidance on the use of AABs in schools	PUSH DOWN HARD REA	/OVE Jest <sup>®</sup> .	
igned		until a click is heard Mas	sage injection for 10 seconds	
		This is a medical document that can only! This document provides medical authorise the Haman Medicines (Americkness) regulate the person, and NOT in the luggage hold. T	e completed by the child's healthcase professi- tion for schools to administer a 'spare' back-up lations 2017. During travel, schemaline auto-ing- his action plan and authorisation to travel will	one. It must not be altered without their permit a detendine autoinjector if needed, as permitte actor devices must be corried in hand-luggage themsergency medications has been prepared b
	ion shout managing	tion a print name	(#	
anaphylaxis in sch	ion about managing hools and "spare" ne autoinjectors, visit:	Hospital/Clinic:		
sparepensinschool				Date

## ALLERGY ACTION PLAN RCPCH ALLERGY ACTION PLAN





This child has the following allergies:

Name:		Watch	n for sig	ns of ANAI	PHYLAXIS	
		The state of the s	tening allerg		110	
DOB:					AYS consider anaphylaxis I BREATHING DIFFICULTY	
	Photo	• Hoarse • Difficu	tent cough	B BREATHING  • Difficult or noisy breathing  • Wheeze or persistent cough	CONSCIOUSNESS  • Persistent dizziness  • Pale or floppy  • Suddenly sleepy  • Collapse/unconscious	
		IF ANY O	NE (OR MORE	) OF THESE SIGNS A	BOVE ARE PRESENT:	
		Lie chi	ld flat with legs :	aised (if breathing is diffi	cult, allow child to sit)	
- 2011 - 1				· tv		
• Swollen lips, fac	erate reaction:	2 Use Ad	renaline autoini	ector without delay (eq. E	piPen*) (Dose: mg)	
Itchy/tingling m     Hives or itchy sl     Abdominal pain     Sudden change	nouth kin rash or vorniting	3 Dial 99	9 for ambulance	and say ANAPHYLAXIS ( IVE ADRENALINE **	'ANA-FIL-AX-IS")	
With Parties and the	0.0000000000000000000000000000000000000	AFTER GI	VING ADREN	ALTNE:		
Action to t  Stay with the ch		1. Stay with o	hild until ambul	ance arrives, do <u>NOT</u> star	nd child up	
if necessary		Commence CPR if there are no signs of life     Phone parent/emergency contact				
<ul> <li>Locate adrenali</li> <li>Give antihistam</li> </ul>	ne autoinjector(s)	<ol> <li>If no improvement after 5 minutes, give a further adrenaline dose using a second</li> </ol>				
Estabolistochenikasanist	(If vomited,	30.00	ilable device, if a			
• Phone parent/e	mergency contact		from any phone, even after anaphylaxis.	if there is no credit left on a mobi	le. Medical observation in hospital	
Emergency co	ntact details:	How to give	EpiPen®	Additi	onal instructions:	
•		1	PULL OFF BLUE CAP and grasp E Remember: "blue orange to the thi	piPen. to sky,		
				P1 10P		
Z) Name:		2)//	Hold leg still and ORANGE END ac			
0		LONG TO STATE OF THE PARTY OF T	mid-outer thigh or without cloth	with.		
back-up adrenaline autoinjecto	reby authorise school staff to d on this plan, including a 'spare' or (AAI) if available, in accordance lance on the use of AAIs in schools.	3	PUSH DOWN HA a click is beard o hold in place for	r felt and 3 seconds		
Signed			Remove EpiPen			
		This is a select feet of	flat on only law at	adlanta abilita ka bi	ad to a second a dead and a second	
rint name:		This document provides me the suman medicines (Ame	dical authorisation for a numerity regulations 20	eutry me crision nearmane profession shools to administer a spere back-up 17. During travel, advenaline auto-injer	nal. It must not be altered without their permissis advensione autoinjector if needed, as permitted b stor devices must be carried in hand-luggage or emergency medications has been prepared by:	
Swite:		ue peson, and MOT in the	ugyaye mad This action	pean and authorisation to travel with	entergettely measurations has been prepared by:	
For more information a		Sign & print name:				
anaphylaxis in schools back-up adrenaline aut		Hospital/Clinic:				
pack-up autenanne aut sparepensinschools.uk						
					. Date:	

## bsaci ALLERGY ACTION PLAN RCPCH AMBrayuk





This child has the following allergies:

