

**The Children’s Anti-inflammatory RELiever (CARE) study: a protocol for a randomised controlled trial of budesonide-formoterol as sole reliever therapy in children with mild asthma**

**Supplementary material**

**Asthma action plans and logbooks**

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Figure S1: Budesonide-formoterol (Symbicort Rapihaler®): Step 1



Name: \_\_\_\_\_ Date of plan: \_\_\_\_\_

GP: \_\_\_\_\_ GP phone: \_\_\_\_\_

**ASTHMA ACTION PLAN | SYMBICORT**

<p>Feeling well</p>	<p><b>Know your asthma symptoms</b></p> <p><b>Your asthma is under control when...</b></p> <ul style="list-style-type: none"> <li>You do not have asthma symptoms most days (wheeze, tight chest, cough, or find it hard to breathe)</li> <li>You can play just like other children</li> <li>Most days you do not need your Symbicort</li> </ul>	<p><b>Know when and how to take your puffers</b></p> <p><b>Remember...</b></p> <ul style="list-style-type: none"> <li>Take <b>2 puffs</b> of your <b>Symbicort</b> through a spacer when you wheeze, cough, or find it hard to breathe</li> <li>Take <b>2 puffs</b> of your <b>Symbicort</b> through a spacer if you find it hard to breathe when you exercise or play</li> </ul>	<p><b>Know your puffers</b></p> <ul style="list-style-type: none"> <li>The name of your puffer is <b>Symbicort</b>. The colour is <b>red</b></li> <li>You take this puffer only when you need it</li> <li>You should <b>carry your Symbicort</b> with you at all times</li> <li>You should <b>always use a spacer</b> with your Symbicort and take <b>6 breaths</b> for each puff</li> </ul>
<p>Getting worse</p>	<p><b>Your asthma is getting worse when...</b></p> <ul style="list-style-type: none"> <li>You coughing or wheezing more</li> <li><b>OR</b> you wake up at night because of your asthma</li> <li><b>OR</b> You are using more than 6 puffs a day, for one week</li> </ul>	<p><b>Let's take action...</b></p> <ul style="list-style-type: none"> <li>You need to see your doctor within the next week to change the way you use your puffer</li> <li>Take <b>2 puffs</b> of your <b>Symbicort</b> through a spacer as often as needed to relieve symptoms</li> </ul>	<p><b>Study details</b></p> <p><b>Next appointment dates</b></p> <p>Visit 2 _____</p> <p>Visit 3 _____</p> <p>Visit 4 _____</p> <p>Visit 5 _____</p> <p><b>Study contact</b></p> <p>Name _____</p> <p>Phone _____</p> <p>Email _____</p>
<p>Feeling worried</p>	<p><b>Your asthma is a worry when...</b></p> <ul style="list-style-type: none"> <li>You are breathing fast or find it hard to breathe</li> <li><b>OR</b> your Symbicort is only helping for 2-3 hours</li> <li><b>OR</b> you are using more than 12 puffs of Symbicort a day</li> <li><b>OR</b> you feel you need to see your doctor</li> </ul>	<p><b>Let's get help...</b></p> <ul style="list-style-type: none"> <li><b>You need to go to the hospital or see your doctor today</b></li> <li>Take <b>2 puffs</b> of your <b>Symbicort</b> through a spacer as often as needed to relieve symptoms</li> </ul>	<p><b>Medical help</b></p> <p>If you need medical help for your asthma, please contact your GP, After Hours service, or 111 as appropriate. This is important to make sure you get treated quickly.</p>
<p>Emergency</p>	<p><b>Your asthma is an emergency when...</b></p> <ul style="list-style-type: none"> <li>Your symptoms are getting more severe quickly</li> <li><b>OR</b> you are finding it hard to speak or breathe</li> <li><b>OR</b> you look pale or blue</li> <li><b>OR</b> your Symbicort is not helping</li> <li><b>OR</b> you are using your Symbicort every 1-2 hours</li> <li><b>OR</b> you are using more than 16 puffs a day</li> </ul>	<p><b>Let's keep calm...</b></p> <ul style="list-style-type: none"> <li><b>Dial 111 for an ambulance and tell them you're having a severe asthma attack</b></li> <li>Sit upright and try to stay calm</li> <li>Take <b>2 puffs</b> of <b>Symbicort</b> through a spacer, taking 6 breaths for each puff, as often as needed until help arrives</li> <li>Even if you seem to get better, seek medical help right away</li> </ul>	

