

# Eye Care in El Salvador

A partnership between a local nongovernmental organization and an American volunteer group is bringing vital services to this country's rural poor.

BY PAUL R. COTRAN, MD, AND JAMES UMLAS, MD



This month's article by my former Harvard Medical School classmate Paul Cotran, MD, and his colleague James Umlas, MD, shows how a small group of dedicated individuals can make an enormous impact on the ocular health of an impoverished region through local partnerships and dedication to continuity of care over many years. Theirs is a wonderful model of a program that succeeds because of several volunteers, each giving a few weeks every year.

I would also like to pay tribute to the passing of Govindappa Venkataswamy, MD, the founder of the Aravind Eye Hospital Systems in India. "Dr. V" was an inspiration to me and many others around the world. We will have a longer tribute to this amazing man and his incredible contributions to eliminating preventable blindness in a future issue.

—Geoffrey Tabin, MD, Section Editor

In the fall of 1988, Joseph H. Bowlds, then Chief of Ophthalmology at the Lahey Clinic in Burlington, Massachusetts, received a phone call from a total stranger. He was asked, "How would you like to give up a week of vacation and income and pay your own way to a country embroiled in a raging civil war to help with an eye care campaign?" On the other end of the line was Robert Zeller, MD, an obstetrician from Boston's South Shore area. As a former flight surgeon for the US Navy, Dr. Bowlds was undaunted by the element of personal risk and asked for more information. Dr. Zeller explained that he worked with ASAPROSAR (the Salvadoran Association for Rural Health), a nongovernmental organization devoted to improving the health of the poor in rural El Salvador. Dr. Bowlds was intrigued, and, several months later, he was on his way to Central America.

## HUMBLE BEGINNINGS

ASAPROSAR evolved from the work of general practitioner Vicki Guzman, MD. In the 1970s, she began treating the rural poor in her home country of El Salvador. In 1980, the outbreak of a civil war between the government's forces and the Farabundo Marti Liberation Front severely disrupted the country's already limited access to healthcare. No medical services were available outside the capital city of San Salvador or the other major cities of Santa Ana and San Miguel. Physicians, nurses, and patients were afraid to travel due to the risk of violence. Nevertheless, Dr. Guzman continued her work and often



Figure 1. Vicki Guzman, MD, (back row, center) is surrounded by volunteers from the Friends of ASAPROSAR at the dedication of a new clinical building in Santa Ana, El Salvador.

traveled on horseback through areas of conflict. She was not deterred when the government accused her of being a communist and imprisoned her briefly in 1983.

Dr. Guzman's organization expanded in size and scope when she recruited and trained local lay people to counsel patients about immunization and prenatal nutrition. Eventually, her group attracted the attention of Americans from the Boston area who went on to found the Friends of ASAPROSAR (FoA) in Hingham, Massachusetts (Figure 1).

## SOLVING THE EYE CARE CRISIS

During her medical missions, Dr. Guzman had observed a high prevalence of eye disease among her patients. Conditions included ocular trauma (some war related), adult and pediatric cataract, pterygia covering the visual axis, and strabismus. The most common visual problem among her patients, however, was uncorrected high ametropia. Many patients who had prescriptions for eyeglasses from a governmental clinic or private doctor could not afford to pay \$100 or more for eyeglasses; the mean annual income of rural Salvadorans is approximately \$1,500.

Dr. Guzman asked the FoA to help her develop an outreach project that would provide eye care and corrective eyeglasses to her poor rural patients. Dr. Zeller started making phone calls, and ASAPROSAR's first eye campaign was launched in 1989.

Dr. Bowlds and seven other Americans helped Dr. Guzman transport several specially made wooden boxes of donated eyeglasses through El Salvador's mountainous terrain. With the help of safe-conduct papers issued by both warring factions, the mission reached villages where the volunteers performed basic ophthalmic examinations and dispensed eyeglasses. At night, the team would fall asleep despite the noise of gunfire and explosions. At the time, they were the only nonmilitary Americans outside the capital city.

Although Salvadorans' access to medical care improved after the civil war ended in 1992, ASAPROSAR continued to be major provider of ophthalmic and optometric services for the poor in large areas of the country. In 1991, the organization's volunteers began performing eye surgery at the San Juan de Dios Hospital in the city of Santa Ana.

