

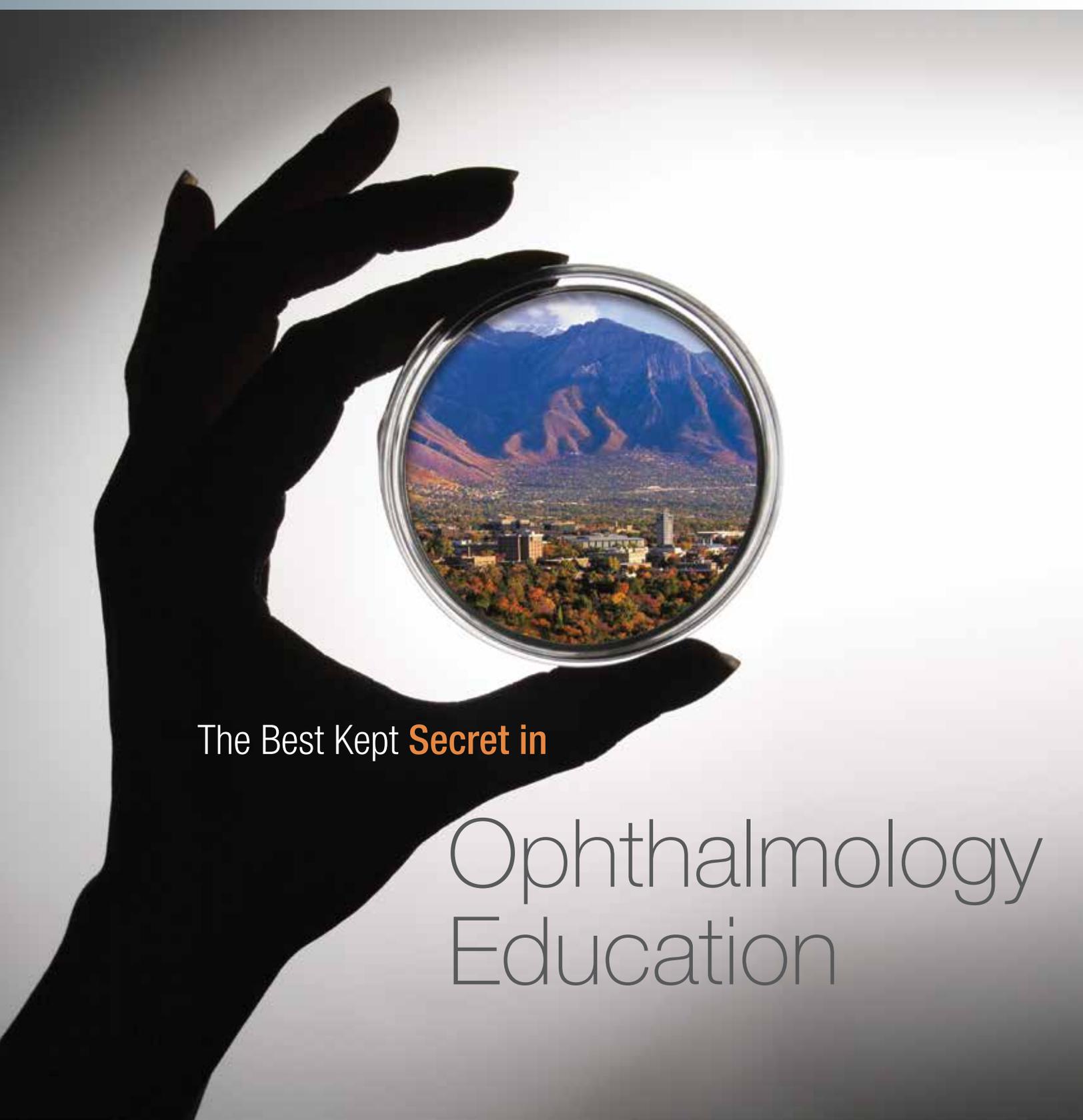
John A. Moran Eye Center

Education

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FOCUS



The Best Kept **Secret** in

Ophthalmology
Education



The Moran Eye Center has long been one of the country's best kept secrets. Home to some of the top leaders in ophthalmology care and research, we offer a world-class facility with state-of-the-art equipment and one of the most competitive and wide-ranging educational programs in the field. All of this located in a friendly, affordable city nestled in the foothills of the beautiful Wasatch Mountains. In these pages, you'll learn more about what makes Moran's program so exceptional and why it should be at the top of any prospective ophthalmology resident's list.

