

New Orbis Flying Eye Hospital helps fight blindness in China

During a three-week maiden voyage to the northern city of Shenyang, the plane's medical volunteers treated 124 patients and provided hands-on surgical training to 18 local doctors.

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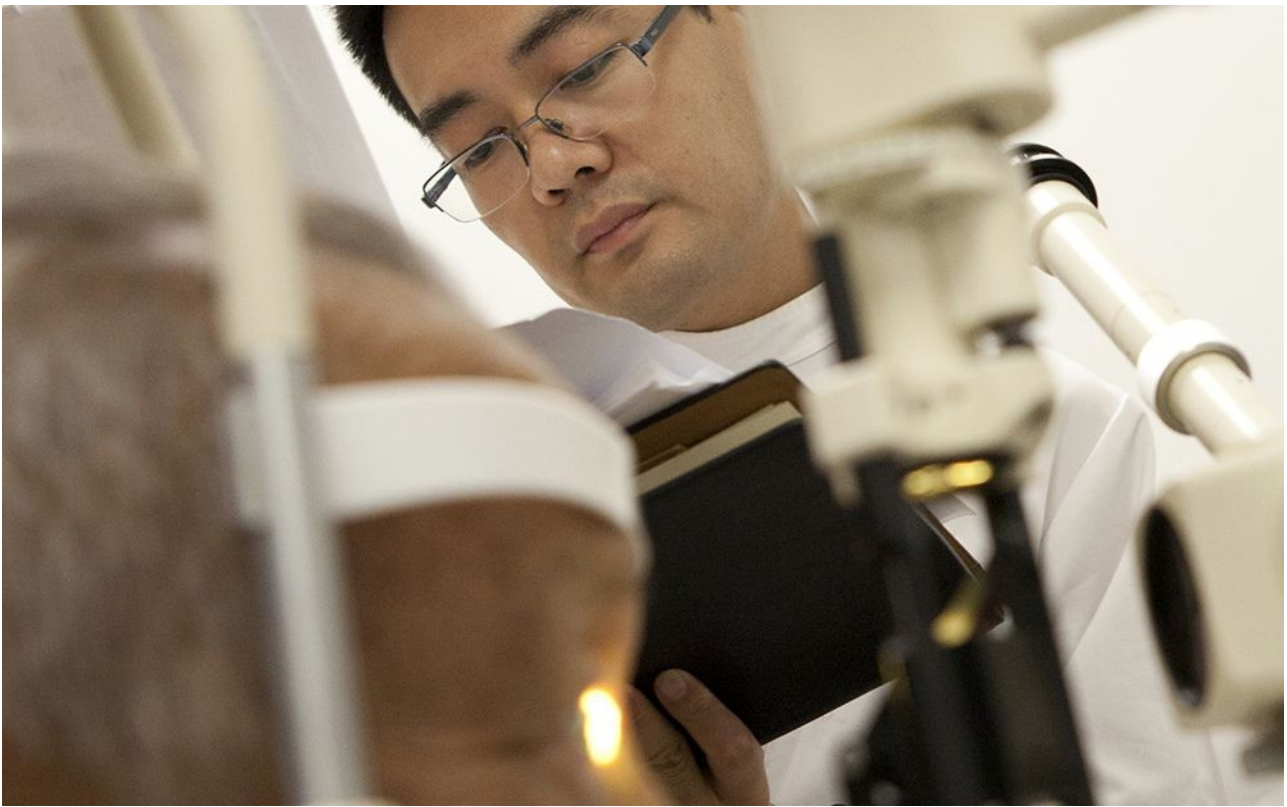
In the ten years Zhang Bin has been an ophthalmologist, he's performed hundreds of cataract surgeries. Yet he saw there was still tremendous need for improved access to eye care among the 8 million people living in and around Shenyang, where some of his patients travel three hours for treatment.

So when he heard the Flying Eye Hospital and its staff of volunteer doctors were coming to town to treat patients and train local eye care professionals, he eagerly signed up.

The Flying Eye Hospital is operated by Orbis International, a non-profit organization dedicated to increasing the standard and availability of eye care in more than 90 countries around the world. Alcon, the [Novartis eye care division](#), has supported Orbis for 34 years with grants, donated equipment and volunteers.