In 1999, with assistance from FoA and Benevolent Missions International based in Texas, Dr. Guzman was able to construct an OR and clinical examination facility on the grounds of her clinic in Santa Ana. Currently, the facility contains three ORs outfitted with operating microscopes, a modern phaco unit, a YAG laser, and an argon laser. Two well-equipped examination lanes include biometry and keratometry capabilities. Much of the equipment has been donated by or purchased through the efforts of FoA and Benevolent Missions International.

## ANATOMY OF AN EYECARE CAMPAIGN

### Surgical Missions

During the past decade, the number of North Americans participating in ASAPROSAR's eyecare campaigns has doubled. The FoA team, which is currently about 50 strong, is composed of ophthalmologists, anesthesiologists, optometrists, ophthalmology residents, optometry students, ophthalmic nurses, technicians, and lay people.



Figure 2. As the child's mother (right) watches, Raymond Smith, MD (left), and Marcia Gnagey, CRNA (center), prepare an infant for eye surgery at ASAPROSAR's clinic in Santa Ana.

Throughout the year, campaign participants secure donations of IOLs, viscoelastic, sutures, medications, and equipment that will be shipped to ASAPROSAR several months before the volunteers arrive in El Salvador. Ophthalmologists bring their own surgical instruments, and clinicians bring all the portable equipment they need to perform eye examinations. Lions Clubs International and many other organizations donate eyeglasses to the cause.

Every 10-day campaign is divided into surgical and medical missions, the latter intended to screen for eye disease and distribute eyeglasses. ASAPROSAR's health promoters prescreen potential surgical patients before the North American volunteers arrive. The individuals are re-examined by the visiting volunteers and scheduled for surgery if they are deemed appropriate candidates. The highest priority is given to patients who are blind from bilateral cataracts.

During the 6-day surgical portion of the campaign, the volunteers perform between 100 and 125 procedures that include cataract removal, penetrating keratoplasties, strabismus repair, and pterygia repair with autografts. (Figure 2). Corneal tissue is supplied by Tissue Banks International in the US.

In the last 10 years, teams from the FoA and other North American volunteer groups have performed more than 1,000 surgeries in El Salvador. Recently, ASAPROSAR has taken steps to ensure that patients who undergo surgery during the campaigns receive proper postoperative care. The organization's clinic in Santa Ana (Figure 3) now employs several part-time Salvadoran ophthalmologists, optometrists, and nurses who are available year round to provide any necessary surgical and medical treatment. The local staff can consult with doctors in the US about difficult cases and surgical outcomes via e-mail.



Figure 3. A cheerful sign indicates the entrance to ASAPROSAR's eye care clinic in Santa Ana.

### Medical Missions

ASAPROSAR usually runs simultaneous surgical and medical missions. Between the San Miguel and the Santa Ana locations, the volunteers examine approximately 400 to 500 patients per day (about 2,000 per mission). Peace Corps volunteers and Salvadoran students, who serve as translators, provide additional assistance.

The patients examined during the medical mission often have advanced ocular pathology caused by glaucoma, diabetic retinopathy, strabismus, pterygia, and cataracts. Individuals who need additional care are referred to Salvadoran ophthalmologists employed by ASAPROSAR or, if possible, scheduled for immediate surgery. Volunteer surgeons usually can perform laser iridotomy, YAG capsulotomy, and retinal photocoagulation on the same day that patients receive their diagnoses.

Another major part of ASAPROSAR's medical mission is to dispense spectacles. Volunteers search a database that lists the prescriptions of almost 10,000 donated eyeglasses to find the five pairs of spectacles that match the patient's prescriptions most closely. If the patient has an unusual refractive error or cannot find a good match in the dispensary, suitable spectacles will be made in the US and mailed to him later. During each campaign, volunteers usually dispense more than 1,000 spectacles, most of which are presbyopic reading glasses.

### CONCLUSION

Since receiving an unexpected phone call in 1988, Dr. Bowlds has participated in every one of ASAPROSAR's eyecare campaigns (17 in all). Serving as the main organizer of the medical mission, he also recruited both authors, who have gone on to participate in eight (Dr. Cotran) and 12 missions (Dr. Umlas).

Thanks to a 20-year partnership between Salvadorans and North Americans, Dr. Guzman's vision of improving poor Salvadorans' access to healthcare and social services has been realized. Furthermore, the eye care program has become a cornerstone of ASAPROSAR's continuing mission and a dependable source of help for thousands people in El Salvador in need of ophthalmic and optometric services. ■

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For more information about the Friends of ASAPROSAR, visit <http://www.friendsofasaprosar.org>.