A handwritten signature in black ink that reads "Dr. Randy Olson". The signature is written in a cursive, flowing style.

Randall J Olson, MD

Professor and Chair, Department of Ophthalmology and Visual Sciences; CEO, John A. Moran Eye Center, University of Utah

“We allow residents the latitude to tailor their own training—one that stimulates minds, develops critical thinking, and fosters personal growth and success. I’m really proud—it’s one of the elite programs in the world.” —Jeff Pettey, MD

Jeff Pettey, MD

An Innovative Vision for Ophthalmology Education

Jeff Pettey, MD, is Moran's residency program director, assistant clinical professor at the University of Utah Department of Ophthalmology and Visual Sciences, and director of ophthalmology at the VA Hospital. He specializes in comprehensive ophthalmology, complex cataracts, and anterior segment surgery. Additionally, Pettey coordinates the teaching and training of medical students, residents, fellows, and international observers; volunteers at free clinics throughout Utah; and is active in international outreach, developing teaching collaborations with training programs in Nepal, Trinidad, Ghana, and Tanzania.

Pettey describes the philosophy of Moran's education program like this: “When you bring in a spectacular group of people—three applicants out of over 400 are selected per year—and offer support rather than requirements and restrictions, you allow them to accomplish great things. I *trust* residents are going to work hard and study. I *trust* they are going to be active and motivated learners. As we listen and give them the tools they need to succeed, they are able to accomplish truly amazing things—because we stay out of their way.”

The bar for potential residents is set high. Applicants must show longitudinal academic achievement, have excellent test scores, have a sustained interest in ophthalmology, demonstrate empathy and social engagement as well as an interest in “giving back,” and display a research interest. But just as importantly, Moran looks for good team players and people who are willing to help others out. “My hope is that our residents not only become superb physicians,” says Pettey, “but that they become leaders and change-agents in a global community.”



Education and Training Program Overview

Ophthalmology is a competitive field, and a world-class program must help residents become flexible and innovative, as well as highly skilled physicians. Between 2012 and 2014, now-Program Director Jeff Pettey evaluated academic ophthalmology practices and models worldwide, implementing cutting-edge advancements in training and teaching and elevating an already competitive program to new heights.

Education: Moran residents may tailor their elective opportunities to develop an expertise or a passion, such as creating a library of educational cases and tools, authoring a textbook or oral boards manual, or developing and writing curriculum or clinical exam teaching sessions. And they can apply to stay on an extra year for an academic fellowship, which can be devoted to research, international ophthalmology, or to academic teaching and training.

Surgical Training: Moran residents are outnumbered approximately three to one by full-time clinical faculty who have active practices covering all subspecialties of ophthalmology, allowing residents an opportunity to learn about and treat all ophthalmic conditions.

Research: Residents who have a strong research interest are given protected research time one-half day each week throughout their residency. This research experience allows them to collaborate in studies, publish in peer-reviewed journals, and present at national meetings. Moran also provides avenues for funding and matching grants.

International Outreach: Moran pioneered international ophthalmology elective time for residents who choose to take advantage of a three- to four-week humanitarian rotation. The opportunity to travel out of the country to participate in training and education has produced a new generation of leaders in international ophthalmology.

Local Outreach: Residents are encouraged to perform ophthalmic services and vision screenings for some of Utah's most underserved and in-need populations at four local clinics, on the Navajo Nation, and during twice-annual Charity Surgery Days.



Jeff Pettey, MD, director of the Education and Residency Program, and 2014-2015 residents. From left to right, Brian Stagg, MD; Russell Swan, MD; Adam Jorgensen, MD; Eileen Hwang, MD, PhD; Program Director, Jeff Pettey, MD; Julia Byrd, MD; Zachary Joos, MD; Trent Richards, MD; Rene Choi, MD, PhD; and Brian Zaugg, MD.

High-volume Surgical Training & Hands-on Patient Care

Within three years, one Moran resident will see hundreds of patients and perform a variety of surgeries. Nationally, ophthalmology residents are required to perform 87 cataract surgeries—the average is 140—but a Moran resident performs over 350 cataract surgeries as well as a range of subspecialty surgeries. And, they become experienced using the latest equipment and techniques, including the Centurion phaco machine, LenSx laser, and an invaluable training tool called the Eyesi Simulator that trains residents to do parts of cataract surgery and tremor control in a very safe environment. About 20 to 25 percent of resident cases require extra equipment, such as the malyugin ring, capsular tension rings, and trypan blue.

