Life & Times

Our prescription for climate change:

reduce and recycle inhalers!

It's an emergency — you take a deep breath in. But this time the emergency isn't a patient collapsing in front of you: that awful feeling in the pit of your stomach is the sense of alarm that comes from knowing that you are contributing to irreversible, anthropogenic climate change — by prescribing an inhaler!

GREENHOUSE GAS

Unbeknown to most doctors and patients, metered-dose inhalers (MDIs) — the most common is the trusted 'blue puffer' salbutamol — pose a devastatingly significant and direct threat to the environment. Although the Montreal Protocol led to the phasing out of ozone-damaging chlorofluorocarbons (CFCs) in inhalers in the 1990s, sadly, they were replaced with hydrofluorocarbons (HFCs). HFCs — although unreactive with ozone and thus safe for the ozone layer — are powerful greenhouse gases. Their effect on climate change has been calculated to be up to 3800 times more powerful than that of carbon dioxide: the equivalent of driving a typical car for 170 miles, per inhaler.[1]

To put this into context, the Department for Transport reports that cars travelled an average of 7134 miles in 2017, so, performing a back-of-an-envelope calculation, by prescribing 42 salbutamol inhalers you have just put an extra car on the road! Have a look over your prescribing records and shudder.

And an MDI inhaler's impact on the environment does not end there. Of the estimated 35 million inhalers issued by the NHS each year, only about 0.5% are recycled appropriately.[2] Thus millions of MDIs end up in landfill each year, where they not only contribute to plastic waste, but also, over time, release residual HFCs into the atmosphere.

Our long-term effort to cut global greenhouse gas emissions must include international legislation to phase out HFCs, and a recent amendment to the Montreal Protocol is calling for just that. The need to act has also filtered through to new National Institute for Health and Care Excellence guidelines and recommendations from the Parliamentary Environmental Audit Select Committee.[1,2] However, this process needs to be expedited through raising awareness and action on a more local level.

Young woman using an asthma inhaler outdoors.

MAKE THE SWITCH TO A NON-PROPELLANT DEVICE

A two-pronged approach is required to reduce the NHS's HFC output from inhalers.

First, we must reduce our prescriptions of propellant-driven inhalers. The UK is currently over-reliant on their use over the greener alternative that are dry-powder inhalers (DPIs), with 70% of inhalers issued belonging to the MDI category. Compare this with Sweden, where that figure is only 10%![3] For many people with airway disease, shifting from an MDI inhaler to a dry-powder version is problem-free. Thus, the British Thoracic Society (BTS) now encourages all prescribers and patients to switch from MDIs to non-propellant devices whenever they are likely to be equally effective.[4] Second, we must responsibly dispose of used MDIs. It is a little-known fact that residual HFCs contained within inhaler canisters can be reclaimed and recycled for other purposes. An example of this is the 'Complete the Cycle' recycling scheme, which is self-sustaining by selling the recovered propellant to refrigerator manufacturers.

The main obstacle standing in the way of inhaler recycling is — as so often — lack of awareness. Show of hands: who knew about the recycling schemes for MDIs? Does your practice nurse in charge of asthma and COPD reviews know this? Or your local pharmacist? Or, most importantly, your patients?

So, do your bit to limit climate change: curb your MDI prescriptions, lobby to revise the local formulary, educate your colleagues, share the news with your patients, install an inhaler collection bin, pat yourself on the back ... and don't forget to switch off the lights on the way out!

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