The Orbis Flying Eye Hospital, the world's only fully accredited teaching hospital on an aircraft, was designed to bring the best medical technology and training to the developing world. The third generation of the flying hospital, built in a donated MD-10 jet, was unveiled in June and its first mission was to Shenyang. There, the hospital's volunteers used the plane's operating room and advanced equipment to demonstrate a variety of eye surgeries.

Preventable forms of blindness are common in China, yet not enough doctors there are equipped to treat them. For instance, cataracts, a clouding of the eye's lens, account for about 40% of all blindness in China. However, because fewer than half of China's 23,000 ophthalmologists perform cataract surgery, many people still go without treatment.



Dr. Zhang is an attending physician at He University Eye Hospital (HUEH), host of the Flying Eye Hospital's three-week ophthalmic training program in Shenyang. He applied for the training program to learn advanced technology and develop his skills so he can eventually become a trainer and teach others, helping increase access to quality care.



Doctors make a lot of difficult choices on screening day when physician trainees and trainers examine patients who were chosen to come to the hospital for final screening and selection for the program. Dr. Zhang and Dr. James Lehmann, a volunteer faculty member from San Antonio, Texas, began preparing weeks in advance by reviewing cases Dr. Zhang had uploaded to Cybersight, Orbis' telemedicine platform.



Nearly 200 patients are treated during a typical Flying Eye Hospital program. About 15-20 doctors receive hands-on training, while another 200 participate as observers to strengthen their skills. Hundreds of additional eye care professionals observe procedures and lectures broadcast from the plane via Cybersight. Over the long term, thousands of patients should benefit from each doctor who receives training.



Orbis' teamwork approach to surgical training covers all types of eye care practitioners, including ophthalmologists, nurses, anesthesiologists, biomedical engineers and technicians. The Flying Eye Hospital also has training programs for optometry and orthoptics, which treats patients who suffer from eye movement disorders and other problems.



Observing live surgeries and receiving real-time feedback from volunteer faculty helps hands-on trainees learn and adopt the best practices for care. “The most important thing I’m learning through Orbis is the standards they teach us,” Dr. Zhang said.



Before training with Orbis, Dr. Zhang had never performed a corneal transplant, where the physician replaces the transparent front part of the eye. By the end of the week, he was performing the surgery from beginning to end on his own and doing so well that his surgery was broadcast in the classroom for observation by other trainees.



Vivid three-dimensional imaging technology that provides a view similar to the surgeon's microscope lens and two-way audio communications allow local doctors and residents to observe live surgeries in the 46-seat Alcon Foundation classroom aboard the jet. They also attend presentations led by the faculty of volunteer ophthalmologists.



Patrick Meng, an Alcon volunteer and regional technical trainer, was on hand for the entire three weeks to help trainee technicians, nurses and surgeons learn to operate the Alcon surgical equipment on the plane. Here he teaches how to operate advanced phacoemulsification (phaco) technology, which uses an ultrasonic device to break up and remove cataracts.



Dr. Zhang has performed hundreds of phaco cataract surgeries, but learned the finer details of using the high-tech equipment on the plane. “At some point I’ll be able to train others and make phaco cataract surgery more accessible,” said Dr. Zhang. “People shouldn’t have to travel to another city for surgery.”



Mrs. Cao’s big smile is typical for patients leaving the Flying Eye Hospital. She had cataracts in both eyes and until Orbis arrived, surgery had not been an option because of the cost. Her vision had deteriorated so much that she had to rely on her daughter for help with everyday chores. After surgery, nurses tend to patients in the plane’s post-operative care room before releasing them with instructions to go to the hospital the next day for a follow-up exam.



Excitement, relief and gratitude are palpable on the day after surgery, when patients have their bandages removed and vision checked.



Cataract surgery, a relatively simple 10-minute procedure, is one of the most cost-effective surgical interventions. With their sight restored, patients can return to work or school and enjoy greater independence. Mrs. Cao said she didn't feel a thing and now that she can see again, she can do housework, read the newspaper and watch TV. In her words, it's, "tai-hao-la" (wonderful).

Meet the flying hospital that brings training to local eye care professionals in under-resourced communities

Enhancing Sight

Alcon is committed to helping people see better and supports initiatives aimed at expanding access to quality eye care worldwide.

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