Residents also take a lead role in providing care as part of Moran's resident-staffed "Continuity Clinic." This clinic provides a unique teaching environment and an opportunity for residents to learn how to become the provider for the patient in a well-supervised setting with graduated levels of responsibility, beginning day one. Residents see their own patient for the entire course of treatment, and senior residents have the opportunity to examine patients, propose a diagnosis, and develop a treatment plan. In addition to the Moran Eye Center, residents rotate through the VA, Primary Children's, and the University of Utah Hospitals.

402%

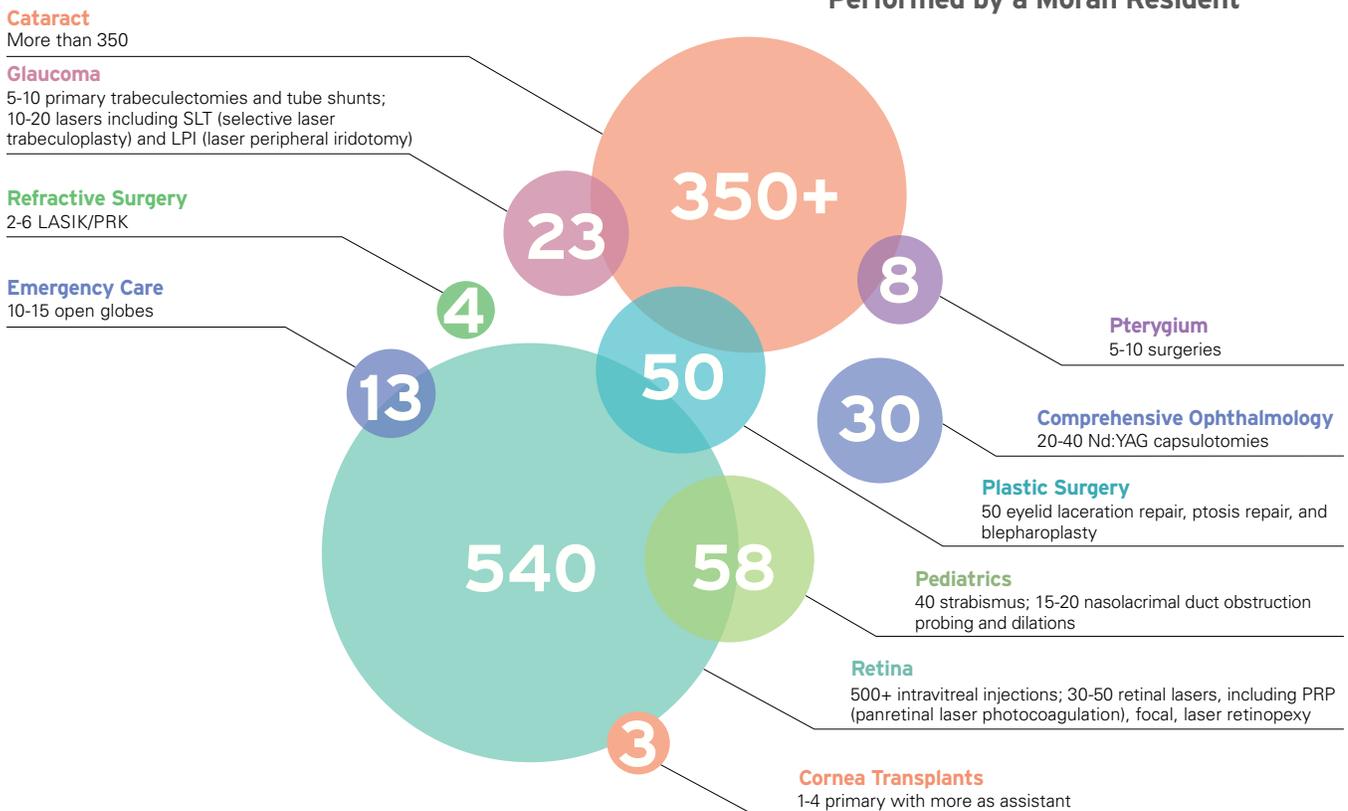
One Moran resident performs 402% more **cataract surgeries** than the national requirement



“The Moran Eye Center is known for teaching residents, both medically and surgically. All cases of resident surgery are videoed. We review cases with the residents to help them understand all the steps of surgery. We can walk through any complication and explain why it happened and how to avoid it in the future. These reviews help build a strong foundation for residents to become excellent surgeons.”

