1.21 Optimising the Formulary in a Tertiary Hospital to Reduce Greenhouse Gas Emissions from Inhalers

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Introduction: Metered dose inhalers (MDIs) contain powerful greenhouse gases (GHG). The most common propellant, HFA-134a, is a GHG 1400 times more potent than carbon dioxide (CO2).

Methods: Emissions from inhalers dispensed at Tallaght University Hospital (TUH) in 2023 were audited. The quantity dispensed was retrieved from the dispensing software. Using published information, the emissions were calculated.

In March 2024 TUH changed its preferred salbutamol MDI from Ventolin to Salamol, which has less propellant and lower emissions.

Inhaler emissions were reaudited between 01/03/2024 and 31/07/2024 to assess this intervention and compared to the same period of 2023.

Results: The baseline audit found that inhaler emissions were 109 tonnes of CO2 equivalents (CO2e) in 2023. MDIs represented 55% (n=4149) of inhalers dispensed but 97.8% of emissions (107t CO2e). Ventolin Evohalers produced 91.7t CO2e. Monthly emissions for March to July were significantly lower in 2024 than in 2023 ($p=0.048$), despite the number of inhalers dispensed increasing from n=2997 to n=3250. Total emissions fell from 43.23t to 32.54t CO2e. Emissions from salbutamol inhalers fell from 37.12t to 23.71t CO2e.

Conclusions: Changing the preferred salbutamol MDI inhaler from Ventolin to Salamol significantly reduced emissions

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Conflict of Interest: None to declare.