How Much Waste Is Generated by Pulmonary Procedures With Reusable Endoscopes, and What Are the Estimated National Impacts and Strategies for Reduction?

STUDY DESIGN

Prospective, multicenter observational study over 4 weeks designed to collect, categorize, and weigh waste, as well as determine the proportion of recyclable materials

RESULTS

Over 4 weeks, waste from 107 procedures in 79 patients:

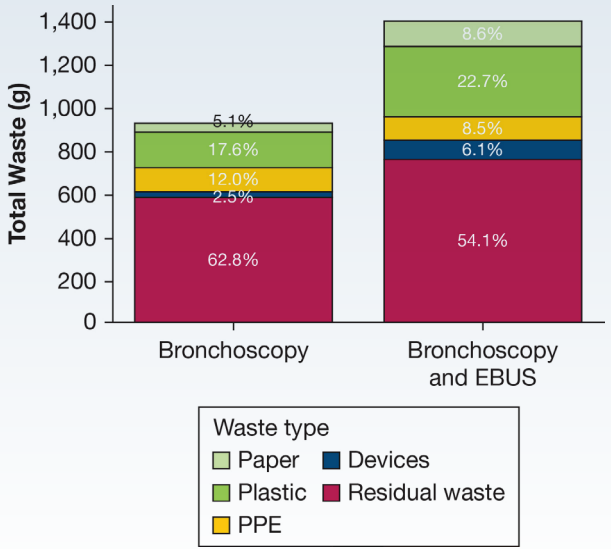
- 1,276.5 g from bronchoscopy
- 1,849.7 g from combined bronchoscopy + endobronchial ultrasound (EBUS)

Of the total waste:

- 74.8% originated in exam room
- 7.8% from suction bags
- 17.4% from reprocessing and recovery areas

28.7% of waste was potentially recyclable

Reusable gowns ↓ potential 61.5% reduction



The findings of this study suggest that pulmonary endoscopy represents a relevant environmental burden, but targeted sustainability measures such as reusable equipment, optimized waste segregation, recycling, and procedural optimization may reduce waste and associated emissions.

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