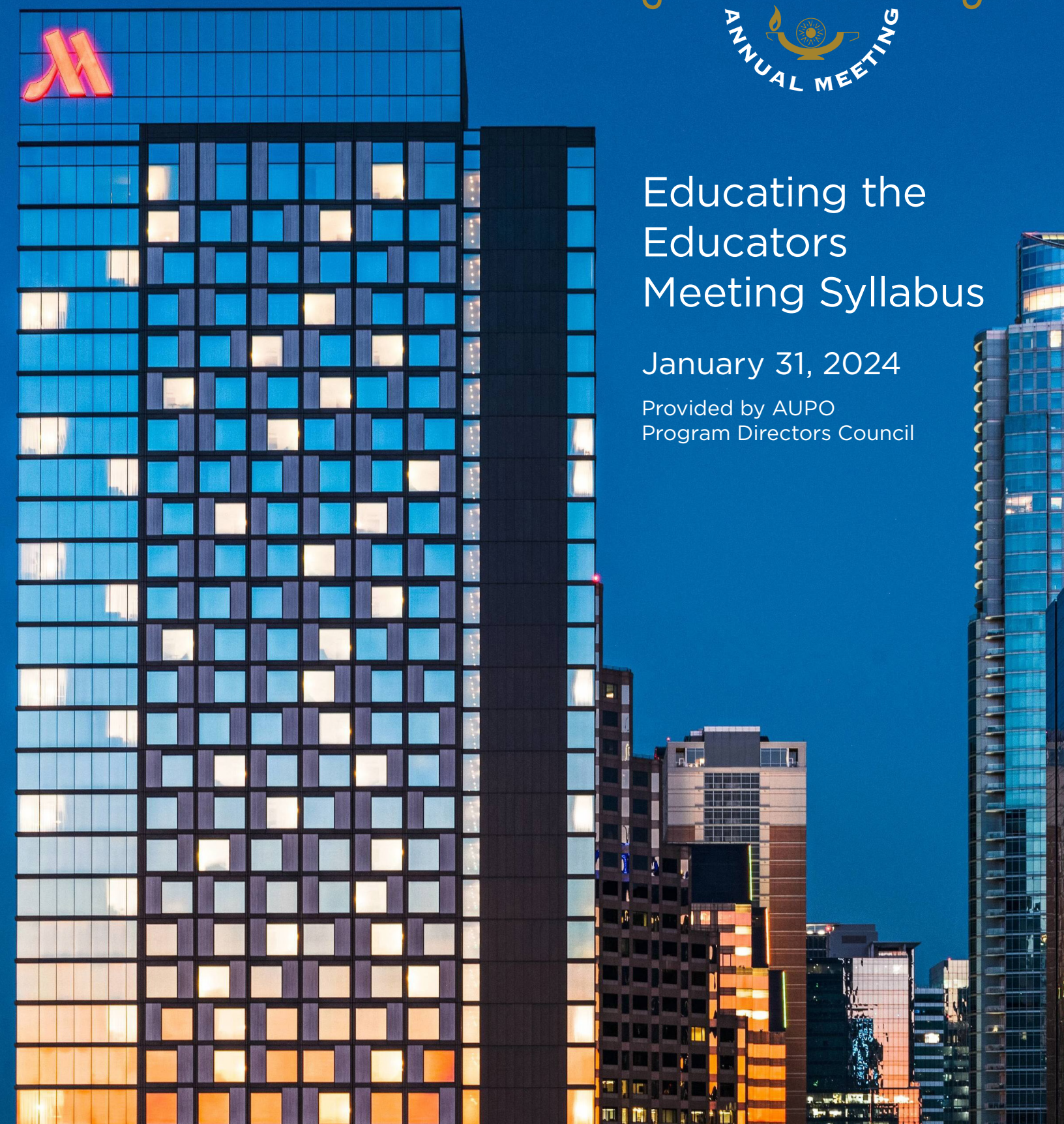
Association of University Professors of Ophthalmology

JAN 31–FEB 3 AUSTIN, TX

AUPO 2024

ANNUAL MEETING



Educating the Educators Meeting Syllabus

January 31, 2024

Provided by AUPO
Program Directors Council

MEETING SUPPORT

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Educating the Educators 2024

The Association of University Professors of Ophthalmology's Program Directors Council welcomes you to the 21st annual Educating the Educators conference in Austin, Texas.

The morning will begin with a Book Club summarizing the book "How Learning Works: Seven Research-Based Principles for Smart Teaching" and a discussion led by Dr. Saras Ramanathan. The opening session features "Competency and Entrustable Professional Activities (EPAs)" where attendees will learn more about EPAs and the concept of a competency-based training program. The morning includes an interactive workshop on creating inclusive learning environments and responding to microaggressions in your residency. We then welcome you to join small group discussions on a myriad of topics with knowledgeable facilitators during our two "Guidance with Gurus" sessions.

The afternoon sessions will include the Organizational Updates followed by the "Free Paper Session" consisting of seven presentations chosen from abstracts submitted for this year's meeting. The day will conclude with the "Innovations in Residency Selection" session, where attendees will hear about hot topics in residency selection from PD and MSE presentations and a panel.

Don't forget to take advantage of time during the breakfast, lunch, and breaks to check out the exhibits, the in-person poster presentation sessions as well as additional virtual posters.

We look forward to seeing you in Austin, and hope you enjoy the meeting!