## How to use your inhaler with a spacer

When using a metered dose inhaler (MDI), a spacer will help get the right dose of medicine into your lungs. Remember not to share your spacer with anyone else



1. Hold the inhaler upright and give it a good shake
2. Fit the inhaler into the opening at the end of the spacer
3. Seal lips firmly around the mouth piece, and press the inhaler once only
4. Take 6 slow breaths in and out through your mouth. Do not remove the spacer from your mouth between breaths
5. Remove the spacer from your mouth
6. Repeat steps 1-4 for further doses
7. Rinse your mouth with water or brush your teeth after using your Symbicort puffer



## Washing your spacer

Wash your spacer once a week with warm water and dishwashing liquid.

**Leave to drip dry (do not rinse).** This will ensure that your medicine gets into your lungs and does not stick to the sides of the spacer

## Since your last visit...

Have you taken any days off school or work due to asthma?

Start date	End date	How many days?	Did someone take time off work due to your asthma?	How many people took time off work due to your asthma? Who were they?	How many days did each person take off work?
e.g. 16/09/2020	e.g. 18/09/2020	e.g. 3	e.g. Yes	e.g. 2 - me and mum	e.g. Me 2 days, Mum 1 day

Have you started any new medication (other than prednisone) **OR** changed any existing medication?

Medication started/changed	Dose	How many times a day?	How long for?	Date started/changed	Date stopped	Reason for medication
e.g. Amoxicillin	e.g. 500mg	e.g. 3	e.g. 5 days	e.g. 15/09/2020	e.g. 20/09/2020	e.g. Sore throat

Have you visited your doctor (e.g. GP) or been admitted to hospital due to asthma?

Date	Type of visit	Was prednisone given?	Dose of Prednisone	How long for?	Start date	Stop date	Comments
e.g. 15/09/2020	e.g. ED visit	e.g. Yes	e.g. 40mg	e.g. 4 days	e.g. 15/09/2020	e.g. 19/09/2020	e.g. Admitted



Figure S2: Budesonide-formoterol (Symbicort Rapihaler®): Steps 2 and 3



Name: \_\_\_\_\_ Date of plan: \_\_\_\_\_  
 GP: \_\_\_\_\_ GP phone: \_\_\_\_\_

**ASTHMA ACTION PLAN | SYMBICORT**

**Know your asthma symptoms**

**Feeling well** 

**Your asthma is under control when...**


- You do not have asthma symptoms most days (wheeze, tight chest, cough, or find it hard to breathe)
- You can play just like other children
- Most days you do not need your Symbicort

**Remember...**

Preventer and reliever:	___ puffs(s) every morning
	___ puff(s) every night
<b>Symbicort</b>	<b>2</b> puffs when needed to relieve symptoms

**Know when and how to take your puffers**

**Know your puffers**

**Getting worse** 


**Your asthma is getting worse when...**

- You coughing or wheezing more
- OR** you wake up at night because of your asthma
- OR** You are using more than 6 puffs a day, for one week

**Let's take action...**

- You need to see your doctor within the next week to change the way you use your puffer
- Take **2 puffs** of your **Symbicort** through a spacer as often as needed to relieve symptoms

- The name of your puffer is **Symbicort**. **The colour is red**
- Your Symbicort is both a preventer and a reliever puffer
- You take this everyday even when you are well, and when you need it
- You should **carry your Symbicort** with you at all times
- You should always use a spacer with your Symbicort

**Feeling worried** 

**Your asthma is a worry when...**

- You are breathing fast or find it hard to breathe
- OR** your Symbicort is only helping for 2-3 hours
- OR** you are using more than 12 puffs of Symbicort a day
- OR** you feel you need to see your doctor

