

# Reducing Nitrous Oxide Use

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- The United States health sector accounts for 10% of national greenhouse gas emissions. Nitrous oxide (N<sub>2</sub>O) is a potent greenhouse gas.
- N<sub>2</sub>O becomes a waste anesthetic gas that is vented off facility rooftops.
- N<sub>2</sub>O has ozone-depleting properties and can persist in the atmosphere for 114 years.
- Deactivating the central nitrous system eliminated the equivalent of 806 tons of CO<sub>2</sub>e per year in a large study from the United Kingdom's National Health Service.
- Most N<sub>2</sub>O (95%) is lost prior to clinical use due to infrastructure leaks.
- A study of 47 hospitals in the United States demonstrated a median N<sub>2</sub>O waste of 93.4%. Approximately half of these hospitals have since deactivated central N<sub>2</sub>O supply systems with no operational concerns.
- The ASA recommends phasing out central piped N<sub>2</sub>O infrastructure in hospital design plans.
- Avoiding the installation of central N<sub>2</sub>O in new hospitals significantly reduces building costs.

Mask induction with sevoflurane in oxygen is well-tolerated, and increases the margin of safety due to preoxygenation



Increase IV inductions; use local anesthetic if needed



Increase total IV anesthetics and regional anesthesia



Utilize N<sub>2</sub>O E cylinders instead of relying on central supply.



## References

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