

# Spotlight on International Charitable Work

Ocular surgeons volunteer their time and skills to help underserved patients overseas.

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In a world where access to high-quality healthcare remains uneven, ocular surgery stands out as a critical but often overlooked need. Millions in low-income and middle-income countries (LMICs) grapple with visual impairments such as deep-seated white cataracts, glaucoma, and ocular tumors, with little opportunity to receive effective treatment for their conditions.

In 2020, an estimated 596 million people had distance vision impairment worldwide, of whom 43 million were blind. Another 510 million people had uncorrected near vision impairment, simply because of not having reading spectacles.<sup>1</sup> Cataract, the leading cause of blindness and the second-leading cause of moderate and severe visual impairment globally, affects more than 100 million people, 17 million of whom are blind.<sup>2</sup>

An estimated 90% of these people live in LMICs in Asia, Africa, and Latin America,<sup>1,2</sup> where access to ocular surgery is often restricted by poor awareness of services, as well as limited numbers of surgeons and eye-care facilities. Despite the enormity of this challenge, a growing community of ocular surgeons in the United States have taken meaningful steps to help alleviate some of these eye health issues around the world.

## Orbis International

One organization stepping up to make a difference is Orbis International (orbis.org), a global nonprofit that provides sight-saving programs in more than 200 countries. Among the most notable of these is the organization's Flying Eye Hospital, which serves as a mobile teaching hospital, ensuring that local eye-care teams in LMICs receive hands-on



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Orbis's Flying Eye Hospital is a fully accredited ophthalmic teaching hospital on board an MD-10 aircraft. It has been used to train doctors, nurses, biomedical technicians, and other eye care professionals in more than 95 countries.

training while working alongside Orbis's volunteer faculty of ophthalmic surgeons and health care providers.

"We're actually a fully Quad A-accredited hospital," says Lori Pacheco, a former volunteer nurse on the Flying Eye Hospital who now serves as the associate director of volunteer experience and engagement for Orbis. In her current position, she recruits ocular surgeons from around the country to volunteer with Orbis.

The airplane itself, a converted MD-10 cargo jet donated by FedEx in 2016, comprises a classroom, a fully outfitted surgical suite with preoperative and recovery rooms, a laser room, and computer simulation capabilities. During a project, team members provide training in their subspecialties—cataract, glaucoma, cornea, retina, oculoplastics—and treat both children and adults.

“I was able to volunteer on the Flying Eye Hospital last year in Zambia and participate in retina and pediatric glaucoma procedures on the plane,” Pacheco says, adding that dozens of people are needed to complete a successful project. They include volunteer surgeons, nurses, biomedical engineers, and anesthesiologists. Additionally, the Flying Eye Hospital engages the help of volunteer pilots, air operations and mechanical teams, and key logistics and administrative personnel.

“That’s one of the reasons why I like Orbis so much because it’s a team approach, because it’s not just doctors teaching doctors,” Pacheco says. “We’re training nurses. We’re training anesthesiologists. We’re training biomedical engineers. We’re training ophthalmic technicians. **It’s a team approach because it takes a whole team to perform a successful eye surgery.**”

Orbis International also operates long-term, in-country programs in Asia, Africa, and Latin America. Working with local partners, the organization trains ocular surgeons and their teams in their own hospitals. “We send volunteers to train [eye-care teams], just without the plane,” Pacheco says. “We just had a very successful program in Hawassa, Ethiopia, and it was a team [consisting of] an ophthalmologist, an orthoptist, an anesthesiologist, and a nurse.”

### In Cyberspace

The third prong of Orbis’ approach consists of Cybersight, an online platform that offers free virtual access to ophthalmic training resources developed by international medical experts. Offerings range from courses, webinars, and lectures to live surgical demonstrations, remote surgical mentorship, advice on complex patient cases, and even an AI diagnostic tool. According to Orbis, more than 90,000 eye-care professionals in more than 200 countries and regions are registered on the platform.

“The platform allows us to extend clinical training far beyond the areas where we run programs or where the Flying Eye Hospital touches down,” Pacheco explains. “We even have people in conflict-affected areas that are logging on and getting training in places like Ukraine and Syria.”

### The Right to Sight and Health

Another organization with a mission similar to Orbis International’s is The Right to Sight and Health (<https://righttosightandhealth.org/tag/eye/>). Co-founded by Donald Macdonald, MD, of the Monmouth (NJ) Eye Center, and Judith Simon, MD, the Right to Sight and Health is a nonprofit



Dr. Tamara Fountain of Chicago instructs two training participants, Drs. Mwacalimba and Chansa, during oculoplastic surgery on the Flying Eye Hospital program in Lusaka, Zambia.

dedicated to treating cataract patients and educating ocular surgeons in the developing world, mainly in Ghana, the organization’s base of operations. The Right to Sight and Health focuses exclusively on treating patients with severely advanced cataracts through a technique called small incision cataract extraction. At the same time, it teaches local surgeons how to perform the procedure, which can be completed in less than 15 minutes.

“It’s a matter of getting the nucleus out, and then irrigating and putting an implant in and [leaving behind] a self-sealing wound. It can be done very quickly and efficiently without a lot of [the equipment] you’ll see here in the United States,” says Dr. Macdonald. He himself has organized more than 30 medical and surgical missions to Ghana, Senegal, Rwanda, Tanzania, Cameroon, the Philippines, and Nicaragua. Unlike many larger organizations, The Right to Sight and Health focuses on reaching small, remote communities with few or no ophthalmologists.