**Let's get help...**

- You need to go to the hospital or see your doctor today**
- Take **2 puffs** of your **Symbicort** through a spacer as often as needed to relieve symptoms


**Study details**

**Next appointment dates**

Visit 2 \_\_\_\_\_  
 Visit 3 \_\_\_\_\_  
 Visit 4 \_\_\_\_\_  
 Visit 5 \_\_\_\_\_

**Study contact**

Name \_\_\_\_\_  
 Phone \_\_\_\_\_  
 Email \_\_\_\_\_

**Emergency** 

**Your asthma is an emergency when...**

- Your symptoms are getting more severe quickly
- OR** you are finding it hard to speak or breathe
- OR** you look pale or blue
- OR** your Symbicort is not helping
- OR** you are using your Symbicort every 1-2 hours
- OR** you are using more than 16 puffs a day

**Let's keep calm...**

- Dial 111 for an ambulance and tell them you're having a severe asthma attack**
- Sit upright and try to stay calm
- Take **2 puffs** of **Symbicort** through a spacer, taking 6 breaths for each puff, as often as needed until help arrives
- Even if you seem to get better, seek medical help right away

**Medical help**

If you need medical help for your asthma, please contact your GP, After Hours service, or 111 as appropriate. This is important to make sure you get treated quickly.

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When using a metered dose inhaler (MDI), a spacer will help get the right dose of medicine into your lungs. Remember not to share your spacer with anyone else



1. Hold the inhaler upright and give it a good shake
2. Fit the inhaler into the opening at the end of the spacer
3. Seal lips firmly around the mouth piece, and press the inhaler once only
4. Take 6 slow breaths in and out through your mouth. Do not remove the spacer from your mouth between breaths
5. Remove the spacer from your mouth
6. Repeat steps 1-4 for further doses
7. Rinse your mouth with water or brush your teeth after using your Symbicort puffer



## Washing your spacer

Wash your spacer once a week with warm water and dishwashing liquid.

**Leave to drip dry (do not rinse).** This will ensure that your medicine gets into your lungs and does not stick to the sides of the spacer

## Since your last visit...

Have you taken any days off school or work due to asthma?

Start date	End date	How many days?	Did someone take time off work due to your asthma?	How many people took time off work due to your asthma? Who were they?	How many days did each person take off work?
e.g. 16/09/2020	e.g. 18/09/2020	e.g. 3	e.g. Yes	e.g. 2 - me and mum	e.g. Me 2 days, Mum 1 day

Have you started any new medication (other than prednisone) **OR** changed any existing medication?

Medication started/changed	Dose	How many times a day?	How long for?	Date started/changed	Date stopped	Reason for medication
e.g. Amoxicillin	e.g. 500mg	e.g. 3	e.g. 5 days	e.g. 15/09/2020	e.g. 20/09/2020	e.g. Sore throat

Have you visited your doctor (e.g. GP) or been admitted to hospital due to asthma?

Date	Type of visit	Was prednisone given?	Dose of Prednisone	How long for?	Start date	Stop date	Comments
e.g. 15/09/2020	e.g. ED visit	e.g. Yes	e.g. 40mg	e.g. 4 days	e.g. 15/09/2020	e.g. 19/09/2020	e.g. Admitted



