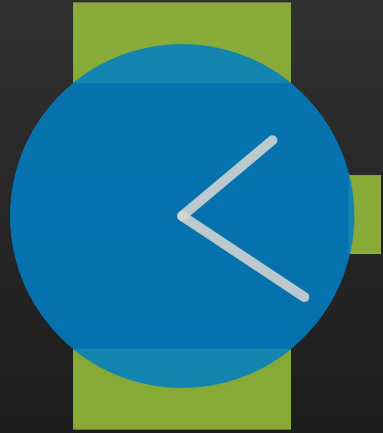
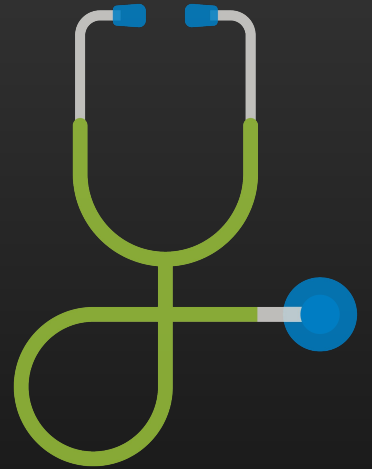


# #LeaveNoGHGBehind

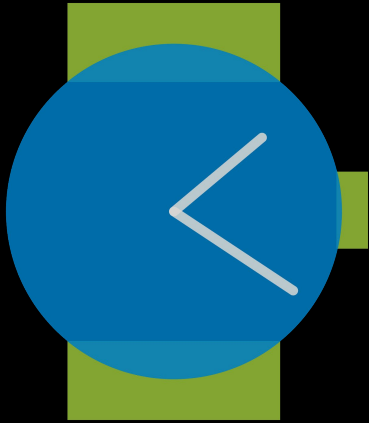
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**The Ministers of the Environment and Health need to work together to add all anesthetic gases to the Greenhouse Gas Inventory and then apply a carbon price to them.**



# Send a letter to your MP



We have a narrow window of opportunity to avert climate catastrophe.



We must leave no greenhouse gas behind.

# Anaesthetic Gases

1. Primary source of GHG pollution in the operating room in North America .
2. Hydrofluorocarbons that are magnitudes worse than CO<sub>2</sub> for the climate.
3. Global Warming Potential (GWP)

**DESFLURANE = 2540 GWP**

**SEVOFLURANE = 130 GWP**

McNeil, A., Lillywhite R., Brown, C. The impact of surgery on global climate: a carbon footprinting Study of operating theatres in three health systems. Lancet Planet Health 2017;1: e381–88



# CO<sub>2</sub>e of common anaesthetic gases expressed in kilometers driven

A route from Parliament Hill to Saint Joseph's Oratory in Montreal. The total distance is 192 km. The CO<sub>2</sub> equivalent of travelling a distance is calculated by assuming that a car emits 200 g of CO<sub>2</sub> per kilometer.

