The WONCA Working Party on the Environment Statement on Sustainable Inhaled Therapies for Healthier People and the Planet

July 2022

People are well aware of air pollution being a risk factor for the development and exacerbations of chronic respiratory diseases, but generally do not know that inhaled therapy to treat respiratory diseases can contribute to climate change. In turn, climate change contributes to respiratory disease including asthma due to increasing intensity and duration of pollen seasons and risks of wildfires.

Environmental impact of inhalers

The health sector is responsible for 7-8% of the carbon footprint worldwide. Pharmaceuticals are in the top 3 of carbon emissions in health care. Commonly-prescribed metered-dose inhalers (MDIs) for chronic respiratory diseases contain hydrofluorocarbons (HFCs) that are strong greenhouse gases and a significant cause of climate change. Although all devices cause some CO_2 pollution in their manufacture, it is the HFA propellant gases that contribute the large majority of the climate impact of inhalers. A typical salbutamol MDI supplying 200 puffs is responsible for a global warming equivalent effect comparable to driving 250 km in a mid-size car. The global warming impact of other inhaler types, such as dry powder inhalers (DPIs), is negligible. At this moment, less harmful alternatives (mainly DPI) for MDIs are available and affordable in many countries.

Kigali agreement

In 1995 MDIs contained chlorofluorocarbons (CFCs) that caused the ozone hole in the stratosphere. Under the strict regulation of the 1987 Montreal Protocol CFCs were replaced by HFCs in 30 years. In 2016 the Kigali agreement (an amendment to the Montreal protocol) was developed to phase out HFCs from 2020-2050 and was signed by 170 countries. However, the regulation is less strict,

countries are free to choose how to phase out HFCs during this period and most countries have chosen to start with regulations for refrigerators and air conditioners.

Recommendation to policy advocacy:

- Request GINA to consider healthcare systems' carbon footprint when developing their guidelines**.**
- Reducing air pollution exposure, both indoors and outdoors, is cost-effective to reduce asthma burden, and externalities affecting planetary health.
- Develop regulation regarding the use of potent HFCs in MDIs.
- Make DPIs more accessible to vulnerable populations.
- Access to DPIs should be part of health equity strategies and climate action.
- Consider WHO´s recommendation on green procurement.
- Consider adjusting cost-effective analysis to account for climate change and planetary health.

Recommendation to pharmaceutical companies

- Progress development of MDIs which use alternate propellant gases with a lower global warming potential (such as HFC-152a).
- Phase out MDIs with HFCs with a high global warming potential according to "race to zero".
- Further research and development of DPIs and soft mist inhalers, including reducing the cost of these inhalers internationally to improve their availability.
- Include dose counters on all MDIs to reduce wasted resources when inhalers are disposed of before they are empty.
- Stop including polluting HFCs in placebo devices.
- Work with health services and governments to develop programs to recycle plastic and metal components of inhalers and to capture unspent HFC gases.

This policy statement is in line with WONCA´s call for planetary health action.

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