Figure S3: Salbutamol (Ventolin®): Step 1



Name: \_\_\_\_\_ Date of plan: \_\_\_\_\_  
 GP: \_\_\_\_\_ GP phone: \_\_\_\_\_

**ASTHMA ACTION PLAN | VENTOLIN**

<p style="writing-mode: vertical-rl; transform: rotate(180deg);">Feeling well</p>	<p><b>Know your asthma symptoms</b></p> <p><b>Your asthma is under control when...</b></p> <ul style="list-style-type: none"> <li>You do not have asthma symptoms most days (wheeze, tight chest, cough, or find it hard to breathe)</li> <li>You can play just like other children</li> <li>Most days you do not need your Ventolin</li> </ul>	<p><b>Know when and how to take your puffers</b></p> <p><b>Remember...</b></p> <ul style="list-style-type: none"> <li>Take <b>2 puffs</b> of your <b>Ventolin</b> through a spacer when you wheeze, cough, or find it hard to breathe</li> <li>Take <b>2 puffs</b> of your <b>Ventolin</b> through a spacer if you find it hard to breathe when you exercise or play</li> </ul>	<p><b>Know your puffers</b></p> <ul style="list-style-type: none"> <li>The name of your reliever puffer is <b>Ventolin</b>. The colour is <b>blue</b></li> <li>You take this puffer only when you need it</li> <li>You should <b>carry your Ventolin</b> with you at all times</li> <li>You should <b>always use a spacer</b> with your Ventolin and take <b>6 breaths</b> for each puff</li> </ul>
<p style="writing-mode: vertical-rl; transform: rotate(180deg);">Getting worse</p>	<p><b>Your asthma is getting worse when...</b></p> <ul style="list-style-type: none"> <li>You coughing or wheezing more</li> <li><b>OR</b> you wake up at night because of your asthma</li> <li><b>OR</b> You are using more than 6 puffs a day, for one week</li> </ul>	<p><b>Let's take action...</b></p> <ul style="list-style-type: none"> <li>You need to see your doctor within the next week to add a preventer puffer</li> <li>Take <b>2 puffs</b> of your <b>Ventolin</b> through a spacer as often as needed to relieve symptoms</li> </ul>	<p><b>Study details</b></p> <p><b>Next appointment dates</b></p> <p>Visit 2 _____</p> <p>Visit 3 _____</p> <p>Visit 4 _____</p> <p>Visit 5 _____</p> <p><b>Study contact</b></p> <p>Name _____</p> <p>Phone _____</p> <p>Email _____</p>
<p style="writing-mode: vertical-rl; transform: rotate(180deg);">Feeling worried</p>	<p><b>Your asthma is a worry when...</b></p> <ul style="list-style-type: none"> <li>You are breathing fast or find it hard to breathe</li> <li><b>OR</b> your Ventolin is only helping for 2-3 hours</li> <li><b>OR</b> you are using more than 12 puffs of Ventolin a day</li> <li><b>OR</b> you feel you need to see your doctor</li> </ul>	<p><b>Let's get help...</b></p> <ul style="list-style-type: none"> <li><b>You need to go to the hospital or see your doctor today</b></li> <li>Take <b>2 puffs</b> of your <b>Ventolin</b> through a spacer as often as needed to relieve symptoms</li> </ul>	<p><b>Medical help</b></p> <p>If you need medical help for your asthma, please contact your GP, After Hours service, or 111 as appropriate. This is important to make sure you get treated quickly.</p>
<p style="writing-mode: vertical-rl; transform: rotate(180deg);">Emergency</p>	<p><b>Your asthma is an emergency when...</b></p> <ul style="list-style-type: none"> <li>Your symptoms are getting more severe quickly</li> <li><b>OR</b> you are finding it hard to speak or breathe</li> <li><b>OR</b> you look pale or blue</li> <li><b>OR</b> your Ventolin is not helping</li> <li><b>OR</b> you are using your Ventolin every 1-2 hours</li> <li><b>OR</b> you are using more than 16 puffs a day</li> </ul>	<p><b>Let's keep calm...</b></p> <ul style="list-style-type: none"> <li><b>Dial 111 for an ambulance and tell them you're having a severe asthma attack</b></li> <li>Sit upright and try to stay calm</li> <li>Take <b>6 puffs</b> of <b>Ventolin</b> through a spacer every 6 minutes with 6 breaths for each puff until help arrives</li> <li>Even if you seem to get better, seek medical help right away</li> </ul>	

## How to use your inhaler with a spacer

When using a metered dose inhaler (MDI), a spacer will help get the right dose of medicine into your lungs. Remember not to share your spacer with anyone else



1. Hold the inhaler upright and give it a good shake
2. Fit the inhaler into the opening at the end of the spacer
3. Seal lips firmly around the mouth piece, and press the inhaler once only
4. Take 6 slow breaths in and out through your mouth. Do not remove the spacer from your mouth between breaths
5. Remove the spacer from your mouth
6. Repeat steps 1-4 for further doses



## Washing your spacer

Wash your spacer once a week with warm water and dishwashing liquid.