**Sevoflurane (Sevo) = yellow = 6.5 km**

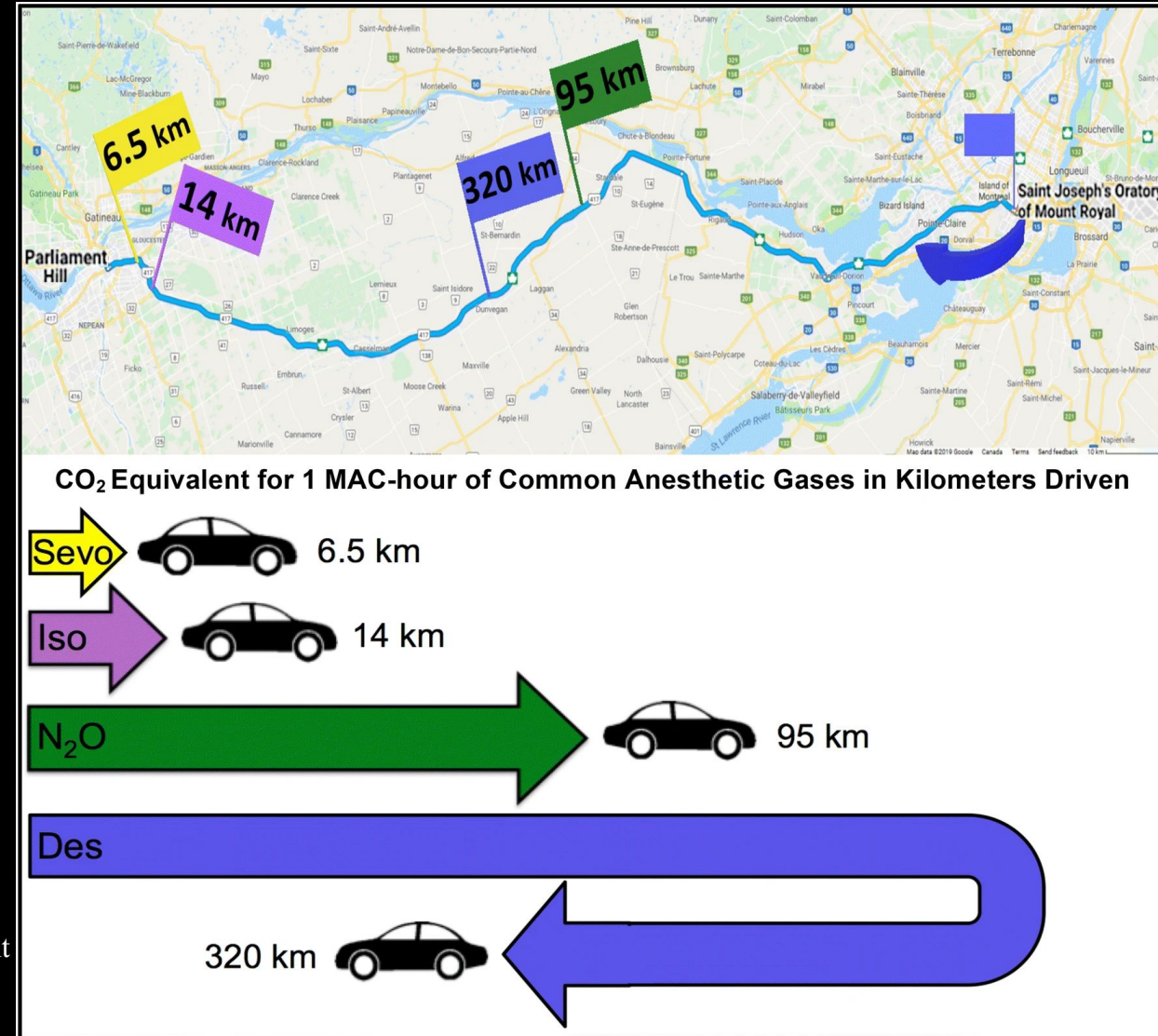
**Isoflurane (Iso) = pink = 14 km**

**Nitrous oxide (N<sub>2</sub>O) = green = 95 km**

**Desflurane = purply blue = 320 km**

**MAC-hour = dose necessary to keep a patient asleep for 1 hour**

IMAGE: Mary Hanna and Gregory Bryson, A long way to go: minimizing the carbon footprint from anesthetic gases, *an J Anesth/J Can Anesth* (2019) 66:838–839





# Efforts to Restrict Desflurane

- **Best practice guidelines and position statements**  
World Federation Societies of Anaesthesiologists, American Society of Anaesthesiologists, and Ontario Anaesthesiologists support restricting anaesthetic gases with high global warming potentials
- **Several health systems including NHS in the United Kingdom are severely restricting desflurane for environmental and financial reasons**
- **Lobbying efforts by anaesthesia professionals and citizens to include anesthetic gases into GHG inventory.**



# Health Sciences North Sudbury

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**Health Sciences North removed Desflurane in 2019.**

**This resulted in the reduction of the annual carbon footprint in their operating rooms by over 720 tonnes and cost savings \$45,000. There was no change in patient morbidity or mortality.**

# CARBON PRICING

In 2022, the price of GHG pollution in Canada is \$50/ tonne. If the GHG pollution from anaesthetic gases had been priced:

**\$2.47 per bottle of Sevoflurane**

**\$44.70 per bottle of Desflurane**

# Send a letter to your MP



The Ministers of the Environment and Health need to work together to add all anesthetic gases to the Greenhouse Gas Inventory, and then apply a carbon price to them.