Eliminating Desflurane
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Why are we eliminating desflurane?
Desflurane is the most environmentally harmful and expensive inhaled anesthetic.¹
  • Desflurane’s Global Warming Potential is 2540 times that of CO₂, 20 times that of sevoflurane, and 15 times that of isoflurane.¹,³
  • Desflurane’s atmospheric half-life is longest (10 years). Sevoflurane has an atmospheric half-life of 1.2 years, and isoflurane has an atmospheric half-life of 3.6 years.³
  • Desflurane is twice as expensive as sevoflurane, and four times as expensive as Isoflurane.⁴
  • Nationwide, desflurane has been eliminated at multiple institutions, savings on the order of 100,000 to millions of dollars.⁵,⁶
  • There is no significant clinical advantage to desflurane based on solubility and lack of compound A production.²,³,⁴

What other steps can you take to reduce inhaled anesthetic atmospheric waste?⁴
  • Utilize low fresh gas flows (see Low Flow Anesthesia One-Pager).
  • Avoid high impact inhaled agents: desflurane, nitrous oxide.
  • Consider intravenous techniques.
  • Invest in waste anesthesia gas trapping or destroying technology.

How can you and your institution help?
1. Eliminate desflurane from your institution.
2. Educate, Advocate, and Standardize practice for low fresh gas flows and the reduction in the use of inhaled agents.
3. Add alarms and warnings to give feedback to providers for high gas flows, high environmental impact, and expensive inhaled agent use.

References: