

A SUSTAINABLE SURGERY CURRICULUM



We aim to create a national surgical sustainability curriculum that provides foundational knowledge and incorporates an iterative QI framework for surgical trainees.

The Problem:

8.5%

of U.S. Greenhouse Gas emissions come from the healthcare sector¹

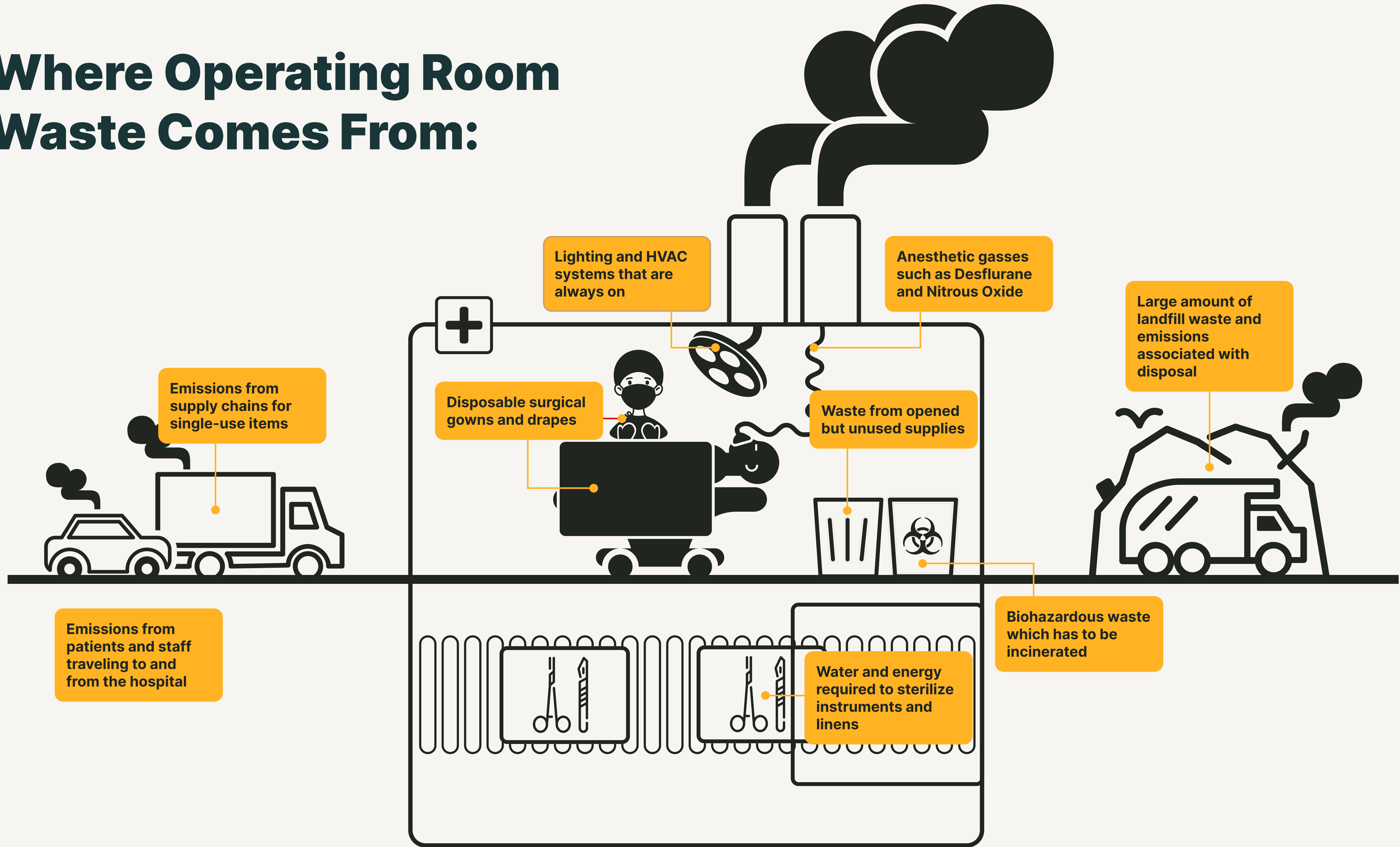
30%

of U.S. healthcare emissions stem from ORs & perioperative space²

50%

reduction in U.S. hospital emissions by 2030 (Biden White House Pledge)³

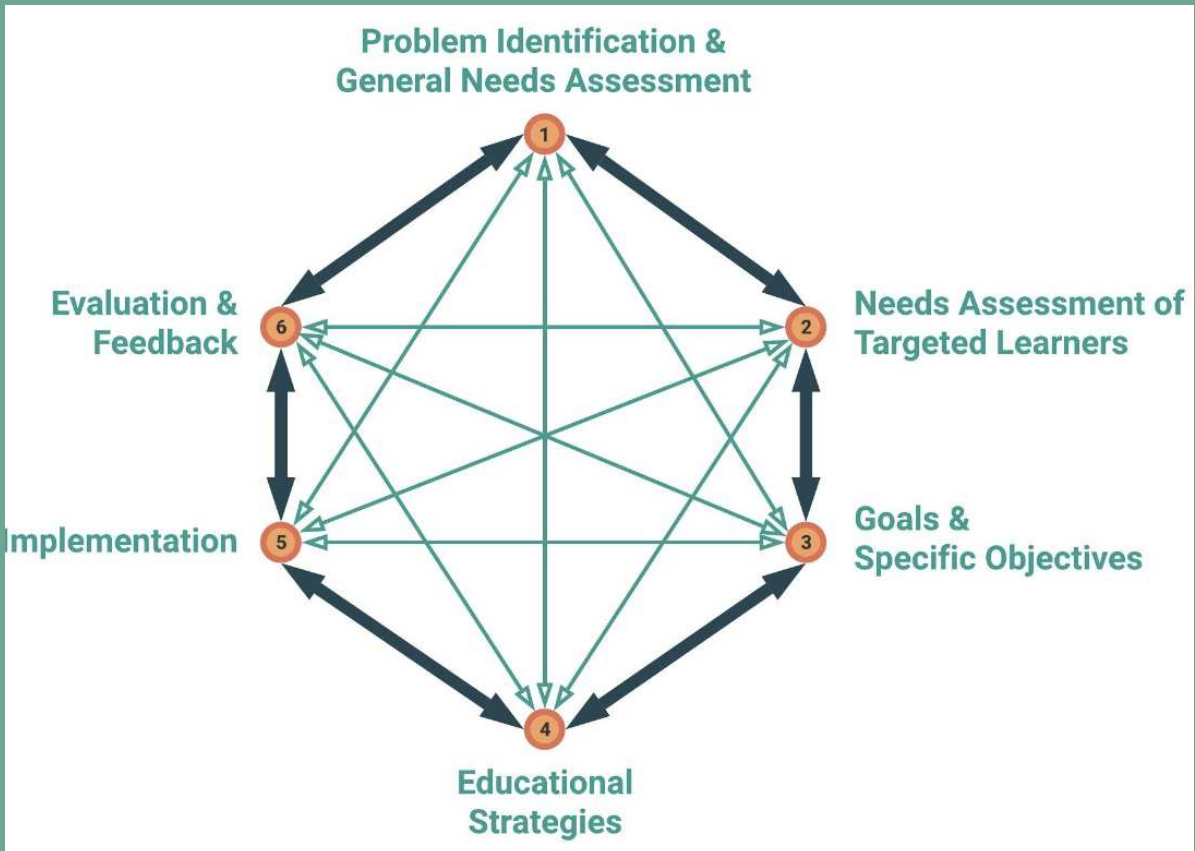
Where Operating Room Waste Comes From:



Initial Design by Tejas S. Sathe, MD (4)

Methods

- Using Kern's 6-step curriculum development framework, we conducted a general and targeted needs assessment through three focus groups.
 - These focus groups included 14 residents from multiple specialties, institutions, and post-graduate years.
 - We completed a manual thematic analysis, as well as AI-generated thematic analysis to validate results



(5)

Results

A targeted needs assessment of the three focus group revealed four themes:

Surgery residents receive no formal teaching on the environmental impact of surgical care or how to reduce this impact.

Current knowledge of and interest in the environmental impact of surgery varies significantly among residents.