Although he now focuses his efforts on fundraising for the organization, Dr. Macdonald still has vivid recollections of the reactions of patients once they could see clearly again.

“The typical patient was that they’re blind, you bring them in for surgery in the afternoon. We actually used a patch and shield because the surgery is more invasive than here in America. They take the patch off the next morning, and they’re so joyous that they can see again,” he says. “It’s a reaction you don’t get that often in America.”

### Relief Organizations

Other organizations that **organize** ocular surgery mission trips include Medical Ministry International ([www.mmi](http://www.mmi)).



Donald Macdonald, MD, stands in a room full of American surgeons being trained in the small incision cataract extract procedure.

org), HCP Cureblindness (<https://cureblindness.org>), and the Hawaiian Eye Foundation (<https://hawaiianeyefoundation.org>). Cathleen McCabe, MD, recently returned from a medical mission trip to Migori, Kenya with Kenya Relief (<https://kenyarelief.org>). There, she and some 30 fellow volunteer ocular surgeons and support staff performed more than 100 surgeries and saw some 600 patients in clinic over the course of one week.

“The scope of problems that we see in Kenya is pretty advanced. We’ve seen really advanced traumas, advanced melanomas of the conjunctiva, even advanced tumors, and



Cathleen McCabe, MD, and Eric Purdy, MD, with their care team at the eye-care clinic in Migori, a small city in western Kenya. They performed more than 100 cataract procedures and provided

all the cataracts are blinding cataracts—dense, no-view white cataracts in little, tiny orbits that are very challenging,” says Dr. McCabe, chief medical officer of Eye Health America and medical director of The Eye Associates, both in Sarasota, FL. Dr. McCabe adds that the environment—far removed from the typical American community—adds to the challenge. About 80% of households, she says, use firewood as their primary energy source, and the homes are mostly simple, mud-brick structures.

“It’s a challenging experience as a surgeon because it tests your flexibility and ingenuity. You don’t always have all the tricks and special equipment that we have in the US to deal with these cases, so you really must think about what is needed to help the patient, how you can do it safely, and how the patient is going to be able to care for themselves afterward,” she observes.

Dr. McCabe has also spent the past two decades serving alongside her longtime friend and colleague, Eric Purdy, MD, in St. Vincent and the Grenadines. Dr. Purdy is a board-certified ophthalmologist at Lutheran Health Physicians in Bluffton, IN.

Describing their efforts in St. Vincent and the Grenadines as a mission “we’ve kind of poured our hearts into,” she says they have focused primarily on treating cataract patients but also operate an optometric and general ophthalmology clinic. “When we first started, there were no ophthalmologists in Saint Vincent taking care of indigent patients. Now there are four ophthalmologists that we work with. Three of them are general ophthalmologists and one is a retina specialist,” Dr. McCabe says. She adds that she and Dr. Purdy travel to the country once each year for a week-long stay, during which they will treat about 1,000 patients. During their last visit, she says, they distributed 700 pairs of eyeglasses collected by the local Lions Club.

Like Dr. Macdonald, Dr. McCabe says she harbors many memories of her experiences treating patients in Kenya and St. Vincent and the Grenadines.

“I like to tell the story of this lady I saw in Saint Vincent who was bilaterally blind and was not able to ambulate or do any of her activities of daily living,” she says. Accompanied by her daughter, the woman came to have a cataract removed.

“When the daughter came back another time with her mom to have the other eye done, she was so grateful,” McCabe recalls. “She said, ‘you don’t know how my life has changed. Before, I had to get up really early, I had to make

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sure my mom was OK for the day, take care of my toddler and make sure she was going to be okay, drop her off at daycare, work, come home, take care of my mom, and take care of my daughter. Now, my mom takes care of herself, and she can help me with my daughter. My life is completely changed.”


“It brought the perspective that what we do is not always just for the patient; it's often meaningful for the family. What we do has a ripple effect,” she says.

But the memories are also sometimes bittersweet. Dr. McCabe recalls a 4-year-old boy who had been poked in the eye with a stick and presented with a “huge scleral perforation” that had become infected.

“He needed to be enucleated, but that was probably a life-saving treatment for him, because where was he going to go to get that treatment?

And how accessible was it going to be when they waited a month for him to see us? Can you imagine the pain he was in for that entire month?”

### **A “Noble Cause” that Helps Patient and Physician**

The surgeons who put their skills to work for those in underserved communities around the world encourage their colleagues to do the same, not just for the patients’ benefit but also for their own. 

“People are in great need all over the world, and we’re just a small drop in the bucket going over to help,” says Dr. Macdonald. “But it’s a noble cause and, just as we help people in our own country, we need to help them, too. That’s our job as physicians.”

“I highly encourage people to go,” agrees Dr. McCabe, who believes that volunteering on a medical mission trip

overseas can help “make you a better surgeon.”

“I’ve brought back so many different tips that I use in my daily clinic and in surgery based on things I had to think about differently and different tools I had to use on a mission because I didn’t have everything available to me. It will benefit you in ways that you can’t imagine now, and your patients also will benefit from it,” she says. ■

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