Name:		Watch for significant of the	gic reaction)	
DOB:		Anaphylaxis may occur with in someone with known foo		
	Photo	AIRWAY  • Persistent cough  • Hoarse voice  • Difficulty swallowing  • Swollen tongue	B BREATHING  • Difficult or noisy breathing  • Wheeze or persistent cough	CONSCIOUSNESS  • Persistent dizziness  • Pale or floppy  • Suddenly sleepy  • Collapse/unconscious
			E) OF THESE SIGNS A raised (if breathing is diffi	ABOVE ARE PRESENT: cult, allow child to sit)
0				
• Phone parent/emer	th rash vocating sehaviour set: , call for help sautoinjector(s) set (if vocated, con repeat dose) regency contact sect details:	3 In a school with "spare the SPARE AUTOINJE 4 Commence CPR if the 5 Stay with child until a 6 Phone parent/emerger *** IF IN DOUBT, GIVE You can dial 900 from any phone, eve	back-up adrenaline autoir cTOR if available re are no signs of life mbulance arrives, do NOT ncy contact  ADRENALINE *** an if there is no credit left on a mobiler more information about managit it sparepensinschools.uk	stand child up
Parental consent: I hereby odminister the medicines listed on sack-up adhenaline satoinjector (AA with Department of Health Guidance	this plan, including a 'spare' Al) if available, in accordance	This BSACI Action Plan for Allergic allergies, who need to avoid certain been prescribed an adrenaline autoi instructions for adrenaline autoinje For further information, consult NIC	allergens. For children at injector device, there are B ctors. These can be downlo	risk of anaphylaxis and who have SACI Action Plans which include baded at <b>bsaci.org</b>
Signed		young people at guidance.nice.org.u	ik/CG116	ramana na aven <del>a da</del> en a regió de espectado de espectado.
runt name.		This is a method document that can only be cought. This document provides medical authorisation for child having analytylasts proper sited by the later confines that there are no medical contra-indicata- staff in an emproper, This plan has been prepared.	schools to administer a 'spere' adrenati san medicines (Amendment) Regulatio ons to the above-named child being ad-	ne autoinjector in the event of the above-mayed no 1007. The healthcare professional named below
hate:			707124	
For more information abou anaphylaxis in schools and back-up adrenaline autoin	d "spare"	tign & print name:  Hospital/Clinic:		

Appendix P: Letter to pharmacist for spare inhaler
[add your school's logo]

Dear Pharmacist,

We wish to purchase Salbutamol inhalers and spacers for use in our school. The Salbutamol inhalers and Spacers will be used in accordance with manufacture's guidelines and the Human Medicines (Amendment) (No. 2) Regulations 2014, allowing schools to buy salbutamol, without a prescription, for use in emergencies.

Item	Quantity
Salbutamol MDI Inhaler	
Spacers	
AeroChamber Plus Flow-Vu Anti-Static yellow with facemask (Trudell Medical UK Ltd)	
AeroChamber Plus Flow-Vu Anti-Static youth 5+ years (Green/blue) with mouthpiece (Trudell Medical UK Ltd)	
Disposable Able Spacer Pack x 10 (Clement Clarke)	

School	
Address	
Telephone number	

Yours faithfully
------------------

**Head Teacher** 

#### Appendix Q: Letter to pharmacist for spare AAI

[To be completed on headed school paper]

[Date]

We wish to purchase emergency Adrenaline Auto-injector devices for use in our school/ college.

The adrenaline auto-injectors will be used in line with the manufacturer's instructions, for the emergency treatment of anaphylaxis in accordance with the Human Medicines (Amendment) Regulations 2017. This allows schools to purchase "spare" back-up adrenaline auto-injectors for the emergency treatment of anaphylaxis. (Further information can be found at <a href="https://www.gov.uk/government/consultations/allowing-schools-to-hold-spare-adrenaline-auto-injectors">https://www.gov.uk/government/consultations/allowing-schools-to-hold-spare-adrenaline-auto-injectors</a>).

Please supply the following devices:

Brand name*		Dose* (state milligrams or micrograms)	Quantity required
	Adrenaline auto-injector device	100	
	Adrenaline auto-injector device		

Signed:	Date:	
5	_	

#### Print name:

#### Head Teacher/Principal

\*AAIs are available in different doses and devices. Schools may wish to purchase the brand most commonly prescribed to its pupils (to reduce confusion and assist with training). Guidance from the Department of Health to schools recommends:

For children age under 6 years:	For children age 6-12 years:	For teenagers age 12+ years:
Epipen Junior (0.15mg) or	Epipen (0.3 milligrams) or	Epipen (0.3 milligrams) or
Emerade 150 microgram or	Emerade 300 microgram or	Emerade 300 microgram or
Jext 150 microgram	Jext 300 microgram	Emerade 500 microgram or
	*	Jext 300 microgram

