

SUSTAINABILITY MADE EASY



Strategies to reduce the environmental impact of ophthalmic practice.

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Health care contributes 4.4% of total greenhouse gas emissions globally. With its high volume of consultations, ophthalmology plays a significant role in health care's sustainability, and you can make a positive impact by implementing some small changes.¹⁻⁷

EFFECTIVE STRATEGIES FOR EVERY PRACTICE

Enable Ventilation 30 Minutes Before Surgery

Turning off OR ventilation outside of office hours instead of running it overnight and on weekends provides comparable infection control.⁸⁻¹⁰ This approach saves 50% on electricity costs and €2,000 annually per OR.

Use an Alcohol-Based Hand Rub

Compared to traditional scrubs,

alcohol-based hand rub disinfectants or liquid preparations provide superior disinfection. Alcohol-based disinfectants act against a broader spectrum of microorganisms and offer a longer duration of action than traditional scrubs. The former are also less drying and irritating to the skin and cause fewer allergies.^{11,12} Additionally, the use of alcohol-based rubs reduces plastic and saves water and €1,600 annually (per 1,000 surgeries). The estimated water usage for a surgical scrub brush of 3 minutes is around 18.5 L per person.

Reduce Drug Waste

Preoperatively, topical drugs can be used safely on multiple patients. When appropriate, patients should be allowed to take their partially used medications home for postoperative use. The risk

of endophthalmitis in cataract surgery is clearly reduced with asepsis and intracameral antibiotics. The benefits of topical antibiotics, however, are difficult to demonstrate. Intravitreal injections with topical antibiotics administered before and/or after the injection do not reduce the risk of endophthalmitis and may be counterproductive owing to the development of resistant microorganisms.¹³⁻²⁰ Reducing drug waste decreases plastic and saves at least €6,000 annually (per 1,000 surgeries).

Reduce Packaging Waste

Replace the full body drape with a face drape. The latter is equally effective in preventing endophthalmitis and helps reduce patient claustrophobia, anxiety, and temperature-related

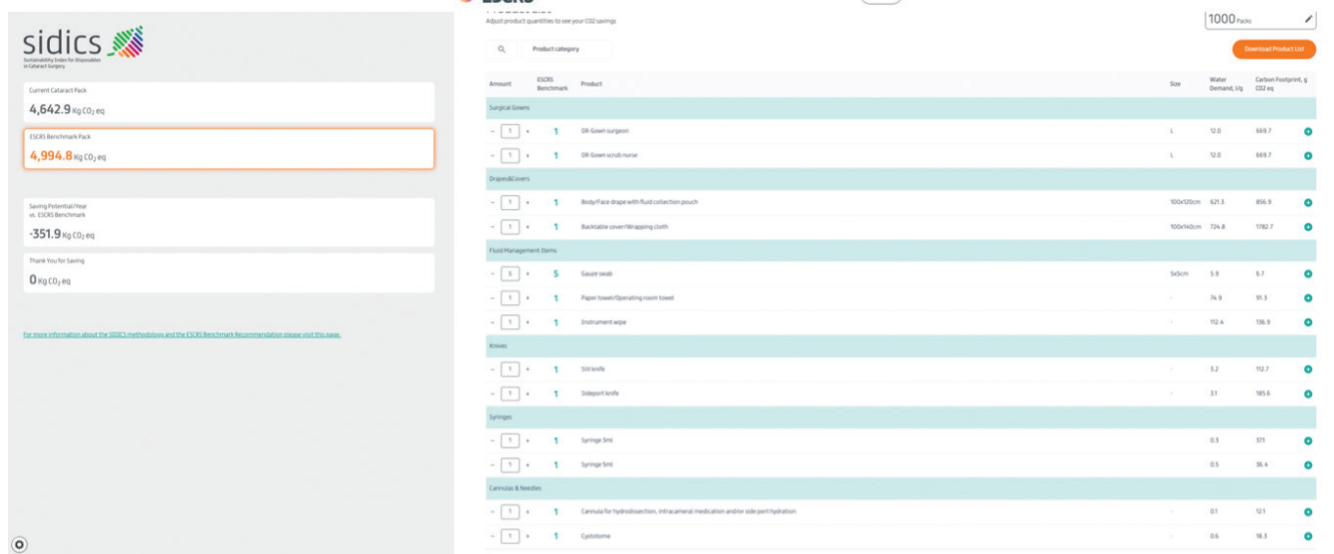


Figure. The ESCRS Sustainability Index for Disposables in Cataract Surgery.

discomfort.²¹⁻²³ This change not only reduces waste, plastic, and costs but also saves at least €1,000 annually (per 1,000 surgeries).

Critically evaluate your custom packs to identify and eliminate unnecessary items that are often discarded unused. Utilize the ESCRS Sustainability Index for Disposables in Cataract Surgery, available at no cost on ESCRS.org (Figure; scan the QR code to access).

Additionally, reducing items in intravitreal packs can maintain safety and quality of care while cutting waste, carbon emissions, and costs—potentially saving €2,000 annually (per 1,000 surgeries).²³⁻²⁸ This adjustment also minimizes plastic use.

Reduce Postoperative Visits

Postoperative visits after intravitreal injections, uncomplicated cataract surgeries, and vitreoretinal surgeries can be reduced safely, decreasing mobility-associated emissions and travel costs.

Immediately sequential bilateral cataract surgery, like bilateral same-day intravitreal

injections, reduces patient travel and the number of postoperative visits. Also avoid using plastic shields.²⁹⁻³⁵ This approach saves at least €10,000 annually (per 1,000 surgeries).

Adopt More Sustainable Medicines and Instruments

Avoid using SF₆ gas, one of the most potent greenhouse gases; it has a global warming potential 25,200 times higher than CO₂. Consider alternatives such as C₃F₈ or air.³⁶ Opting for sustainable medical equipment and instruments that are smaller, transportable, and reusable can significantly reduce environmental impact.

TAKE ACTION

Improve the environmental impact of ophthalmic care by adopting practices of reducing, reusing, recycling, and rethinking.³⁷ Share this article with colleagues, friends, and hospital management to enhance the sustainability processes in your environment. Create a team. Implement one change every month. Solicit feedback. Consider joining sustainability groups such as EyeSustain (eyesustain.org) to participate in the dissemination, research, and awareness of more efficient and ecological practices. ■

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