

# CLIMATE CONSCIOUS INHALER PRACTICES IN INPATIENT CARE

## Hospital Formulary: A step-by-step guide



This step-by-step guide was developed by the Critical Air Project, led by Dr. Valeria Stoyanova and Dr. Celia Culley at Island Health in Victoria, British Columbia. The steps in this guide are contextualized by the worked examples and recommendations from the Critical Air Project team.

Use the Notes section to brainstorm who to engage, ideas for action, and to check off completed steps!

1

Locate the hospital formulary

Context

At Island Health, the hospital formulary is located on the Intranet. This requires a staff login to access.

Notes

2

Identify which inhalers are on hospital formulary and their relative carbon footprint

Context

Within short-acting bronchodilators

- Salbutamol MDI: 9.7-28.2g CO<sub>2</sub>e (38.8-112.6 km)
- Salbutamol DPI (Ventolin Diskus): 600g CO<sub>2</sub>e (2.4 km)

Within ICS/LABA

- Budesonide/formoterol (Symbicort Turbuhaler): 800g CO<sub>2</sub>e (3.2 km)
- Fluticasone/salmeterol (Advair Diskus, Wixela Inhub): 900-1,125g CO<sub>2</sub>e (3.5-4.5 km)
- Fluticasone/vilanterol (Breo Ellipta): 780 CO<sub>2</sub>e (3.5 km)
- Mometasone/formoterol (Zenhale MDI): 34,800g CO<sub>2</sub>e (139 km)

Notes

3

Decide which inhalers you would like to see on hospital formulary and why

Context

SABA: Aimed to include terbutaline (Bricanyl Turbuhaler DPI)

- The Salbutamol DPI on formulary was expensive and seldomly used. It was often substituted for salbutamol MDI.
- The Salbutamol DPI on formulary is not covered by the outpatient provincial drug plan, so patients may be switched to MDI as outpatients. (Salbutamol DPI cost per dose 0.40\$ vs MDI 0.09\$)
- The carbon footprint of Terbutaline is marginally better (Terbutaline 1.9km vs Salbutamol DPI 2.4km)

ICS/LABA: Aimed to change mometasone/formoterol to fluticasone/salmeterol (Advair MDI)

- Mometasone/formoterol (Zenhale) is the only MDI on the Canadian market using HFA227 as a propellant, which is 3200x more potent than CO<sub>2</sub>. It has the highest carbon footprint of any inhaler available in Canada at 139km.
- The alternative MDI (fluticasone/salmeterol Advair MDI) only has a carbon footprint of 78km. Both have the same Special Authority coverage criteria in the outpatient setting.

Notes

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Identify and engage the formulary management team at the hospital

Context

The Medication Use and Management pharmacist took the lead, collaborating closely with pharmacy colleagues at different health authorities to address the provincial scope of BC's hospital formulary.

Notes

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5

Identify the process by which formulary change requests are made

Context

The team used the BC Health Authorities Drug Review Request form, which requires a submission for the requested drug, proposed indication and rationale including supporting clinical evidence. A department head and Pharmacy & Therapeutics (P&T) co-chair or delegate are also required to sign-off on the request form.

- Once the Medication Use Management Pharmacist receives this form, they present it to a provincial drug review committee and if approved to move forward, a formal formulary drug review is completed including cost analysis.
- For **Terbutaline**, the initial form was approved and moved on to the next stage.
- For **Zenhale**, a preliminary cost analysis revealed that, given the small number of ICS/LABA MDIs used provincially, the cost of making the change to a different ICS/LABA MDI was prohibitive. This request did not progress past this stage.

Notes

6

Make a compelling case for formulary change

Context

The Medication Use and Management pharmacist spearheaded the writing of the Terbutaline Formulary Drug Review Report along with a colleague at a different Health Authority. The report included organizational priorities, carbon analysis, and cost analysis of the change.

Notes

7

Determine the process for requests to be reviewed by committees

Context

In BC, the committee deciding on the contents of the provincial hospital formulary is called the Pharmacy and Therapeutics Committee (P&T Committee)

- Once a request is made, different health authorities receive stakeholder feedback in different ways. There is a critical review period for stakeholders including clinicians to provide feedback. Once you have submitted the form, clarify when and how feedback will be solicited.
- At Island Health, this was done through an email request to the MUM pharmacist.

Notes

8

Ensure clinicians are aware of the formulary request

Context

The team presented at hospital Grand Rounds, hospitalist rounds and primary care rounds on inhaler sustainability during the critical feedback period and included information on how to show support for this initiative during the talk.

Notes

9

Publicize and spread the word so these options can be adopted into practice.

Context

Once the addition of Terbutaline to the hospital formulary was confirmed, the team communicated this decision to clinicians through the same channels we used to elicit feedback, and incorporated this new information to the clinical order sets and wardstock.

Notes