EMORY’S GLOBAL OPHTHALMOLOGY PROGRAM WORKS TO PREVENT BLINDNESS

Primarily found in hot, dusty climates where water is scarce and sanitation is poor, trachoma is a blinding eye disease that impacts entire communities. With its large number of rural and often isolated villages, Ethiopia has the distinction of bearing the largest burden of trachoma in the world.

Trachoma is easily spread, especially between mothers and their children. According to the World Health Organization, 232 million people worldwide are at risk for developing trachoma, and 4 million are at immediate risk for blindness from repeated trachoma infections. *Chlamydia trachomatis* bacteria, which causes trachoma, spreads through contact with eye discharge from an infected person (via hands or clothes), or through flies that land on the face. Left untreated, trachoma causes a build up of scar tissue on the inner eyelid, which in turn causes an inward rotation of the eyelid. The inward turning of the eyelashes, called trichiasis, is an extremely painful stage of trachoma disease, as the eyelashes cause corneal scratches with every excruciating blink - eventually causing irreversible blindness.

Yet trachoma has an enemy in Dr. Danny Haddad, Director of the Global Ophthalmology Program at Emory (GO-Emory). Having worked in the area of infectious eye diseases for almost 20 years, Dr. Haddad has made the control and eventual elimination of worldwide trachoma both a professional and personal priority.

Before arriving at the Emory Eye Center (EEC) in 2013, Dr. Haddad served as Director of the International Trachoma Initiative (ITI) at the Taskforce for Global Health, and previous to that, served as Director of the Children Without Worms program at the Taskforce, as well as worked with Helen Keller International (HKI) in a variety of capacities. Familiar with the devastation and debilitation caused by trachoma in some of the most vulnerable communities on the planet, Dr. Haddad made it a priority when joining the EEC to build a global vision initiative that harnesses the resources of Atlanta-area expertise in the fight to control blinding trachoma.

Global Ophthalmology at Emory, or GO-Emory, is the realization of that goal. Partnering with ITI, The Carter Center, the CDC, Sightsavers, and Helen Keller International, GO-Emory supports the goals of GET 2020, a WHO-led Alliance for the Global Elimination of Trachoma by the year 2020. GO-Emory is now a pioneering interdisciplinary program that aids in the global fight against trachoma.
An initial focus of GO-Emory was to build global medical education opportunities for Emory ophthalmology residents. The first step was to encourage the Department of Ophthalmology to join the Emory School of Medicine’s Global Health Residency Scholars Program (GHRSP). Through this program, residents attend global health seminars for a year and participate in a one-month rotation at Addis Ababa University (AAU) in Ethiopia. By including the Emory Ophthalmology Department in GHRSP, Emory residents are offered the opportunity to work in the eye department at Menelik II Hospital. The experience of working in an Ethiopian hospital exposes Emory residents to a range of conditions and cases that they are not typically exposed to in their training.

Through providing global ophthalmology training opportunities, the Emory Department of Ophthalmology is able to better compete for top-tier residents. And the desire of potential residents to work abroad is only growing, says Dr. Haddad. He notes that since the AAU rotation in ophthalmology was initiated in 2013, there has been increased interest and enthusiasm for the program among residents, younger medical students, and faculty, who wish to travel with the residents to Ethiopia.

GO-Emory goes beyond just educating Emory ophthalmology students. Dr. Haddad and Emory are currently working with HKI, Sightsavers, and several Ethiopian partners to train Ethiopian medical workers to provide surgery to those affected by trachoma in Ethiopia. Currently, these trachoma surgeries, which consist of correcting the inward rotation of the upper eyelid, are performed by nurses due to a dearth of ophthalmologists in Ethiopia. Ensuring that these nurses are properly trained has, therefore, been an ongoing challenge to building capacity.

Through this partnerships, nurses participate in a two-week trachoma surgery course, practicing on training mannequins with removable eyelid cartridges. The course focuses on performing the surgery not only in hospital settings, but in the community as well. This capitalizes on the relative simplicity of the trachoma surgery, eliminating the need for patients to travel to hospitals or large cities to receive the potentially vision-saving surgery. Emory and its Atlanta coalition partners also invested in updated technology and tools to arm Ethiopian health workers with the capacity to effectively operate on increased numbers of Ethiopians with trichiasis in their local communities.

Trachoma surgery has a 10% chance of recurrence, but Haddad states that “there has been a reduction in blindness due to these surgeries.” In the cases where trichiasis recurs after surgery, Dr. Haddad and GO-Emory are working with ocular plastic surgeons at Emory to explore different surgical techniques.

And there is no shortage of exciting opportunities for Emory students and faculty in the field of global ophthalmology. Alcon recently awarded a grant to Emory to begin a global ophthalmology fellowship, a two-year program collaborating with the RSPH’s Department of Global Health to ensure that medical fellows get “good, solid training in global health.” One of Dr. Haddad’s objectives as Director of GO-Emory is to work on further strengthening the bond between Emory and Menelik II Hospital. Ideally, through the new Alcon fellowship program, there will be an Emory fellow based in Addis Ababa at Menelik II Hospital to help train Ethiopian residents and foster this relationship.

In addition to growing the GO-Emory program, Dr. Haddad has been working to strengthen the ties between the Department of Global Health in the Rollins School of Public Health (RSPH) (where he holds a joint appointment) and the Department of Ophthalmology. He feels that there are “incredible opportunities to build the link between [the two schools].” One such link with the Department of Global Health is the “Vision Health-A Global Perspective” course offered at RSPH, which introduces students to the epidemiology of the major causes of global vision loss.

Dr. Haddad is also looking to collaborate more with other Emory departments and schools to gain varying perspectives and benefit from other areas of expertise. For example, he would like to work with the College’s Department of Anthropology to better understand barriers to health and the Goizueta Business School to develop tools for program leadership and management. Dr. Haddad believes that through these collaborations, Emory can continue to be a leader in improving global health.