

# Inclusion, Diversity, and Equity at Harvard Ophthalmology

Harvard Ophthalmology is dedicated to fostering an inclusive, diverse, and equitable community—across our department and institutions, and even more broadly at a national level. Building a diverse department strengthens our ability to provide world-class care to our patients, while also bolstering our education and research efforts.

Inclusion, diversity, and equity (IDE) are core values, central to our mission and culture. We are proud to have a faculty made up of over 50% women, with many serving in leadership roles, and we recognize the need to continue to diversify our department by taking steps to include all demographics underrepresented in medicine (URiM) and science.

Over the past several years, we have launched many new programs with the goal of supporting and providing more opportunities to those underrepresented in medicine. Our IDE leaders, James Chodosh, MD, MPH; Alice Lorch, MD, MPH; Joseph Arboleda-Velasquez, MD, PhD; and Ankoor Shah, MD, PhD, are driving several of our initiatives to increase diversity department-wide.

## DIVERSITY AS DEFINED BY THE NATIONAL INSTITUTES OF HEALTH

The NIH's ability to help ensure that the nation remains a global leader in scientific discovery and innovation is dependent upon a pool of highly talented scientists from diverse backgrounds...

1. **Racial and ethnic groups** underrepresented in medicine and biomedical sciences;
2. Individuals identifying as part of the lesbian, gay, bisexual, transgender, queer, intersex, asexual (**LGBTQIA+**) community; and,
3. Individuals with life paths that are **socially or economically disadvantaged**.<sup>1</sup>

## Why IDE and not DEI?

Our inclusion, diversity, and equity leadership team were inspired by a discussion with alumna Eve Higginbotham, SM, MD, ML, Professor of Ophthalmology and Vice Dean for Inclusion and Diversity at Perelman School of Medicine at the University of Pennsylvania.

Dr. Higginbotham approaches IDE by first placing an emphasis on an inclusive environment, which embraces people of all ethnicities, genders, religions, abilities, sexual orientation, historical traditions (like first-time college graduates); and socioeconomic, veteran, and immigrant statuses. This method then allows diversity and equity to flourish by fostering a sense of belonging and value. This concept resonated with our leaders and is at the core of our latest initiatives.

## The EYE CAN Program

The EYE CAN Program, envisioned by Dr. Shah and Dr. Lorch, incorporates initiatives to diversify the pipeline of individuals interested in ophthalmology at every level of the professional development lifecycle—from school-aged children to faculty leaders—creating a feeling of inclusion and encouraging each individual to believe “EYE CAN.” Our vision is to provide:

- School-aged children with the dream that they can succeed in any career
- High school students with the seed that careers in science, technology, engineering, and math (STEM) are achievable
- College students with the belief that medical and graduate school are within reach
- Medical and graduate students with the vision that a career in ophthalmology and visual sciences can be exciting
- Residents and postdoctoral fellows with the sponsorship necessary to launch successful careers in medicine and science
- Junior faculty with the mentorship to become leaders

1. <https://grants.nih.gov/grants/guide/notice-files/NOT-OD-20-031.html>

## EYE CAN do Anything

Early on, we encourage school-aged children to be curious about the world around them, including the field of ophthalmology. At this age, the mantra should be supportive and expansive, allowing each child to dream big and to have champions who encourage their ideas of becoming a writer, an astronaut, a doctor, or a scientist.

## VISION SCREENING TOUCHPOINTS WITH CHILDREN

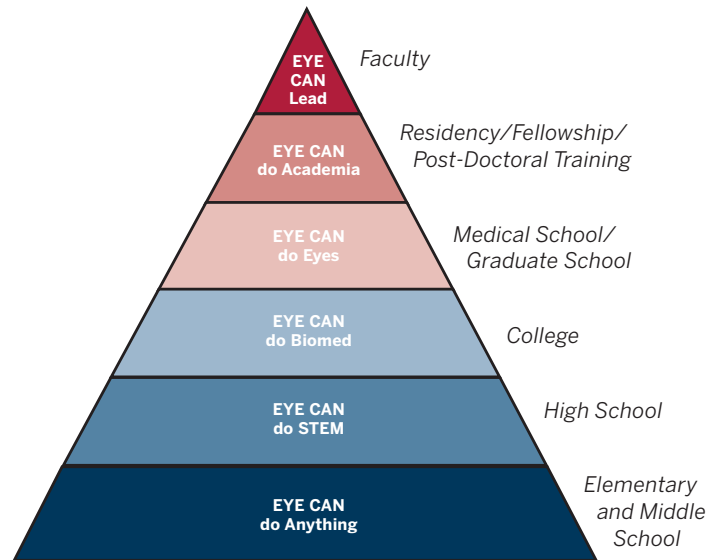
During regularly scheduled visits, our pediatric ophthalmologists foster fun, open discussions with their patients about their accomplishments; asking them about school and how they are doing; and allowing curious children to play with equipment, ask questions, and learn.

