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**Carbon footprinting and environmental impact of gastrointestinal endoscopy procedures at a tertiary care institution**

**Rughwani H, Kalapala R, Katrevula A, et al. Carbon footprinting and environmental impact of gastrointestinal endoscopy procedures at a tertiary care institution: a prospective multi-dimensional assessment. Gut 2025; 74: 926-934. doi: 10.1136/gutjnl-2024-332471.**

Gastrointestinal endoscopy (GIE) is the third-largest source of hazardous waste and second-largest waste producer per clinical procedure. This prospective single-centre study evaluated the carbon footprint from GIE procedures with the aim of identifying waste reduction and eco-friendly opportunities.

The primary outcome of this study was to determine the overall carbon footprint of GIE procedures at a tertiary care institution in India by calculating the related greenhouse gas (GHG) emissions and waste generated. The secondary outcome was comparison between diagnostic and therapeutic procedure subgroups. The unit is equipped with 15 procedure rooms, 40 endoscopes and 92 staff. 3873 procedures performed on 3244 consecutive patients undergoing GIE procedures during the study period from 29 May to 10 June 2023 were included. 3503 were diagnostic and 370 therapeutic. Most procedures were performed under conscious sedation using propofol with only 18 patients given general anaesthesia. All devices and accessories were single-use devices. No single-use endoscopes were used.

Data collected were electricity consumption, water consumption, waste generated, patient travel, transport of endoscopes and accessories, transport and usage of medical gases (CO2 and O2) and quantity of detergents and disinfected for endoscope washing and laundry of bedsheets and gowns.

Results showed that the average carbon footprint is 38.45 kg CO2e per procedure, with patient travel being the largest contributor accounting for 83.09% of emissions followed by electricity consumption (10.42% of emissions). Waste per procedure averaged 0.504kg with an estimated annual total waste of 50439.60kg. Therapeutic procedures consumed more electricity and produced overall more waste although no statistical difference was observed. Opportunities exist to reduce emissions and their environmental impact.