**Frequently asked Questions from CSH Respiratory Susnet sharing meeting**

**June 2025**

**Questions on AIR/MART Regimes**

1. **If patients are using additional doses, are there risks from too much inhaled corticosteroid?**

Evidence shows a lower overall steroid burden and a reduced risk of asthma exacerbations. (1)

There are much greater risks of needing oral steroids if asthma is uncontrolled and patients' needs oral prednisolone for an asthma exacerbation. Oral prednisolone dose is 1000x higher and has unwanted systemic side effects.

A few short courses of prednisolone over a lifetime increases risk of cataracts, diabetes, osteoporosis.

If patients are concerned about using inhaled steroids, Professor Rob Horne's work suggests it may be helpful to explain that their airways are responding too strongly to triggers causing their airways to swell. They need more of the steroid *that their body naturally produces* to counter this.

1. **How do we inform patients about the different expiry dates. Especially as these vary in terms of if inhaler opened?**

Certain brands of beclomethasone/formoterol pressurised metered dose inhalers (Fostair®, Luforbec® and Bibefco®) need to be stored in the fridge and need to be thrown away three months after they are removed from the fridge. This will be on the patient information leaflet and the pharmacy should place a label on the product to highlight that it cannot be used after 3 months. Some dry powder inhalers also have a limited expiry date once in use (see table below for more detail). Patients should be counselled on this when it is prescribed for AIR regime.

|  |  |
| --- | --- |
| Inhaler | Expiry date once opened |
| Fostair, Luforbec and Bibefco pMDI | 3 months |
| Fobumix Easyhaler | 4 months |
| Duoresp Spiromax | 12 months |
| Symbicort Turbohaler | 3 years |
| Fostair Nexthaler | 6 months |
| WockAir DPI  | 2 years |

1. **How can we assess asthma control based on how frequently patients are requesting inhalers, if additional use is variable?**

There is no definitive answer to this. However, if a patient is well controlled on a MART inhaler, they will rarely have to take additional doses and two doses a week additional doses on average would be reasonable. If patients are regularly needing to use more than one additional dose a day, they would need a review to assess this.

If we use the example of a 120 dose inhaler, we should be alerted to possible poor asthma control if

* AIR - >1 dose/day ( 8 doses weekly), regularly ordering it before 15 weeks (120 days)
* MART - 1 puff twice a day, regularly ordering before 6 weeks
* MART - 2 doses twice a day, regularly ordering before 3 weeks.

You should also consider if patients on MART are not ordering enough inhaler to take their regular daily dose. In most patients one inhaler would last 8 weeks if they are taking 1 puff twice a day or 4 weeks if they are using 2 puffs twice a day. Under use may increase their risk of uncontrolled asthma.

Detailed workings for MART regimes explained below:

MART regime of 1 dose twice a day plus additional doses as needed. Inhaler has 120 doses.

With no additional puffs used (14 doses a week) the inhaler will last 60 days (8 weeks plus 4 days).

If additional 2 puffs a week (16 doses a week) - 52 days (7 weeks 2 days)

If additional 8 puffs a week (22 doses a week) – 38 days (5 weeks 3 days)

If a patient was regularly needing to order their prescription every 5-6 weeks, this would mean they were using on average an additional 8 doses a week – or more than one a day. This would be a good marker for review.

Example 2: MART regime of 2 doses twice a day plus additional dose as needed. 120 doses.

With no additional puffs (28 doses a week) - 30 days.

If additional 2 puffs a week ( 30 doses a week) - 28 days

If additional 8 puff a week (38 doses a week) – 3 weeks 1 day.

If the patient is regularly needing to order their inhaler every 3 weeks this would be cause for review.

1. **Do people on AIR or MART still need a SABA?**

No! Formoterol works just as quickly as Salbutamol. Giving them SABA prevents the benefits of combination inhalers as patients may still use blue inhaler instead of combination inhaler as reliever.

1. **Don’t these combination inhaler regimes cost a lot more?**

Overall, they are cost-effective due to fewer asthma exacerbations. NICE has done a cost-effectiveness analysis. (2)

1. **What are the risks of starting AIR if they don't have asthma?**

This is very low risk. Little steroid will be systemically absorbed and the inhaler can be stopped when it becomes clear that the patient does not have asthma. . It is far riskier to give SABA whilst patient is being suspected of asthma diagnosis as if the patient does have asthma, they are effectively not on treatment, increasing their risk of an asthma attack. Giving a SABA alone, whilst undertaking diagnosis can also give patients the impression that this is the main treatment for asthma. The new [NICE asthma guidance](https://cks.nice.org.uk/topics/asthma/) is clear, that no one with asthma should ever be on SABA alone.

**Questions on Dry Powder Inhalers**

1. **Are DPIs as effective as pressurised metered dose inhalers.**

In many RCTs, DPIs are just as effective. In many real world studies, more effective (3,4,5,6)

From a patient perspective, an individual assessment needs to be made regarding inhaler device choice. Most patients with asthma will be able to use a DPI effectively, and many find it easier to use than a pMDI. Caution is needed with young children and those with severe asthma.

1. **Can patients safely use a DPI during an exacerbation?**

Yes, patients who are assessed to be able to use a DPI effectively, will be able to use if during an exacerbation. (7)

1. **What type of inhaler do patients prefer?**

DPIs are popular with patients. In one study, where patients were given a free choice, 86% did not choose a pMDI.(8)

1. O'Byrne PM, FitzGerald JM, Bateman ED, Barnes PJ, Zhong N, Keen C, Jorup C, Lamarca R, Ivanov S, Reddel HK. Inhaled Combined Budesonide-Formoterol as Needed in Mild Asthma. N Engl J Med. 2018 May 17;378(20):1865-1876. doi: 10.1056/NEJMoa1715274.
2. <https://www.nice.org.uk/guidance/ng245/chapter/Rationale-and-impact>
3. Switching patients from other inhaled corticosteroid devices to the Easyhaler®: Historical, matched-cohort study of real-life asthma patients. *J Asthma Allergy* 2014, 7: 31-51.
4. Effectiveness of fluticasone furoate plus vilanterol on asthma control in clinical practice: An open-label, parallel group, randomised controlled trial. Lancet 2017, 390: 2247-55.
5. Effectiveness of inhaler types for real-world asthma management: retrospective observational study using the GPRD Journal of Asthma and Allergy 2011:4 37–47
6. Beasley R, Holliday M, Reddel HK, et al. Controlled Trial of Budesonide–Formoterol as Needed for Mild Asthma. *N Engl J Med*. 2019;380(21):2020-2030. doi:10.1056/NEJMoa1901963
7. Vartiainen VA, Federico Lavorini, Anna C Murphy & Klaus F Rabe (2023) High inhaler resistance does not limit successful inspiratory manoeuvre among patients with asthma or COPD, Expert Opinion on Drug Delivery, 20:3, 385-393, DOI: 10.1080/17425247.2023.2179984
8. Schreiber J, Sonnenburg T, Luecke E. Inhaler devices in asthma and COPD patients - a prospective cross-sectional study on inhaler preferences and error rates. BMC Pulm Med. 2020 Aug 20;20(1):222. doi: 10.1186/s12890-020-01246-z. PMID: 32819337; PMCID: PMC7439539.