Jeffrey SooHoo, MD, MBA
Chair, Educating the Educators
Member-at-Large
AUPO Program Directors Council

Fasika Woreta, MD, MPH
Chair, Free Paper Session
Member-at-Large
AUPO Program Directors Council

Saras Ramanathan, MD
Chair, Book Club Session
Member-at-Large
AUPO Program Directors Council

Robert Swan, MD
Chair, Guidance with Gurus Sessions
Member-at-Large
AUPO Program Directors Council

Dan Knoch, MD
President
AUPO Directors of Medical Student Education Council

Jules Winokur, MD, MBA
President
AUPO Program Directors Council

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Wednesday, January 31

6:30 AM – 8:00 AM	Breakfast and Exhibits		Moontower Hall
6:30 AM – 8:00 AM	Registration		Waller Foyer
7:00 AM – 8:00 AM	**Book Club** – *Moderator: Saras Ramanathan, MD* Please join us for a discussion of the book, "How Learning Works" by Marsha C. Lovett, Michael W. Bridges, Michele DiPietro, Susan A. Ambrose, Marie K. Norman		**Moontower Hall**
8:00 AM – 8:10 AM	**Welcome and Announcements** – *Jeffrey SooHoo, MD, MBA*		**Waller Ballroom A-D**
8:10 AM – 9:00 AM	**Competency and Entrustable Professional Activities (EPAs)** – *Moderator: Fasika Woreta, MD, MPH* In this session, attendees will learn about EPAs and the concept of a competency-based training program.		**Waller Ballroom A-D**
	8:10 AM– 8:15 AM	Introduction – *Fasika Woreta, MD, MPH*	
	8:15 AM – 8:30 AM	Development of a Competency-Based Training Program – *Scott Lifchez, MD*	
	8:30 AM – 8:35 AM	Q&A	
	8:35 AM – 8:50 AM	EPAs in Ophthalmology – *Laura Green, MD*	
	8:50 AM – 8:55 AM	Q&A	
	8:55 AM – 9:00 AM	Conclusion	
9:00 AM – 10:00 AM	**Inclusive Learning Environment: Responding to Microaggressions with Wellness in Mind –** Moderators: *Chris Alabiad, MD; Ambar Faridi, MD; Lora Glass, MD* This session will provide background information on microaggressions and unconscious bias, followed by interactive discussion with the audience on how to recognize and respond to microaggressions based on real scenarios in our work spaces. We will also explore how to process microaggressions and their impact on our well-being long-term.		**Waller Ballroom A-D**
10:00 AM – 10:30 AM	Refreshment Break and Exhibit Time		Moontower Hall
10:00 AM – 10:30 AM	**Poster Presentations (1–10)**		**Moontower Hall Foyer**
10:30 AM – 11:10 AM	**Guidance with Guru Sessions #1** – *Moderator: Robert Swan, MD* Are you looking for guidance from a guru? Would you like to have an exchange with an expert? Join these small group discussion opportunities with knowledgeable facilitators and varied topics chosen by attendees. Multiple sessions will run concurrently. They are designed to be intimate to allow small group discussions with topic specialists.		**Waller F**
	1. How Can My Program Accommodate the Growing Number of Students Interested in Ophthalmology? – *Lora Glass, MD*		
	2. Counseling Struggling Medical Students Interested in Ophthalmology – *Lindsay De Andrade, MD*		
	3. PGY1 Year Integration – Lessons Learned and Refinements – *Brian J. Song, MD, MPH, FACS*		
	4. Surgical Wet Lab: Increasing Utilization and/or Funding – *David Goldman, MD, MBA*		
	5. Incorporating Social Determinants of Health Into Your Curriculum and Clinic – *Neeti Parikh, MD*		
	6. Helping the Struggling Resident – Bring Your Problems! – *Jessica Chow, MD*		
	7. Mitigating Microaggressions in Ophthalmology Departments – *Amanda Redfern, MD*		
	8. Strategies to Promote Wellness in Your Residents and Faculty – *Katherine Talcott, MD*		
	9. The Long Road: Holistic Application Review Strategies – *Mitra Nejad, MD*		
	10. AI in Resident Education – Where Do We Start? – *Nariman Boyle, MD*		
	11. What Does a Vice Chair for Education Do and Why Does My Department Need One? – *Misha Syed, MD, MEHP*		
	12. Focus on Department Social Media and the Doximity Survey – *Royce Chen, MD*		
	13. Incorporating Ethics Into Your Residency Curriculum – *Harsha Reddy, MD*		
	14. Designing a Structured Research Curriculum into Your Residency Program – *Pratap Challa, MD*		
	15. How to Approach Helping a Reapplicant in Ophthalmology – *Alice Zhang, MD*		
11:15 AM – 11:55 AM	**Guidance with Guru Sessions #2** – *Moderator: Robert Swan, MD*		**Waller F**
	1. How Can My Program Accommodate the Growing Number of Students Interested in Ophthalmology? – *Anjali Tannan, MD*		
	2. Counseling Struggling Medical Students Interested in Ophthalmology – *Jamie Rosenberg, MD*		
	3. PGY1 Year Integration – Lessons Learned and Refinements – *Kyle Godfrey, MD*		