In the local community, our clinicians provide free vision screenings to hundreds of middle-school youths at Camp Harborview in Boston and at the Neighborhood House Charter School. These vision screenings provide yet another opportunity for our clinicians to encourage children and pre-teens to “think big” and to instill curiosity in STEM.

## EYE CAN do STEM

In high school, adolescents start thinking about careers, and it is our responsibility to ensure that they know about careers in STEM. Preeti Mokka, OD; and Benjamin Jastrzembski, MD, serve as mentors in Community Opportunities Advancement at Children’s Hospital (COACH). The COACH program introduces local high school students to careers in the health sciences through opportunities to interact and to work with healthcare professionals.

Additionally, Harvard Medical School graduate and incoming resident Sameen Meshkin, MD, has served as a youth advocate within the Chelsea community, and he is spearheading a new opportunity allowing Chelsea High School students to explore health-related careers through tours and talks with staff at Mass Eye and Ear. Other faculty engage with high school students, offering observerships and research opportunities.



The EYE CAN Pyramid

## EYE CAN do Biomedical Sciences

At the college level, the EYE CAN Program encourages individuals through mentorship, research opportunities, and a clinical shadowing program to consider advanced degrees in the biomedical sciences.

## HARVARD RETINAL IMAGING LABORATORY UNDERGRADUATE MINORITY MENTORSHIP PROGRAM

In 2021, the Harvard Retinal Imaging Laboratory, led by John Miller, MD, launched an innovative, semester-long mentoring program, which offers premedical students at Harvard College who identify as underrepresented in medicine and science the opportunity to gain early exposure to ophthalmology. Edward Lu, MD, a Harvard Medical School graduate and now PGY1 resident, and Augustine Bannerman, a 2021 graduate of Harvard College and retinal imaging laboratory research associate, developed didactic and experiential program that pairs each student with a formal mentor.

Program participants are given an opportunity to contribute to a research project, participate in laboratory meetings, critically analyze data, and write scientifically—all while continuing their undergraduate education. In addition, students attend virtual shadowing sessions with faculty, who present patient cases and discuss their career paths.

To date, three members of this program have continued research at Mass Eye and Ear and one student was invited to present at the 2021 Association for Research in Vision and Ophthalmology Annual Meeting. Most recently, Dr. Lu presented Creating a Mentorship, Research, and Virtual Shadowing Program for Underrepresented Minority Undergraduates During Covid-19<sup>2</sup>, a paper co-authored by Augustine Bannerman, at the annual Association for University Professors of Ophthalmology meeting. The program has now expanded to include undergraduate students from Massachusetts Institute of Technology.

## EYE CAN do Eyes

For medical and graduate school students, the EYE CAN program focuses on introducing underrepresented students to ophthalmology and the visual sciences as a career path.

## HARVARD OPHTHALMOLOGY RESEARCH SCHOLARS PROGRAM

Launched in 2021, the Harvard Ophthalmology Research Scholars program provides rising second-year medical students from underrepresented and disadvantaged groups an immersive, eight-week experience in ophthalmology and vision research at Mass Eye and Ear. Developed and overseen by Drs. Arboleda-Velasquez and Chodosh, the program pairs students with a Harvard Ophthalmology vision scientist, who mentors the student in research skills. Scholars also participate in weekly half-day clinical sessions with a physician in ophthalmology, receive career coaching, community building, and networking during weekly dinner sessions with rotating faculty, and gain wet lab experience with resident teachers. A case study repository provides an opportunity for the Scholars to publish a clinical ophthalmology manuscript, mentored by residents and faculty.

At the end of the program, Scholars continue to receive support and guidance as they prepare their applications for ophthalmology residency programs. For an additional opportunity to network and gain inspiration from alumni

## Did you know?

Across medical specialties, on average, 10% of faculty come from underrepresented backgrounds. However, in ophthalmology only 7% identify as underrepresented in medicine.<sup>3</sup>

and faculty presentations, the Scholars from the prior year attended the 2022 Harvard Ophthalmology Annual Meeting and Alumni Reunion.