**Leave to drip dry (do not rinse).** This will ensure that your medicine gets into your lungs and does not stick to the sides of the spacer

## Since your last visit...

Have you taken any days off school or work due to asthma?

Start date	End date	How many days?	Did someone take time off work due to your asthma?	How many people took time off work due to your asthma? Who were they?	How many days did each person take off work?
<i>e.g. 16/09/2020</i>	<i>e.g. 18/09/2020</i>	<i>e.g. 3</i>	<i>e.g. Yes</i>	<i>e.g. 2 - me and mum</i>	<i>e.g. Me 2 days, Mum 1 day</i>

Have you started any new medication (other than prednisone) **OR** changed any existing medication?

Medication started/changed	Dose	How many times a day?	How long for?	Date started/changed	Date stopped	Reason for medication
<i>e.g. Amoxicillin</i>	<i>e.g. 500mg</i>	<i>e.g. 3</i>	<i>e.g. 5 days</i>	<i>e.g. 15/09/2020</i>	<i>e.g. 20/09/2020</i>	<i>e.g. Sore throat</i>

Have you visited your doctor (e.g. GP) or been admitted to hospital due to asthma?

Date	Type of visit	Was prednisone given?	Dose of Prednisone	How long for?	Start date	Stop date	Comments
<i>e.g. 15/09/2020</i>	<i>e.g. ED visit</i>	<i>e.g. Yes</i>	<i>e.g. 40mg</i>	<i>e.g. 4 days</i>	<i>e.g. 15/09/2020</i>	<i>e.g. 19/09/2020</i>	<i>e.g. Admitted</i>



