

Sustainability in Ophthalmology: Decrease Costs and Waste While Increasing Quality of Healthcare

IC-201

- Decrease your costs and waste in the OR using the Eyefficiency app. <http://Eyefficiency.org/>

Global Engagement

Eyefficiency Global Cataract Surgical Services Auditing Tool

- Tool measures Productivity, Cost, Carbon Emissions, and Waste Generation of Cataract Surgical Services (any site globally)
- Can anonymously compare sites
 - Develop best practices guidance
 - Develop regional strategies to optimize performance
- Finished pilot testing, intending to launch at IAPB (Int'l Agency for Prevention of Blindness) General Assembly (delayed due to COVID-19)
- <https://eyefficiency.org/>

Thiel CL, Cassels-Brown A, Goel H, Stancliffe R, Steinbach I, Thomas P, et al. Utilizing off-the-shelf LCA methods to develop a 'triple bottom line' auditing tool for global cataract surgical services. Resources, Conservation and Recycling. 2020;158:104805.

20 www.clinicallysustainable.org @CassandraLThiel

NYU Langone Health

- Decrease costs by “greening” your office

Medscape Highlights My Green Doctor for Helping Healthcare “Go Green”

 mygreendoctor.org/medscape-highlights-my-green-doctor-for-helping-healthcare-go-green/

<https://www.medscape.com/viewarticle/942979>

“How You Can Save Money in Your Practice by Going Green”

Abigail Cukier

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Ted Shieh, MD, developed a passion for environmental advocacy after an oil tanker crashed and spilled crude oil on a Taiwan beach where he had spent many happy days during his childhood. When his family moved to Southern California, Shieh continued to spend a lot of time at the beach and witnessed how untreated sewage was damaging the marine ecosystem.



“Seeing the world where you grew up destroyed has a real impact,” says Shieh, who volunteers as a coral reef diver at the Shedd Aquarium in Chicago.

As an emergency department doctor at Westlake Hospital in Melrose Park, Illinois, Shieh became a green advocate at work too when hospital administration implemented a sustainability program and created a green team, which Shieh eventually led. (Sustainability is the ability to provide for current needs without harming or impairing the needs of future generations.)

When he moved to DuPage Medical Group in Lisle, Illinois, to lead its immediate care centers, Shieh decided to make the department sustainable, hoping others would follow. The department started by creating a drug formulary review process to standardize the medications it uses. It eliminated rarely used medications, reduced waste, and lowered costs.

Medical Group Saved \$75,000 a Year by Going Green

They also purchased paper products that had 100% recyclable fibers, as well as biodegradable waste bags, and started turning off lights, photocopiers, and computers every night.

After about a year, their accomplishments convinced the whole organization to join their efforts. Bigger steps since then have included changing to nontoxic, recyclable, DEHP-free IV bags and tubing, which saves \$40,000 a year, says Shieh. They save an additional \$35,000 a year by using reusable cubicle curtains instead of disposable ones.

Shieh realized that not everyone will be interested in greening the office.

“Find some allies. Look for other folks in your organization who might be open to it. Then take small steps, get some wins, and then you can expand,” he says. “When you start doing that, it brings extra joy at work. You feel like you are doing something good. And once you start doing it, people don’t want to go back.”

Physician behavior can influence the behavior of the whole office, says Shieh.

"So I would say, get your life green and then start to share that knowledge with your coworkers, and people will follow," he says. "I really think physicians have an enormous role. We have to get our colleagues and our patients to connect their health outcome with what's going on in the environment."

Shieh sees an opportunity to help patients make that connection by, for example, discussing how air quality may be related to a patient's respiratory condition.

"I don't always have the time, but if I see a moment, I'm going to do it," he says. "It would be irresponsible for me to just say, 'Here's a medication, go home.' And patients appreciate it. It actually makes my job more satisfying."

What Can the Average Doctor Do in Their Own Practice?

Todd Sack, MD, agrees that the actions of individual healthcare providers can add up to big environmental wins.

"If we want to have an impact on the climate, it really has to be all health professionals, doctors, nurses, chiropractors, pharmacists rolling up their sleeves to say, 'We can do this,'" says the Jacksonville, Florida gastroenterologist, adding that reducing energy, water, or paper use also saves medical clinics money.



Sack says there is something physicians can do. He helped create [My Green Doctor](#), a free, not-for-profit service owned by the Florida Medical Association, which provides tips and resources to healthcare professionals who want to implement sustainable environmental practices. Sack shared an example of a medical practice that has five sites in Pensacola, Florida. The first year after joining My Green Doctor, the practice lowered its electricity use by 5.2%, which amounted to 125,000 kilowatt-hours. It also reduced its carbon dioxide emissions by 85,600 metric tons, which is [equivalent to taking 18,493 vehicles off the road](#) for a year. The practice also saved about \$14,000.