Wednesday, January 31

	4. Surgical Wet Lab: Increasing Utilization and/or Funding – *Tara McGehee, MD*		
	5. Incorporating Social Determinants of Health Into Your Curriculum and Clinic – *Ambar Faridi, MD*		
	6. Helping the Struggling Resident – Bring Your Problems! – *Hassan Shah, MD*		
	7. Mitigating Microaggressions in Ophthalmology Departments – *Chris Alabiad, MD*		
	8. Fostering Departmental Resilience and Wellbeing – *Arthi Venkat, MD, MS*		
	9. The Long Road: Holistic Application Review Strategies – *Gene Kim, MD*		
	10. ACGME: Ask a Guru From the RRC – *Laura Green, MD*		
	11. VA Issues: Vent, Listen, Share How You Taught an Old VA New Tricks – *William (Abe) White, MD*		
	12. Creating a Quality Curriculum – *Andrew Barkmeier, MD*		
	13. Tips and Tricks For Coordinators Old and New – *Mallory Mack, COA*		
	14. Career Counseling, Elevating Junior Faculty, and Retention/Promotion/Tenure for Educators – *Jeff Pettey, MD, MBA*		
	15. Climate Change and Ophthalmology: Steps to Alter Our Carbon Footprint – *Daniel Moore, MD*		
12:00 PM – 1:00 PM	Lunch for Educating the Educators and Exhibit Time		Moontower Hall
1:00 PM – 1:53 PM	**Organizational Reports** – *Moderator: Jules Winokur, MD, MBA*		**Waller Ballroom A-D**
	1:00 PM – 1:05 PM	SF Match – *Dennis Thomatos*	
	1:05 PM – 1:08 PM	Q & A	
	1:08 PM – 1:18 PM	AUPO Match Oversight Committee – *Jeff Pettey, MD, MBA*	
	1:18 PM – 1:21 PM	Q & A	
	1:21 PM – 1:26 PM	AAO State Affairs – *Laura Green, MD*	
	1:26 PM – 1:29 PM	Q & A	
	1:29 PM – 1:34 PM	AAO Committee for Resident Education – *Robert Swan, MD*	
	1:34 PM – 1:37 PM	Q & A	
	1:37 PM – 1:42 PM	Association of Veterans Affairs Ophthalmologists – *Jennifer Lindsey, MD*	
	1:42 PM – 1:45 PM	Q & A	
	1:45 PM – 1:53 PM	OPHTHPAC – *Jeffrey Henderer, MD*	
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2:00 PM – 3:00 PM	**Free Paper Session** – *Moderator: Fasika Woreta, MD, MPH*		**Waller Ballroom A-D**
	2:00 PM – 2:04 PM	Introduction	
	2:04 PM – 2:10 PM	AI-Enabled Metrics of Surgeon Ability to Maintain a Level Eye Intraoperatively Indicate Skill Level – *Dena Ballouz, MD*	
	2:10 PM – 2:12 PM	Q & A	
	2:12 PM – 2:18 PM	Academic Outcomes of the AUPO & RPB Resident and Fellow Research Forum Awardees – *Sheel Patel, MD*	
	2:18 PM – 2:20 PM	Q & A	
	2:20 PM – 2:26 PM	Rabb-Venable Pathway to Success Program Outcomes – *O'Rese Knight, MD*	
	2:26 PM – 2:28 PM	Q & A	
	2:28 PM – 2:34 PM	An Update on Ophthalmology Faculty Diversity Trends in the United States: A 20-Year Study – *Arsalan Ali, BBA*	
	2:34 PM – 2:36 PM	Q & A	
	2:36 PM – 2:42 PM	Initiative to Promote Equality in Resident Cataract Surgical Experience – *Tina Hendricks, MD, MSc*	
	2:42 PM – 2:44 PM	Q & A	
	2:44 PM – 2:50 PM	Effect of Interview Cap on Ophthalmology Residency Match from 2021-2023 – *Muhammad Ali, MBBS*	
	2:50 PM – 2:52 PM	Q & A	

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	2:52 PM – 2:58 PM	Analysis of Reapplicants to Ophthalmology Residency: Factors Associated with Successful Matching – *Jared Moon, MEd, BS*	
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3:00 PM – 3:30 PM	Refreshment Break and Exhibit Time		Moontower Hall
3:00 PM – 3:30 PM	**Poster Presentations (11–20)**		**Moontower Hall Foyer**
3:30 PM – 5:00 PM	**Innovations in Residency Selection** – *Moderators: Jeffrey SooHoo, MD, MBA; Daniel Knoch, MD* Hear about hot topics in residency selection from PD and MSE presenters and a panel.		**Waller Ballroom A-D**
	3:30 PM – 3:45 PM	Preference Signaling – *Andrew Melson, MD; Ariane Kaplan, MD*	
	3:45 PM – 4:00 PM	Discussion	
	4:00 PM – 4:15 PM	Coordinated Interview Release – *Jullia Rosdahl, MD, PhD; Daniel Moore, MD*	
	4:15 PM – 4:30 PM	Discussion	
	4:30 PM – 4:45 PM	Virtual vs. In Person Recruitment – *Moran Roni Levin, MD; Nandini Gandhi, MD*	
	4:45 PM – 5:00 PM	Discussion	
5:00 PM – 5:30 PM	New Program Directors Reception (by invitation)		6th Floor Foyer
5:30 PM – 6:30 PM	Educating the Educators Reception		Waller Foyer