Figure S4: Salbutamol (Ventolin®): Steps 2 and 3



Name: \_\_\_\_\_ Date of plan: \_\_\_\_\_  
 GP: \_\_\_\_\_ GP phone: \_\_\_\_\_

**ASTHMA ACTION PLAN | VENTOLIN**

<p><b>Feeling well</b></p>	<p><b>Know your asthma symptoms</b></p> <p><b>Your asthma is under control when...</b></p> <ul style="list-style-type: none"> <li>You do not have asthma symptoms most days (wheeze, tight chest, cough, or find it hard to breathe)</li> <li>You can play just like other children</li> <li>Most days you do not need your Ventolin</li> </ul>	<p><b>Know when and how to take your puffers</b></p> <p><b>Your inhalers are...</b></p> <table border="1"> <tr> <td>Preventer:</td> <td>___ puffs(s) every morning</td> </tr> <tr> <td></td> <td>___ puff(s) every night</td> </tr> <tr> <td>Reliever: <b>Ventolin</b></td> <td><b>2</b> puffs when needed to relieve symptoms</td> </tr> </table>	Preventer:	___ puffs(s) every morning		___ puff(s) every night	Reliever: <b>Ventolin</b>	<b>2</b> puffs when needed to relieve symptoms	<p><b>Know your puffers</b></p> <ul style="list-style-type: none"> <li>Preventer: You take this everyday even when you're well. The name of your preventer is _____. The colour is _____.</li> <li>Reliever: You take this only when you need it. The name of your reliever is <b>Ventolin</b>. The colour is <b>blue</b></li> <li>You should <b>carry your Ventolin</b> with you at all times</li> <li>You should <b>always use a spacer</b> with your puffers</li> </ul>
Preventer:	___ puffs(s) every morning								
	___ puff(s) every night								
Reliever: <b>Ventolin</b>	<b>2</b> puffs when needed to relieve symptoms								
<p><b>Getting worse</b></p>	<p><b>Your asthma is getting worse when...</b></p> <ul style="list-style-type: none"> <li>You coughing or wheezing more</li> <li><b>OR</b> you wake up at night because of your asthma</li> <li><b>OR</b> You are using more than 6 puffs a day, for one week</li> </ul>	<p><b>Let's take action...</b></p> <ul style="list-style-type: none"> <li>You need to see your doctor within the next week to change your preventer puffer</li> <li>Take <b>2 puffs</b> of your <b>Ventolin</b> through a spacer as often as needed to relieve symptoms</li> </ul>	<p><b>Study details</b></p> <p><b>Next appointment dates</b></p> <p>Visit 2 _____</p> <p>Visit 3 _____</p> <p>Visit 4 _____</p> <p>Visit 5 _____</p> <p><b>Study contact</b></p> <p>Name _____</p> <p>Phone _____</p> <p>Email _____</p>						
<p><b>Feeling worried</b></p>	<p><b>Your asthma is a worry when...</b></p> <ul style="list-style-type: none"> <li>You are breathing fast or find it hard to breathe</li> <li><b>OR</b> your Ventolin is only helping for 2-3 hours</li> <li><b>OR</b> you are using more than 12 puffs of Ventolin a day</li> <li><b>OR</b> you feel you need to see your doctor</li> </ul>	<p><b>Let's get help...</b></p> <ul style="list-style-type: none"> <li><b>You need to go to the hospital or see your doctor today</b></li> <li>Take <b>2 puffs</b> of your <b>Ventolin</b> through a spacer as often as needed to relieve symptoms</li> </ul>	<p><b>Medical help</b></p> <p>If you need medical help for your asthma, please contact your GP, After Hours service, or 111 as appropriate. This is important to make sure you get treated quickly.</p>						
<p><b>Emergency</b></p>	<p><b>Your asthma is an emergency when...</b></p> <ul style="list-style-type: none"> <li>Your symptoms are getting more severe quickly</li> <li><b>OR</b> you are finding it hard to speak or breathe</li> <li><b>OR</b> you look pale or blue</li> <li><b>OR</b> your Ventolin is not helping</li> <li><b>OR</b> you are using your Ventolin every 1-2 hours</li> <li><b>OR</b> you are using more than 16 puffs a day</li> </ul>	<p><b>Let's keep calm...</b></p> <ul style="list-style-type: none"> <li><b>Dial 111 for an ambulance and tell them you're having a severe asthma attack</b></li> <li>Sit upright and try to stay calm</li> <li>Take <b>6 puffs</b> of <b>Ventolin</b> through a spacer every 6 minutes with 6 breaths for each puff until help arrives</li> <li>Even if you seem to get better, seek medical help right away</li> </ul>							



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5. Remove the spacer from your mouth
6. Repeat steps 1-4 for further doses
7. Rinse your mouth with water or brush your teeth after using your preventer puffer



## Washing your spacer

Wash your spacer once a week with warm water and dishwashing liquid.

**Leave to drip dry (do not rinse).** This will ensure that your medicine gets into your lungs and does not stick to the sides of the spacer

## Since your last visit...

Have you taken any days off school or work due to asthma?

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e.g. 16/09/2020	e.g. 18/09/2020	e.g. 3	e.g. Yes	e.g. 2 - me and mum	e.g. Me 2 days, Mum 1 day

Have you started any new medication (other than prednisone) **OR** changed any existing medication?

Medication started/changed	Dose	How many times a day?	How long for?	Date started/changed	Date stopped	Reason for medication
e.g. Amoxicillin	e.g. 500mg	e.g. 3	e.g. 5 days	e.g. 15/09/2020	e.g. 20/09/2020	e.g. Sore throat

Have you visited your doctor (e.g. GP) or been admitted to hospital due to asthma?

Date	Type of visit	Was prednisone given?	Dose of Prednisone	How long for?	Start date	Stop date	Comments
e.g. 15/09/2020	e.g. ED visit	e.g. Yes	e.g. 40mg	e.g. 4 days	e.g. 15/09/2020	e.g. 19/09/2020	e.g. Admitted