You Can Set a Green Example for Patients

Sack says doctors can educate patients simply by having recycling bins in the office or educational brochures in the waiting room. "It's not just about a green office and saving money but also making your office a healthier place for people to work and to teach some of these same wise practices to patients," he says.

"Nurses and doctors are among the most trusted professions. Why not use that sense of integrity to teach people wise practices in using energy and water and chemicals or food

choices and transportation? These are all topics that make a difference for their health and the environment."

After chairing the Florida Medical Association's environment and health section for a decade, writing and passing policies on environmental health, Sack realized they weren't actually helping members make changes in their own practices. That led to the creation of mygreendoctor.org about 10 years ago.

"The challenge is that people are so busy that it's hard to get them to realize that this isn't difficult to do. The first step is just to make a commitment to go green, to make environmental sustainability one of the core values of your practice," he says.

Changes at Hospitals Can Have a Big Impact

Along with doctors' offices and ambulatory surgery centers, hospitals have a huge environmental impact. They use energy to power heating, cooling, and ventilation systems, as well as computers, lighting, medical equipment, and laundry and food service for large buildings that are open all day, every day. Hospitals also use water for cooling, landscaping, kitchens, and washrooms and produce waste from large amounts of paper products and single-use disposable supplies.

Across the country, hospitals are making progress in reducing their environmental footprint. For example, Overlook Medical Center, in Summit, New Jersey, discards about 15,000 pounds of surgical blue wrap each year. The wrap is made of polypropylene, which is lightweight and durable but is also non-biodegradable. Last year, Overlook began turning the blue wrap into reusable tote bags as well as ponchos and sleeping bags, some of which have been donated to people in the community who are homeless.

Seattle Children's Hospital, through energy conservation and a multi-year plan to upgrade its mechanical systems, has reduced energy use per square foot by 15% since 2013. Hospital staff are working to reduce it even more.

Physicians Are Important in Saving Our Resources

Mona Sarfaty, MD, executive director of the Medical Society Consortium on Climate and Health, says physicians know they have a role to play in addressing climate change. A survey of physicians found that about half felt they had patients who were personally affected by climate change to a moderate or great extent, says Sarfaty. Another 20% had patients they felt were affected at least a little bit.

"They felt that doctors had a responsibility to inform their patients and policymakers about health harms, and they felt there should be continuing medical education about climate change for physicians and that it should be part of medical school education," said Sarfaty.

Seventy-five percent of those surveyed felt that doctors should be taking a leadership role in making their own workplaces environmentally sustainable.

"So yes, we need big system changes, but we also need to think about how we can each be part of functioning differently. We've seen a steady growth of the population of physicians who feel like this is extremely important. They need to be involved and they want to make a difference," says Sarfaty. "As a friend of mine said, 'I gave up waiting for somebody to save me from climate change. I realized that nobody's coming to save us. We need to save ourselves.' "

How Physicians Can Get Started

- Monitor energy and water use. [Energy Star Portfolio Manager](#) allows medical offices to benchmark their energy and water consumption to help make decisions to improve energy performance and save money.
- Find out about federal, state, and local incentives to offset audit and upgrade costs.
- Perform a waste audit to track your progress. The Environmental Protection Agency's WasteWise program has resources to help you get started.
- Participate in clean energy programs, such as the [Green Power Partnership](#), to support renewable energy development.
- Turn down the thermostat at night and on weekends and use energy-efficient lighting.
- Reduce or eliminate the use of bottled water or water coolers. Put a pitcher in the refrigerator that staff can use to fill their own reusable bottles, or invest in a bottle-less cooler that draws from your water supply.
- Switch to digital subscriptions of journals where possible.
- Switch to compostable coffee pods or make drip coffee that has a reusable filter system.
- Ask electronics or equipment suppliers about take-back programs or recycling of highuse parts, such as ink cartridges.
- When renovating, ask your contractor for environmentally responsible upgrades, such as improved wall insulation, high-insulation windows and doors, and recycling of demolition waste.
- Look for medical waste companies that use environmentally responsible alternatives to incineration, and recycle sterilized waste.
- Join <https://mygreendoctor.org> for resources and a step-by-step guide to making your practice more sustainable.
- Check out the Medical Society Consortium on Climate and Health, Healthcare Without Harm, Practice Greenhealth, and the American College of Physicians Climate Change Toolkit to learn more.

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