Live Poster Presentations

MOONTOWER HALL FOYER

SESSION 1: 10:00 AM – 10:30 AM

1. Standardized Global Ophthalmology Curriculum for Residency Programs – *Jacquelyn O'Banion, MD*
2. Visual Outcomes and Complications of Trainee-Performed Phacoemulsification – *Abdelrahman M Elhusseiny, MD, MSc*
3. Practice Management Curriculum: A Curriculum to Prepare Residents for the Business of Medicine – *A. Itzam Marin, MD*
4. Career Decisions and Satisfaction Among Underrepresented in Medicine Ophthalmologists – *Andrew Gedde*
5. Geographical Distribution of Ophthalmologists in the United States by Gender – *Maya Harrington, MBA*
6. The Virtual Instrument Tray: An Interactive Online Resource for Ophthalmology Surgical Education – *Katherine Hu, MD*
7. Flipped Classroom Didactics: Three-Year Data of Faculty and Resident Beliefs and Practices – *Brandon Kennedy, MD*
8. Mock On-Call Patient Encounters to Assess Ophthalmology Resident Peer Communication – *Shravika Lam, BS*
9. Evaluation of the Ophthalmology Residency Case Discussion Curriculum – *Jennifer Larson, MD*
10. Longitudinal Evaluation of an Open Globe Curriculum – *Jennifer Larson, MD*

SESSION 2: 3:00 PM – 3:30 PM

11. Perspectives on Residency Interview Capping in Ophthalmology Residency Selection – *Fasika Woreta, MD*
12. Nature vs. Nurture – The Impact of Faculty on Post-Residency Career *Choice – Luke Oh, MD*
13. Zooming In: Virtual Interviews on Ophthalmology Match for Applicants With vs. Without Home Programs – *Lauren Frances Ong, BA*
14. Mastering the Retrobulbar Block: Using a Novel 3-D Printed Simulator for Practical Training – *Brittany Powell, MD*
15. Can AI Accurately Answer: "Who Is the Expert Surgeon?" – *Safa Saeed, MBBS*
16. Perceptions of the Ophthalmology Residency Application: A Survey of Applicants and Program Directors – *Sagar Jagdish Shah, BS*
17. Effect of Ocular Trauma Surgical Skills Curriculum on Preparing Residents for Trauma Call – *Joanna Silverman, MD*
18. Feedback Friday: A Solution to Improve On-Rotation Feedback for Residents – *Allie Simpson, MD*
19. Using ChatGPT-4 As a Python Developer to Solve Complex Resident Scheduling – *Maxwell Singer, MD*
20. Enhancing Ophthalmology Resident Orientation with an Experiential Simulation Lab using Virtual Reality – *Sarah Tajran*

Free Paper Abstracts

AI-Enabled Metrics of Surgeon Ability to Maintain a Level Eye Intraoperatively Indicate Skill Level

DENA BALLOUZ, MD*; BINH DUONG GIAP, PHD; JEFFERSON LUSTRE, BS; OSSAMA MAHMOUD, BS; KARTHIK SRINIVASAN, MBBS, MS; SHAHZAD MIAN, MD; BRADFORD TANNEN, MD; NAMBI NALLASAMY, MD

Background:

Objective assessment of surgical performance is essential to improving surgical skills.

Purpose:

To develop a novel AI-powered system for evaluating the proficiency of surgeons in maintaining eye stability and centration during cataract surgery.

Methods:

A 3-part automated system (preprocessing, deep learning segmentation, and deep learning-enabled postprocessing) was developed for computation of performance metrics from cataract surgery video recordings. The palpebral fissure, limbus, and Purkinje Image 1 (PI-1) were segmented using a deep learning model (UNet with VGG16 backbone) trained and validated on a dataset of 5,700 annotated surgical images. Metric computation accuracy was enhanced using a deep learning-powered obstruction classifier. Using this system, we evaluated eye stability and centration in 20 surgeries (10 attending, 10 resident) using 1) LCP1: distance between the limbus centroid and PI-1 and 2) LCFC: distance between the limbus centroid and the center of the video frame as metrics.

Results:

The case-level mean and SD of LCP1 were significantly lower for attending cases than resident cases ($p = 0.0224$ for LCP1mean, $p = 0.037$ for LCP1SD). Residents struggled with eye stability and centration most during paracentesis creation (LCP1SD 6.1x that of attendings) and viscoelastic removal (LCP1SD 2.5x that of attendings). All metrics were significantly lower during paracentesis creation for attendings in comparison to residents ($p = 0.001$ for LCP1mean, $p = 0.031$ for LCP1SD, $p = 0.023$ for LCFCmean, $p = 0.001$ for LCFCSD).

Conclusions:

Automated AI-powered measurements of novel metrics LCP1 and LCFC offer assessments of a surgeon's ability to maintain a level and centered eye during surgery, and values of these metrics are associated with surgical skill level.

Academic Outcomes of the AUPO & RPB Resident and Fellow Research Forum Awardees

SHEEL PATEL, MD*; EVANSHAPIRO, BS; KATHRYN COLBY, MD, PHD

Background:

The Association of University Professors in Ophthalmology (AUPO) and Research to Prevent Blindness (RPB) collaboratively initiated the Resident and Fellow Research Forum in 1997 to promote excellence in research in early-career ophthalmologists.

Purpose:

This study investigates awardee academic career outcomes, including NIH funding, publication metrics, and h-index.