“The experience was transformative for my professional growth and motivated me to explore my interest in ophthalmic genetics further. I now feel there is a place for me in ophthalmology, and I am grateful for that!” Cherrell Price, Doctor of Medicine Candidate, Morehouse School of Medicine.

## MINORITY OPHTHALMOLOGY MENTORING PROGRAM

To help increase diversity in ophthalmology, the American Academy of Ophthalmology (AAO) and Association of University Professors of Ophthalmology (AUPO) developed the Minority Ophthalmology Mentoring (MOM) Program. Dr. Chodosh served as a founding partner of the program, and numerous Harvard Ophthalmology faculty serve as mentors within the program. Medical students accepted to the program are paired with a faculty mentor for ongoing support, attend quarterly career building webinars, and are provided an expense-free trip to attend AAO Annual Meeting to learn about ophthalmology through hands-on experience, presentations, and networking. The MOM program has reached 206 students across over 85 medical schools and 24 participants have matched in ophthalmology residencies. To date, five Harvard Medical School students, one Harvard College student, and one Harvard Ophthalmology research associate (now a University of Chicago medical student) have completed the MOM program.

2. Bannerman, A, Lu ES, Bryant D, Miller JB. Creating a Mentorship, Research, and Virtual Shadowing Program for Underrepresented Minority Undergraduates During Covid-19. Invest. Ophthalmol. 2022;63(7):1079 – A0174.

3. Fairless EA, Nwanyanwu KH, Forster SH, Teng CC. Ophthalmology Departments Remain Among the Least Diverse Clinical Departments at United States Medical Schools. Ophthalmology. 2021;128(8):1129-1134.

## EYE WONDER

Dr. Chodosh, our department's Ophthalmology Champion for Diversity, collaborated with Dr. Lorch, Program Director of the Harvard Ophthalmology Residency Training Program, and with Dr. Shah, Director of Medical Student Education at Harvard Medical School, to develop the EYE Wonder Program in 2019. This yearly dinner event brings together Harvard Ophthalmology faculty and residents with first- and second-year Harvard medical students from underrepresented backgrounds, and it highlights opportunities within the field with a pictorial tour highlighting the diversity of patients cared for by ophthalmologists, an opportunity to network, and an awareness of the MOM program opportunity.



Students participating in wet lab demonstration  
Photo Courtesy: Sila Bal, MD, MPH

## PROGRAM FOR UNDERREPRESENTED MINORITY PEER MENTORSHIP

Sila Bal, MD, MPH; and Nakul Singh, MD, MSc—both Harvard Ophthalmology Residency Program 2022 graduates—worked with Drs. Chodosh and Shah to form the Program for Underrepresented Minority Peer Mentorship (PUMP). PUMP is a near-peer mentorship program implemented in January 2021, where Harvard Ophthalmology residents serve as mentors, guiding Harvard medical students from underrepresented backgrounds through monthly meetings, attending grand rounds, clinical shadowing opportunities, wet lab sessions, and career development sessions. To date, 16 mentees have participated in the program, and survey results showed a marked increase towards considering an ophthalmology career, as well as more confidence in performing ophthalmic examinations in patients. For the 2022-23 academic year, two of our stellar PGY-4 residents, Alexandra Castillejos Ellenthal, MD; and Luis Martinez-Velazquez, MD, PhD, are leading the PUMP program.

## EYE CAN do Academia

At the level of resident, fellow, graduate student, and postdoctoral fellow, the EYE CAN program focuses on giving trainees the tools necessary to succeed in academia.

Programs such as PUMP allow our trainees to become mentors to students from underrepresented backgrounds. The mentorship role promotes their development into academics, and it gives them an appreciation for collaboration and promotion among academia to build a stronger department. For clinical and scientific postdoctoral trainees—including those underrepresented—assigned faculty mentors, in addition to the education leadership, meet with trainees regularly to review progress in training, encourage scientific inquiry, and discuss career trajectories. Our faculty mentors' intentional goal is to act as a sponsor for trainees who are underrepresented, opening doors and creating opportunities for growth within academic ophthalmology and vision sciences.





## EYE CAN Lead

EYE CAN Lead promotes the development of our faculty who are underrepresented into the next generation of leaders in ophthalmology and vision sciences.

## FACULTY MENTORSHIP AND PROMOTIONS COMMITTEE

The Faculty Mentorship Oversight Board and the Promotions and Reappointments Subcommittee at Harvard Ophthalmology play important roles in ensuring that each faculty member progresses through the academic ladder.