—Alan S. Crandall, MD, Senior Vice Chair, Moran's Department of Ophthalmology and Visual Sciences; Director, Glaucoma and Cataract Division; and Co-director, International Outreach Division

Average Number of Surgical Procedures Performed by a Moran Resident





ARCS Scholars Brian C. Stagg, MD; Brian E. Zaugg, MD; and Eileen Hwang, MD, PhD.

Beyond the Basics Dedicated Research Time

Moran is known as much for its top-notch research labs as it is for innovations in clinical care. Our physicians and researchers collaborate on a daily basis, and unlike most programs, residents who request it are given protected research time one-half day each week throughout their residency and have ample opportunities to pursue their research passions. Funding is available through the generosity of the Achievement Rewards for College Scientists (ARCS) Foundation, which each year awards \$15,000 in research funding to a first-year Moran resident (ARCS awards go only to the top 100 research universities in the US). Moran builds on ARCS' generosity by providing matching funds for second- and third-year awardees to continue their research.

Moran's ARCS Scholars

Before coming to Moran, first-year resident Eileen Hwang, MD, PhD, studied the hereditary diseases of collagen through a National Institutes of Health F30 fellowship at Robert Wood Johnson Medical School in New Jersey. She was attracted to Moran because, she says, "Here, I don't have to put my research on hold." Currently, Hwang is researching biophysical techniques used to measure blood molecules in relation to age-related macular degeneration. She was honored with the inaugural ARCS "Randall J Olson Scholar Award" in 2014.

Brian E. Zaugg, MD, and Brian C. Stagg, MD, received ARCS 2012 and 2013 awards respectively. They have made extraordinary advances in researchers' ability to quantify cataract surgery outcomes by testing new technologies and techniques for safety and efficiency with a device called the "cubinator." This egg-slicer-like invention divides formalin-soaked pig lenses into uniform 1 or 2mm cubes, simulating human cataract material. Throughout their residencies, they have collaborated with other Moran researchers and physicians, and their work has been published in top industry journals.

Research Benefits Clinical Practice

"My research on phaco technology allowed me to use the machine and become familiar with running the foot pedal. It helped create a comfort level with the instruments that couldn't be replaced by any other method. In the last year, I've done several research projects with cadaver eyes evaluating equipment and new devices. All of these experiences offer invaluable training."

—Brian E. Zaugg, MD,
third-year resident



The cubinator



Moran Resident Appointed as National Ophthalmology Representative

Brian C. Stagg, MD, was recently appointed as the resident representative for ophthalmology's national Resident Review Committee (RRC) for the Association of Graduate Medical Education (ACGME)—an honor for him and for Moran. The RRC reviews and awards accreditation for all ophthalmology specialties for the ACGME. Stagg's appointment runs through June 2016.



The Moran Eye Center partners with the Tilganga Institute of Ophthalmology in Kathmandu, restoring sight to hundreds at a time.

Debilitating vision problems know no borders—they affect every population and ripple through economies worldwide. Moran is unparalleled in our global mission to eradicate curable blindness through a perpetual, sustainable model.



Each year, residents and fellows from the Moran Eye Center travel through the Nepal countryside to remote eye camps, treating many individuals who have traveled miles on foot to have their sight restored.

Moran operates an educational exchange program in Nepal, which teaches residents how to deliver high-quality care in the developing world.



Reaching Out *Globally & Locally*

Global Outreach Residents and fellows have extraordinary opportunities to participate in outreach efforts as well as international electives because of the Moran Eye Center's commitment to reaching individuals in need of eye care who are unable to access or afford it. Moran outreach teams conduct approximately 20 international eye camps each year in countries as remote as Micronesia and as close as Haiti.

Training in Nepal Residents may opt to do a three- to four-week rotation at the Tilganga Institute of Ophthalmology in Kathmandu, Nepal, where they experience clinical and surgical settings they may never see in the US. From lightning-induced cataracts to open globes caused by stork attacks, they get an entirely new perspective on eye trauma. They also accompany Tilganga teams on outreach medical eye camps throughout Nepal.