Methods:

We performed a retrospective study of AUPO/RPB Resident and Fellow Research Forum recipients from 1997 to 2022. Awardees' names and training institutions were provided by the AUPO. Utilizing publicly accessible sources, practice details, degrees, ranks, and leadership roles were identified. NIH funding was determined via the NIH Research Portfolio Online Reporting Tool, while the Scopus database was used to tabulate h-index and publication/citation metrics.

Results:

During 1997-2022, 114 ophthalmology trainees earned AUPO/RPB Resident and Fellow Research Forum Awards, with 77% being male. 63% practiced in academic settings, surpassing the 17% national benchmark for academic ophthalmologists, and 52% specialized in retina. 47% held dual MD and PhD degrees. The average h-index (18.57 +/- 14.87, $p < 0.0001$) and mean publications (60.7 +/- 82.8, $P < 0.005$) exceeded those of practicing academic ophthalmologists. 46 awardees secured NIH research funding, averaging $5,438,985 +/- $7,191,285.

Conclusions:

AUPO/RPB Resident and Fellow Research awardees achieve high academic career productivity, with a majority selecting a career in academia.

Rabb-Venable Pathway to Success Program Outcomes

O'RESE KNIGHT, MD*; DOLLY-ANNPADOVANI-CLAUDIO, MD, PHD; MILDRED OLIVIER, MD; EYDIE MILLER-ELLIS, MD

Background:

Any effective strategy addressing healthcare disparities must consider physician workforce diversity. There is a lack of diversity among practicing ophthalmologists and trainees. We have demonstrated a relationship between USMLE performance by race/ethnicity and application rates, interview invitations, and match rates.

Purpose:

The Rabb-Venable (RV) program, which recruits URiM trainees to academic careers in ophthalmology, developed the Pathway to Success (P2S) program to bolster URiM applicant match success. We outline P2S program success.

Methods:

P2S participants applying during the 2021 – 2023 match cycles completed application workshops, virtual interview training, fireside chats (FSC) with 52 residency programs, faculty application reviews, and mock interviews.

Results:

Of 107 P2S participants, 97 (90.7%) were URiM. Ninety-one (85%) successfully matched including: 90% of first-time MD applicants, 75% of DO applicants, 60% of IMG applicants, and 50% of reapplicants. Sixty-eight (75.6%) of P2S participants matched at FSC-participating programs, and 65.4% of FSC programs matched P2S participants.

Conclusions:

The P2S program has increased the number of URiM ophthalmology applicants and helped neutralize racial/ethnic disparities in match outcomes. Although, among P2S participants, match success is lower for DO, IMG, and reapplicants, their rates are higher than for non-P2S ophthalmology applicants.

An Update on Ophthalmology Faculty Diversity Trends in the United States: A 20-Year Study

ARSALAN ALI, BBA*; MUHAMMADCHAUHAN, MD, MS; MADISON DOTY, BS, MS; TOMMY BUI, BS; PAUL PHILLIPS, MD; AHMED SALLAM, MD, PHD

Background:

Faculty diversity is vital for fostering cultural competence among trainees, shaping them as compassionate and adept healthcare providers for an increasingly diverse patient population.

Purpose:

To investigate longitudinal trends in underrepresented in medicine (URiM) and female representation among ophthalmology faculty.

Methods:

In this retrospective study, we analyzed over 20 years of Association of American Medical Colleges Faculty Roster data from the "U.S. Medical School Faculty" report. We assessed shifts in URiM and non-URiM faculty ratios, rank, gender, department chair roles, and the US population from 2000 to 2021.

Results:

Between 2000 and 2021, ophthalmology faculty surged from 1,820 to 3,151. URiM women constituted 3.07%, URiM men 3.51%, non-URiM men 62.95%, and non-URiM women 30.47%. URiM male faculty remained steady, while URiM female faculty notably rose. Non-URiM male numbers declined, but non-URiM female numbers grew. Female representation increased at various ranks. URiM representation remained stable at most ranks. Ophthalmology ranked third lowest in URiM faculty change among specialties.

Conclusions:

Our study reveals notable ophthalmology faculty growth and significant female representation gains in various ranks. Nonetheless, URiM representation has mostly stayed static, except for an increase at the associate professor level. This underscores the ongoing necessity to enhance diversity in academic ophthalmology.

Initiative to Promote Equality in Resident Cataract Surgical Experience

TINA HENDRICKS, MD, MSC*; ABIGAILWALLING, MD; ERIN SHRIVER, MD; LINDSAY DE ANDRADE, MD; THOMAS OETTING, MD; JACLYN HAUGSDAL, MD

Background:

Studies have noted a difference in surgical case numbers between graduating male and female ophthalmology residents. (1,2,3)

Purpose:

To determine if this discrepancy existed in the University of Iowa Ophthalmology residency program with a goal of promoting equality in resident cataract surgical experience.

Methods:

A 10-year (2009-2019) retrospective review of cataract surgery numbers analyzed by gender and stratified by rotation schedule/location, absentee days, and future subspecialty plans was performed. Current and former residents were surveyed regarding perceptions of the role of gender in their training.

Results:

Female residents (n=22) performed fewer cataract surgeries than males (n=33) (p=0.0128) despite no significant difference in absentee time (p=0.35). There was no difference in caseload at the university hospital (p=0.971), but there was a significant difference at the Iowa City (p=0.001) and Des Moines (p=0.011) VA hospitals. Females with a VA-rotation first performed significantly fewer surgeries than males in the same position (p=0.003), however this difference was no longer present in the last rotation (p=0.81). Survey respondents (n=36) did not perceive program-based disadvantages based on gender (p=0.86).

