INDIVIDUALLY AND COLLECTIVELY MAKING A DIFFERENCE

Leading ophthalmology toward environmental sustainability.

BY DAVID F. CHANG, MD

The staggering amount of carbon emissions generated by the global health care sector should alarm all of us. This is especially true for physicians because the World Health Organization declared in 2021 that the climate crisis is the single greatest threat to global public health. At nearly 10%, the United States leads the world in the percentage of national carbon emissions attributable to the health care sector. More than 70% of these emissions come from the manufacture, use, and disposal of medical supplies and drugs.

In our 2020 survey by the multisociety Ophthalmic Instrument Cleaning and Sterilization Task Force, 91% of the 1,139 ophthalmologist respondents expressed concern about global warming, with 60% saying they were very concerned.[1] Most (93%) believed the waste from cataract surgery to be excessive, and 78% agreed that there should be more efforts to reuse supplies safely.

Given that ophthalmology has one of the highest surgical volumes in medicine, it is imperative that we urgently focus our attention, education, research, and policies on reducing unnecessary waste and carbon emissions. In response, several of us established EyeSustain.org, a global coalition of ophthalmologists and eye societies dedicated to promoting sustainability within our profession. Cosponsored by the ASCRS, ESCRS, and AAO, EyeSustain now includes 50 member eye societies worldwide. Furthermore, EyeSustain serves as a web- and app-based global hub offering the latest information, studies, position papers, tools, and resources to assist in rendering our care more financially and environmentally sustainable. Ophthalmology is the first medical specialty to form a global coalition of societies and a centralized resource center with a focus on sustainability.

This issue of *CRST Global | Europe Edition* is dedicated to sustainability in eye care. The cover series features contributions from several members of EyeSustain's editorial and advisory boards. The articles discuss strategies to immediately lessen waste in the OR and diminish the environmental footprint of our clinics. The surgical manufacturing industry must contribute significantly to these efforts by collaborating with ophthalmologists to develop products that are either reusable or reprocessable. For instance, an all-day phaco cassette system where facilities pay a per-case click fee would eliminate the need to dispose of the plastic cassette and its packaging after each use. Such an approach would reduce not only manufacturing and shipping costs but also emissions and plastic landfill waste. Leaders from the Medical Society Consortium on Climate and Health outline how physicians can serve as trusted advocates for public policies aimed at cutting carbon emissions by explaining the deleterious general and ocular health effects of climate change. Both the ASCRS and AAO are among the 56 medical societies that have joined the Medical Society Consortium on Climate and Health.

As one article highlights, EyeSustain has created an online pledge for ophthalmic surgical facilities to commit to educating staff and seeking methods to reduce unnecessary OR expenses and waste. (Editors' note: See "Reduce Surgical Waste Now" on pg 54.)

Finally, the future health impact of global warming is of great concern to medical students, residents, and early-career physicians, all of whom will deal with the disease sequelae throughout their careers.

Most people feel relatively powerless to affect global warming on an individual basis. However, that is not actually true for ophthalmologists. Multiple studies from the Aravind Eye Care System in Southern India show that we can dramatically reduce OR waste without compromising patient safety.[2,3] Because ours is such a high-volume surgical specialty, improving wasteful policies and protocols within our own ORs can have a significant and long-lasting benefit.

I encourage readers to champion the EyeSustain pledge to their department or surgical facility. Residents can join in doing this together for their program. We ophthalmologists have a unique opportunity to advocate for meaningful change in a way that other individuals in society do not. We should treat this not only as an opportunity but also as an obligation. ■

1. Chang DF, Thiel CL, Ophthalmic Instrument Cleaning and Sterilization Task Force. Survey of cataract surgeons' and nurses' attitudes toward operating room waste. *J Cataract Refract Surg*. 2020;46:933-940.
2. Chang DF. Tackling the challenge of needless surgical waste in ophthalmology. *J Cataract Refract Surg*. 2023;49(4):333-338.
3. Haripriya A, Chang DF, Ravindran RD. Endophthalmitis reduction with intracameral moxifloxacin in eyes with and without surgical complications: results from 2 million consecutive cataract surgeries. *J Cataract Refract Surg*. 2019;45(9):1226-1233.

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