International Fellowship Fellows from Moran or elsewhere who have completed a year's training in cornea, glaucoma, or retina may apply for a second-year international fellowship. This option includes six to eight months working in the developing world teaching and practicing clinical and surgical aspects of ophthalmology in a variety of settings. The balance is spent at the Moran Eye Center. Past fellowship experiences have included periods in Nepal, Ghana, Ethiopia, Rwanda, and Kenya. Our fellows network overseas with organizations including the Himalayan Cataract Project and ORBIS.



Chief resident Zachary Joos, MD, and attending Nick Mamalis, MD, treat patients during Charity Surgery Day, spring 2015.

Local Outreach

Initiated in 2011 by then-Moran resident Dr. Jeff Pettey and medical student Brian Stagg, MD (now a Moran resident), our first Charity Surgery Day launched in 2012. This extraordinary program is an outgrowth of the volunteer eye care Moran residents provide at Salt Lake City's Fourth Street Clinic—one of three community clinics where, under the supervision of a board certified ophthalmologist, they are able to function as primary providers for patients. As Pettey and Stagg recognized a need to follow up on cases where surgery could help patients get back to work and live more independent lives, they took action.

Today, Charity Surgery Days are still largely organized, staffed, and run by Moran residents. These events have proven so successful and cost-efficient, the American Society of Cataract and Refractive Surgery Foundation's new Operation Sight network adopted Moran as a model in 2014. Moran is now one of five founding members of the network, which provides a centralized approach for organizations and volunteer surgeons who wish to end cataract blindness in the United States. As of spring 2015, Moran's Charity Surgery Day has served more than 100 patients.

Our Outreach Division also travels monthly to the Utah strip of the Navajo Nation, one of the most isolated and neglected areas in the lower 48. Here, unnecessary blindness from cataracts, lack of vitamin A during pregnancy, and diabetic retinopathy are common. Residents and fellows often join these trips where they screen patients and refer them as needed for surgery.



During a recent Charity Surgery Day, resident Zachary Joos, MD, and attending physician, Nick Mamalis, MD, successfully removed a white cataract from Fredi, a 26-year-old chef who, at age eight, was thrown from a donkey and landed in thorn bushes. One of the thorns stuck in Fredi's eye. Doctors in Oaxaca, Mexico, removed the thorn, but the injury led to a dense cataract that jeopardized Fredi's livelihood. His surgery made it possible for him to continue in his career.

Former residents Jim Bell, MD, and Leah Owen, MD, PhD, screen patients on the Navajo Nation, 2014.



"I've had the opportunity to work with many residents, fellows, and newly trained ophthalmologists over the years. I am always amazed how well trained and surgically capable they are when they have been trained at the Moran Eye Center. Indeed, whenever I am asked by a medical student about ophthalmology programs, I strongly suggest they apply to the Moran Eye Center for this very reason."

—Robert J. Cionni, MD, Salt Lake City, Utah; President, American Society of Cataract & Refractive Surgery





Ike K. Ahmed, MD



Alan Crandall, MD

Moran Alumni Where Are They Now?

Ike K. Ahmed, MD, former Moran glaucoma fellow (2001), received the 2014 Binkhorst Medal and presented the Binkhorst Lecture during the American Society of Cataract and Refractive Surgery Symposium and Congress. Ahmed was the fourth Moran physician or alumni to receive this prestigious honor—and the third in a row. Currently the director of the Glaucoma and Advanced Anterior Surgical Fellowship at the University of Toronto, Ahmed is also an assistant professor at the University of Toronto and clinical assistant professor at the University of Utah.



Since his glaucoma and anterior segment fellowship with Moran specialist Alan Crandall, MD, Ahmed has received numerous research grants. He has designed innovative glaucoma diamond scalpels for surgery, microsurgical instrumentation devices and implants, and techniques for managing dislocated cataracts, iris reconstruction, and glaucoma implant devices. He is world-renowned for his skills and groundbreaking work in the diagnosis and surgical treatment of highly complex eye diseases including glaucoma and surgical complications. In 2010, Ahmed was selected as one of Canada's "Top 40 Under 40."

"Perhaps the best testament to the quality of the training I received at Utah as a resident and fellow is that even though I am only a few years out of training, I am already being referred complicated surgical cases from my more senior colleagues. The quality of the surgical training at Utah has prepared me well for a busy surgical practice."

—Grant Morshedi, MD, Director of Glaucoma Services, Jones Eye Institute, University of Arkansas for Medical Sciences, Little Rock, Arkansas