Conclusions:

Difference in caseload based on gender primarily occurred during VA-rotations where residents had high autonomy over case number determination. In response, a standardized system for caseload increase during VA-rotations has been implemented to improve surgical training.

Effect of Interview Cap on Ophthalmology Residency Match from 2021–2023

MUHAMMAD ALI, MBBS*; LAURA GREEN, MD; ALICE LORCH, MD, MPH; JEFF PETTEY, MD, MBA; R. MICHAEL SIATKOWSKI, MD, MBA; JULES WINOKUR, MD; FASIKA WORETA, MD

Background:

Given the introduction of interview caps for the ophthalmology residency match, evaluating its impact on applicants is critical.

Purpose:

To assess the effect of interview capping on 2021-2023 ophthalmology match results.

Methods:

Match rates for applicants with ≤15 interview invites (the current interview acceptance cap) were compared with those with > 15 invites using SF Match data from 2021-2023. Percentage of candidates who matched among those who participated in the match from 2017-2023 was calculated using the publicly available ophthalmology residency match summary report.

Results:

A total of 2,417 applicants applied to ≥1 program in the ophthalmology residency match from 2021 to 2023 of whom 1,519 (62.85%) matched. Among all applicants 391 (16.18%) received > 15 interview invites of whom 385 (98.5%) matched while of those 2,026 (83.82%) who received > 15 interview invites, 1134 (56.0%) matched, ($p<0.001$). The proportion of matched candidates to candidates participating in match decreased from 78% in 2017 to 69% in 2023 ($p=0.02$). Applicants with Interview Invites Above the Threshold of Interview Cap had a Significantly Higher Match Rate however, overall participant match rates decreased during this period.

Analysis of Reapplicants to Ophthalmology Residency: Factors Associated with Successful Matching

JARED MOON, MED, BS*; SAIMAKHAN, BS; SARA TAO, BS; GENE KIM, MD

Background:

Ophthalmology residency programs are highly competitive and each year there are many unmatched reapplicants. Our analysis of reapplication factors will be the first evidence-based guide to reapplying ophthalmology.

Purpose:

To determine the components of a reapplicants application that contribute to ophthalmology residency match success.

Methods:

Eighty-eight total reapplicants to Dell Medical School's Department of Ophthalmology residency program for the year of 2022 and 2023 were analyzed. We assessed match success in the context of demographics, academic performance, cognitive measures, letters of recommendation, personal statements, and extracurricular activities.

Results:

Of 84 reapplicants who completed the San Francisco Match, 41 matched successfully (48.8%). Factors that significantly affected match success include quantity of LORs written by ophthalmologists (P = 0.0143), choice of interim year activity (p = 0.0019), and Step 2 Clinical Knowledge score (P = 0.0017).

Conclusions:

Ophthalmology residency reapplicants should focus on finding a research year or established pre-ophthalmology residency program for their interim year and bolstering their LORs within the field. The quality of in-specialty relationships and letters of recommendation are more impactful than the number of publications during a research gap year. Step 2 CK score is a significant factor but would have already been determined by the time of reapplication.

Live Poster Abstracts

Standardized Global Ophthalmology Curriculum for Residency Programs

JACQUELYN O'BANION, MD*; YASMIN BRADFIELD, MD; HANNAH BAKER, MA; JEFF PETTEY, MD, MBA; CAT BURKAT, MD

Background:

There is a demand for global health training and experiences among ophthalmology residency applicants. Various residency programs offer global ophthalmology (GO) exposure, but there is no currently accepted standardized GO curriculum across ophthalmology residencies. At the AAO inaugural Global Ophthalmology Summit last year, several departments with residency training programs expressed interest to have a standardized GO curriculum created which can be easily implemented into their own programs.

Purpose:

The goal of this project is to propose a standardized global ophthalmology curriculum which can be easily implemented into a residency program, that aligns with the ACGME competencies. This curriculum provides ophthalmology residency training programs a defined pathway to assess and direct resources, education, and mentorship toward a global ophthalmology experience for residents.

Methods:

Three academic institutions with experience in GO residency training assessed their individual programs and selected high priority topics to create a uniform curriculum. The coursework includes foundational global health paradigms with emerging topics within global ocular health.

Results:

The standardized curriculum includes a roadmap for programs to implement a GO curriculum. A combination of self-directed online modules, group learning, and fieldwork will be presented. Examples of experiences with local and global partners are included. Oversight and assessment mechanisms will be discussed. The course is based on five foundational global health pillars, and offers a framework for multidisciplinary training in cross-cultural care, diversity, equity, and inclusion, social justice, health disparities, and advocacy. ACGME core competencies such as practice-based learning and systems based practice are integrated.

Conclusion:

A standardized global ophthalmology curriculum meets the demands of residency applicants and residency training programs. The proposed curriculum can be implemented into existing residency curriculum, and provides a roadmap to include global health training in programs across the country.