The Harvard Ophthalmology Mentoring Program, established in 2014 and led by David Hunter, MD, PhD; Patricia D'Amore, PhD, MBA; and Joan W. Miller, MD, pairs each junior faculty member with two mentors within the department. Mentors and mentees meet at least twice yearly to define clinical, investigative, educational, and leadership goals. Faculty mentors are also charged with

providing clarity on the promotion process and helping junior faculty members feel supported and valued. Faculty mentors work with mentees to increase and to expand the reach of scholarly activity and to identify teaching opportunities and peer mentorship. In 2019, the Harvard Ophthalmology Mentoring Program received a Program Award for Culture of Excellence in Mentoring from Harvard Medical School.

As we continue to improve our faculty mentorship program, the Harvard Ophthalmology Mentoring Oversight Board will now initiate a new program to support underrepresented faculty in their development. It will perform periodic reviews of mentorship and of promotion afforded to underrepresented faculty to ensure equitable opportunities. With this intentional approach, similar to what was done for women almost 30 years ago, we envision building a change in leadership demographics in our department and across the nation. Harvard Ophthalmology has also been strategic about sponsoring underrepresented faculty to attend AAO and AUPO leadership development courses.

With time, and intentional efforts, we expect to build an inclusive and diverse community of colleagues and leaders within ophthalmology and vision sciences.

## Other Efforts

### One Class of Care

Our department is committed to providing equal care to all patients. More than four decades ago, Mass Eye and Ear introduced faculty supervision for previous resident-only clinics, integrated trainees into faculty practices, and adopted one class of care for all patients in outpatient clinics and the OR. This model ensures that each patient is seen by an attending faculty clinician and receives world-class treatment. Today, many ophthalmology departments have widely adopted this same model, which also reflects the AUPO's mission to eliminate disparities in access to quality care that exists because of social status, race, or insurance type.<sup>4</sup>

### Quality and Outcomes Data and IDE Research

Many of our trainees are researching the role that healthcare inequities, including disparities based on race, ethnicity, gender, sexual orientation, disability or socioeconomic status, plays in patient care and clinical outcomes. Harvard Ophthalmology graduating residents Drs. Bal and Singh used our own data from the Quality and Outcomes report, which provides clinical outcomes statistics for all subspecialties at Mass Eye and Ear, to show that Asian patients are most commonly under-corrected during refractive surgery and have an increased risk for intra-operative complications during cataract surgery. These contributions develop their careers in academia and create awareness of inequities that we need to address in providing optimal care for our patients.

### LGBTQIA+ in Ophthalmology

In a recent survey of graduating medical students who identified as LGBTQIA+, researchers assessed their

intended medical specialty areas. The authors found that ophthalmology ranked second-to-last.<sup>5</sup> Harvard Ophthalmology recognizes the LGBTQIA+ community as underrepresented in medicine and is working to ensure a public forum exists for discussions on improving representation in the field.

Faculty member, David Sola-Del Valle, MD, is surveying the national landscape of LGBTQIA+ individuals in ophthalmology and recently presented preliminary findings at the 2022 Harvard Ophthalmology Faculty Retreat. His findings show that the ophthalmology LGBTQIA+ community nationwide may not feel included, and his talk highlighted for our department that inclusion again should be the center of our approach to diversifying.

### Providing Eye Care to Underserved Communities

Dr. Lorch, Director of the Harvard Ophthalmology Residency Training Program, is leading a pilot program that provides comprehensive ophthalmology care and disease screenings to underserved communities in the Boston area. Screenings are held in Revere at the Mass General Revere Health Center and in Jamaica Plain at the Brookside Community Health Center. Over 20% of patients screened have findings of diabetic retinopathy or other eye pathology that requires follow up and potential treatment.

Not only do these screenings provide an essential service to the community, but they also give Harvard medical students and Harvard Ophthalmology residents an opportunity to volunteer and learn about community health. Diagnosing eye disease at its early stages improves patient outcomes and decreases the costs associated with blindness in our society.

Harvard Ophthalmology is proud of these exciting initiatives created by our faculty, residents, and trainees. We look forward to strengthening the state of diversity in ophthalmology by continuing to invest in our current IDE programs department-wide and encouraging further conversations and innovation in IDE to forge a more diverse and inclusive workforce for all.

4. Association for University Professors of Ophthalmology, Statement on Diversity, Equity, and Inclusion. 2020 Oct 12.

5. Mori WS, Gao Y, Linos E, et al. Sexual Orientation Diversity and Specialty Choice Among Graduating Allopathic Medical Students in the United States. JAMA Netw Open. 2021;4(9):e2126983. Published 2021 Sep 1.