Several barriers prevent the implementation of sustainable changes in the OR, including a lack of institutional initiative, cultural inertia, concerns about efficiency, and lack of education.

Residents prefer educational topics that focus on interactive, practical ways to reduce waste.

Current & Next Steps

Develop Proposed 3-Part Curriculum:
1. Didactic, foundational learning
2. Cased-based learning modules
3. QI projects

Pilot Curriculum, Elicit Feedback, Make Revisions

Launch Curriculum and National Curricular Guidelines



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REFERENCES
¹ Eckelman, M. J. et al. Health Care Pollution And Public Health Damage In The United States: An Update. Health Aff. (Millwood) 39, 2071–2079 (2020).
² Greening the OR | Practice Greenhealth. <https://practicegreenhealth.org/topics/greening-operating-room/greening-or>.
³ House, T. W. FACT SHEET: Health Sector Leaders Join Biden Administration's Pledge to Reduce Greenhouse Gas Emissions 50% by 2030. The White House <https://www.whitehouse.gov/briefing-room/statements-releases/2022/06/30/fact-sheet-health-sector-leaders-join-biden-administrations-pledge-to-reduce-greenhouse-gas-emissions-50-by-2030/> (2022).
⁴ Artwork in panel 2 courtesy of Drew David Park, Yanti Anis, Milky - Digital Innovation, ProSymbols, Victoruler, Kelsey Chisamore, Icons8, and Jason Rattengraph from the Noun Project.
⁵ <https://www.mededmodels.com/curriculum-development-1>