Visual Outcomes and Complications of Trainee-Performed Phacoemulsification

ABDELRAHMAN ELHUSSEINY, MD, MSC*; JOSEPH TOMA, MD, PHD; SARA IBRAHIM, MD, MSC; AHMED SALLAM, MD, PHD

Background:

Phacoemulsification is an integral part of ophthalmology training. Teaching residents while achieving the best visual outcomes is challenging

Purpose:

To evaluate the visual outcomes and complication rates of cataract extraction (CE) performed by trainees versus attending physicians

Methods:

Retrospective chart review. CE data set pooled from 8 UK sites between 2000 and 2015. The main outcome measures were the mean postoperative visual acuity (VA) at 4-12 weeks and the rate of intraoperative complications in both groups. VA was measured in logMAR for statistical analysis. P < 0 .003 was considered statistically significant.

Results:

45798 eyes in the trainee group and 66891 eyes in the attending group were included in this study. Mean LogMAR preoperative VA was slightly better in the trainee group (0.65) vs. the attending group (0.69). The rates of preoperative use of prostaglandin analogues, uveitis, advanced cataract, pseudoexfoliation, and poor pupillary dilation were significantly higher in the attending group (P < 0 .001). At 4-12 weeks postoperatively, there was no significant difference in the mean VA between both groups (0.19 vs. 0.2, P=0.01) or in the percentage of eyes with VA ≥20/40 (83.5% vs. 82.7%, P=0.01). The rates of posterior capsular rupture (2.2% vs. 1.3%), zonular dialysis (0.8% vs. 0.6%), and dropped lens fragments (0.3% vs. 0.2%) were significantly higher in the trainee group. There was no difference in the rates of suprachoroidal hemorrhage, hyphema, iris trauma, postoperative cystoid macular edema, and IOL exchange between both groups.

Conclusion:

The rates of intraoperative complications were higher in trainee cases. There was no significant difference in the VA at 4-12 weeks postoperatively between both groups.

Practice Management Curriculum: A Curriculum to Prepare Residents for the Business of Medicine

A. ITZAM MARIN, MD*; MONICA ERTEL, MD; NIHAAL MEHTA, MD; EIMI RODRIGUEZ-CRUZ, BS

Background:

Business and management skills are essential components of a healthcare practice. The data on nonclinical education related to business and management of health systems for ophthalmology residents are limited. One study published in Ophthalmology surveyed 900 residents and over 60% reported they did not have sufficient training in nonclinical healthcare skills such as practice management. Studies also show teaching residents nonclinical skills improves confidence and billing/coding.

Purpose:

To perform a needs assessment and develop a longitudinal curriculum to prepare Ophthalmology residents for the business of healthcare

Methods:

A pre-course survey was administered to residents in the University of Colorado Ophthalmology Department. The survey had two objectives: assess current comfort and knowledge regarding healthcare business topics and assess residents' interest level in practice management topics.

Results:

The pre-course survey response rate was 61% (11/18 residents). Residents scored difference in practice types, data management, billing/coding, employee recruitment/retention, and impact of legislative decisions as the most interesting topics. Of the topics, residents are least comfortable with employee recruitment and retention (80% 'Not at all'), billing and coding, acquisition and management of capital equipment, incorporating new innovations into practice, and operating room management (70% 'Not at all').

Conclusion:

The results of our survey demonstrate that ophthalmology residents are uncomfortable with common practice management topics and there is a high level of interest for further education in these areas.

Career Decisions and Satisfaction Among Underrepresented in Medicine Ophthalmologists

ANDREW GEDDE*; LAURA HUERTAS, MPH; JAYANTH SRIDHAR, MD; BASIL WILLIAMS, MD

Background:

The ophthalmology workforce is significantly less racially and ethnically diverse than the US population, and this has implications for addressing health disparities.

Purpose:

To describe the career choices and satisfaction of newly practicing ophthalmologists who are underrepresented in medicine (URiM).

Methods:

An anonymous electronic survey evaluating career decisions was distributed to ophthalmologists who completed training within the prior 5 years. Statistical comparisons were made between URiM (self-identified as Black/African American, Hispanic/Latino, American Indian/Alaska Native, or Native Hawaiian/Pacific Islander) and non-URiM groups.

Results:

671 (31.3%) eligible participants completed the survey, including 46 in the URiM group and 625 in the non-URiM group. Compared with the non-URiM group, the URiM group was more likely to practice in an urban location (68% vs 45%, P = 0.013) and in the South or Midwest (81% vs 53%, P = 0.011), decided to pursue fellowship training earlier (during PGY 2 or earlier in 83% vs 59%, P = 0.004), and was more influenced in their career choices by types of patient problems (mean Likert score 4.3 vs 3.9, P = 0.007). A positive level of happiness with work was reported by 31 (84%) URiM respondents.

Conclusion:

URiM ophthalmologists were attracted to racially and ethnically diverse locations. They may have made earlier career decisions to overcome obstacles in their career pathways. Their career decisions were motivated by types of patient problems, including social determinants of health. URiM ophthalmologists had a high degree of career satisfaction.

Geographical Distribution of Ophthalmologists in the United States by Gender

MAYA HARRINGTON, MBA*; SOPHIE BAKRI, MD

Background:

Female representation is growing each year in ophthalmology, but women are still generally underrepresented. Due to the potential impact of physician gender on the physician-patient relationship, this imbalance could affect patient outcomes and satisfaction.

Purpose:

This study describes the geographic variation of gender disparities in ophthalmology in the United States.

Methods:

Physician characteristics were retrieved from the 2023 Medicare Physician Compare National Database for physicians listing "ophthalmology" as their primary specialty. Duplicate physician entries were excluded. The remaining 17,503 physicians were divided by state allowing for the analysis of gender distribution geographically.