Further information can be found at http://www.sparepensinschools.uk

Appendix R: Emergency Kit location poster



#### Appendix S: Emergency kits checklist

#### **Emergency Kit Checklist**

Emergency asthma kit	Yes	No		
At least 2 salbutamol metered dose inhalers (MDI) with manufacturer's instructions and label for expiry date				
At least 2 single-use spacers compatible with the inhaler				
A school asthma action plan				
Instructions on how to administer the inhaler using spacer				
Instructions on cleaning and storing the inhaler and spacer				
Emergency Allergy Kit	Yes	No		
At least 2 adrenaline auto-injectors with manufacturer's instructions and label for expiry date				
Instructions how to administer the adrenaline auto-injector				
Recognising signs of an allergic reaction and anaphylaxis poster				

#### **Emergency Kit Audit**

	Term 1a	Term 1b	Term 2a	Term 2b	Term 3a	Term 3b	
Emergency asthma kit – sign and date							
All items							
present as per							
checklist							
The inhalers							
have							
sufficient							
doses							
remaining							
The inhalers							
have more							
than 3							
months							
before expiry							
The spacers							
are in good							
working							
order, free							
from							
scratches and							
cloudiness							

All items have been stored correctly										
Emergency Allergy Kit — sign and date										
All items present as per checklist										
The AAIs have more than 3 months before expiry										
The medication has not discoloured and does not have any particles present										
All items have been stored correctly										

#### **Emergency Kit Action Plan**

	Term 1a	Term 1b	Term 2a	Term 2b	Term 3a	Term 3b				
	Termina	<u>L</u>			Terriroa	16111130				
Emergency asthma kit – sign and date										
Outstanding action(s) list										
Outstanding action(s) completed, sign and date										
Emergency allergy kit — sign and date										
Outstanding action(s) list										
Outstanding action(s) completed, sign and date										

#### 22. References

This document uses material from:

Asthma UK (n.d.), 'Asthma Facts and FAQs' [online] Available at: <a href="http://www.asthma.org.uk/asthmafacts-and-statistics">http://www.asthma.org.uk/asthmafacts-and-statistics</a> [Accessed: 16<sup>th</sup> Feb. 2021]

Department of Health (2015). 'Guidance on the use of emergency inhalers in schools'. [online] Available at:

https://www.gov.uk/government/uploads/system/uploads/attachment\_data/file/416468/emergenc y\_inhalers\_in\_schools.pdf [Accessed: 16<sup>th</sup> Feb. 2021]

Department of Health (2015). 'Supporting pupils in schools with medical conditions'. [online] Available at:

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\_data/file /803956/supporting-pupils-at-school-with-medical-conditions.pdf [Accessed: 16<sup>th</sup> Feb. 2021]

Department of Health (2017). 'Guidance on the use of Adrenaline auto-injectors in schools'. [online] Available at:

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\_data/file /645476/Adrenaline\_auto\_injectors\_in\_schools.pdf [Accessed: 16<sup>th</sup> Feb. 2021]

Healthy London Partnership (2016). 'London asthma standards for children and young people'. [online] Available at: <a href="https://www.healthylondon.org/wp-content/uploads/2017/11/Londonasthma-standards-for-children-and-young-people.pdf">https://www.healthylondon.org/wp-content/uploads/2017/11/Londonasthma-standards-for-children-and-young-people.pdf</a> [Accessed: 16<sup>th</sup> Feb. 2021]

#### 23. Useful websites

- Epipen <u>www.epipen.co.uk</u>
- Jext www.jext.co.uk
- British Society of Allergy and Clinical Immunology <a href="https://www.bsaci.org">https://www.bsaci.org</a>
- Allergy UK <a href="https://www.allergyuk.org/">https://www.allergyuk.org/</a>
- Anaphylaxis Campaign https://www.anaphylaxis.org.uk/
- Spare Pens in schools <a href="http://www.sparepensinschools.uk">http://www.sparepensinschools.uk</a>
- Asthma UK <a href="https://www.asthma.org.uk/">https://www.asthma.org.uk/</a>
- Aerochamber animation <a href="https://www.trudellmed.com/products/aerochamber-flow-vuchamber">https://www.trudellmed.com/products/aerochamber-flow-vuchamber</a>
- Healthy London Partnership <a href="https://www.healthylondon.org/our-work/children-youngpeople/asthma/">https://www.healthylondon.org/our-work/children-youngpeople/asthma/</a>
- Education for Health https://www.educationforhealth.org/allresources/free-elearning/

### 24. Locally made films

- Asthma kit <a href="https://youtu.be/pfaG\_Rz5CwQ">https://youtu.be/pfaG\_Rz5CwQ</a>
- Washing a spacer <a href="https://youtu.be/NblqBgmfTFE">https://youtu.be/NblqBgmfTFE</a>
- What it feels like to have asthma https://youtu.be/ZNvqMDpfFQs
- Living with asthma <a href="https://youtu.be/OyOdu7hAjL0">https://youtu.be/OyOdu7hAjL0</a>
- Whole school asthma approach <u>https://youtu.be/l1J4cTwMev0</u>