

This anesthesiologist is targeting hospitals' surprising source of emissions

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Seven years ago, Seattle Children's Hospital was doing an inventory of its carbon footprint. Elizabeth Hansen, an anesthesiologist there, was alarmed to learn that the gases she used daily accounted for 7 percent of the facility's total greenhouse gas emissions. Some, like nitrous oxide, have almost 300 times the warming potential of carbon dioxide. Others, like desflurane, are over 2,000 times worse for the planet over a 100-year period.

Working with her colleagues, Hansen devised a way to measure and track their emissions, found alternatives that allowed them to phase out the most harmful gases, and developed techniques to administer medication more efficiently. "I think that that's all of our responsibility, to leave things better than we found them and try not to make things worse for the next generation. It's on all of us," she said.

But it wasn't just a matter of reshaping their practice. Over the last several years, Hansen sleuthed through purchasing and operation room records and discovered that more than 90 percent of the nitrous oxide that the hospital purchased was wasted before it was used, partly because it was stored in containers designed to leak to avoid pressure buildup. A year ago, her department got approval to cap off these old tanks and use smaller, leak-free ones instead.

Since then, Hansen said her hospital's anesthesiologists have seen a tenfold reduction in their emissions. She's also developed a consortium, Project Spruce, and rallied 18 children's hospitals to join her sustainability effort. This summer, all active members have reduced their anesthesiology emissions by 50 percent or more.

"It's really moving to see how this is affecting people and how they feel empowered to change their practice," she said.