

REDUCING THE ENVIRONMENTAL IMPACT OF ENDOSCOPY STARTS TOMORROW

THE BEST WASTE IS NO WASTE AT ALL!

The following information was devised by The Eco-Responsibility and Sustainability Development Committee from the French Society for Digestive Endoscopy (SFED). The European Society for Gastrointestinal Endoscopy (ESGE) are grateful for the opportunity to bring these important resources to a wider audience.

Context :

- Endoscopy is the third highest producer of hospital waste with 3.1 kg/patient/day
- 64% of the waste is due to the packaging
- Most of the waste is avoidable

Reducing single use plastic is one of the targets of the European Commission¹ !

We can reduce single use plastics by...



Substitution with reusable strategies

Reusable utensils: Mugs, ceramic plates, **metal water bottles**, **glass lunch boxes** (less toxic), Drink tap water in reusable bottle², Reusable scopes instead of disposable³

Devices: Open mouth, valve, pistons, electric pad, Reusable lime container (anesthesiology)

Strategies: Bougie dilation, reusable snares, **Reusable clothes** without plastic (cap, suit), **Aspiration liquids to go directly to sewage** (vs disposable bags)



Working on packaging with industry representatives

Substitution of paper by e-IFU with QR code! Reduction of overpackaging

Smaller packaging (ex : formol jars)

Substitution of plastic by biodegradable⁴ materials: cardboard, wood⁵



Choosing the devices with less plastic

Lighter devices (ex : handles)

Strategies : transparent cap vs diverticuloscope for Zenker, transanal endoscopy instead of oral

Sedation : endoscopy without sedation < sedation < intubation with laryngoscope < intubation with single use scope



Using collective intelligence

Re-think our practice by reducing and substituting plastic : simple gauze vs polyp trap Collaboration with sterilization to reintroduce reusable

References :

- [1] Single-use plastics - European Commission. 2024; Im Internet: https://environment.ec.europa.eu/topics/plastics/single-use-plastics_en; Stand: 15.11.2024
- [2] GIFE.fr - FAQ 3 : Traitement des endoscopes souples thermosensibles à canaux. . Im Internet: <https://www.gife.fr/79-actualite/C3%A9s-gife/276-faq3.html>; Stand: 10.10.2024
- [3] Pioche M, Vidal G, Ben Rejeb M, et al. Single-use scopes may reduce various environmental impacts of gastroscopy in some situations but probably not in routine practice of endoscopy units. Gut 2024; gutjnl-2024-334018. doi:10.1136/gutjnl-2024-334018
- [4] Oliver-Cuenca V, Salaris V, Muñoz-Gimena PF, et al. Bio-Based and Biodegradable Polymeric Materials for a Circular Economy. Polymers (Basel) 2024; 16: 3015. doi:10.3390/polym16213015