Results:

Of the 17,503 ophthalmologists registered on the Medicare Physician Compare, 4,965 were women (28.37%). Gender distributions of ophthalmologists varied between states and regions, with the highest female representation in Massachusetts (41.25%) and the District of Columbia (38.37%). The lowest representation was in Wyoming (9.09%) and Utah (15.73%).

Conclusion:

Geographical gender imbalances may be due to several factors including personal preference, state policies, family choices, etc. By identifying factors that contribute to where women geographically choose to practice, we can better guide approaches to increase female engagement in areas with the lowest representation to close potential healthcare disparities.

The Virtual Instrument Tray: An Interactive Online Resource for Ophthalmology Surgical Education

KATHERINE HU, MD*; JENNA JENSEN, BS; JEFF PETTEY, MD, MBA

Background:

Despite the need for learning surgical instruments, there are few dedicated resources. In applying adult learning theory, we aimed to incorporate advances in educational technology, acknowledge different learning styles, and reflect shifts in generational thinking to optimize the learning experience for novice ophthalmic surgeons.

Purpose:

To evaluate ophthalmology residents' familiarity with basic surgical instruments and develop a tailored educational resource; to design a user-intuitive, interactive platform for trainees to gain proficiency with names, features, and uses of common ophthalmic surgical instruments.

Methods:

Residents were surveyed on familiarity of surgical instruments and preference of learning methods. Using these data, digital single-lens reflex imaging and Articulate Storyline software were utilized to create an interactive virtual tray.

Results:

Out of 14 residents, 10 (71%) initially reported moderate or poorer familiarity with cataract surgery instruments. High-resolution photos, videos, and online modules were the most preferred learning tools. The virtual tray is platform-free online: https://morancore.utah.edu/section-11-lens-and-cataract/moran-eye-center-virtual-cataract-instrument-tray-online-module/cataract-tray/. Post-implementation, 100% of surveyed residents reported increased recognition and familiarity of instruments.

Conclusion:

This tool is the first educational resource of its kind; it can serve as both an asynchronous, stand-alone resource and introductory module for ophthalmology trainees. Future directions include expansion and integration into a wider virtual surgical curriculum.

Flipped Classroom Didactics: Three-Year Data of Faculty and Resident Beliefs and Practices

BRANDON KENNEDY, MD*; SRAV VEGUNTA, MD; JEFF PETTEY, MD, MBA; RACHEL SIMPSON, MD; KATHERINE HU, MD

Background:

Resident and faculty dissatisfaction with traditional lectures prompted a flipped classroom curriculum development.

Purpose:

We evaluated resident and faculty experiences and the perceived efficacy of prior didactic lectures versus flipped classroom sessions.

Methods:

Residents and faculty at the University of Utah Ophthalmology Department were surveyed on their understanding of flipped classroom learning, perceived barriers to implementation, and satisfaction with teaching/learning six months before, one year after, and three years after the implementation of the curriculum.

Results:

Twenty-four faculty and 12 residents responded. One-year data showed resident attendance rates increased from 61.7% to 84.2%. Resident pre-work completion rates increased from 25-50% to 75-100%. Faculty and residents agreed that quizzes, case-based learning, and oral board-style questioning were the most effective methods of knowledge retention. Most faculty and all residents reported greater satisfaction with the flipped classroom model. Three-year data will be presented at AUPO 2024. We will include a summary of how our curriculum and its components continue to change with attending and resident feedback. We will discuss how to assess a GME curriculum.

Conclusion:

A flipped classroom curriculum can improve faculty and resident satisfaction, lecture participation, and attendance.

Mock On-Call Patient Encounters to Assess Ophthalmology Resident Peer Communication

SHRAVIKA LAM, BS*; JONATHAN BARNETT, MD; AMY CHOMSKY, MD; JENNIFER LINDSEY, MD; JOHN BOND, MD; EDWARD CHERNEY, MD; JANICE LAW, MD

Background:

Communication between co-residents is a crucial component of resident on-call teams. Senior residents on-call are expected to have advanced ophthalmic knowledge and teach while supervising junior residents. Opportunities to assess this communication skill are limited.

Purpose:

We developed a novel pilot assessment workshop using standardized patients to evaluate communication between ophthalmology trainees and observe seniors in supervisory roles.

Methods:

Four senior (PGY-3) residents were observed supervising four junior residents (PGY-2) in two mock on-call encounters (central retinal artery occlusion and open globe) held in the simulation center. Four faculty and four PGY-4 observers used validated rubrics to grade the encounters on communication and patient care management. A structured debriefing session was held and post-workshop surveys were distributed.

Results:

PGY-2 residents reported the workshop improved their patient care skills (mean rating of 4.7 on a 5-point scale) and ability to communicate and collaborate with peers while on call (mean ratings of 5.0 and 4.7, respectively). PGY-3 residents reported improvement in their ability to coach and communicate with PGY-2 residents on call (mean ratings of 4.7 and 4.7, respectively).

Conclusion:

This pilot supports the feasibility of using standardized patient encounters to improve communication and collaboration within resident teams and measure a senior resident's readiness to manage an on-call team.

Evaluation of the Ophthalmology Residency Case Discussion Curriculum

JENNIFER LARSON, MD*; KATHLEEN SCHILDROTH, MD

Background:

While most examinations are in written format, clinical practice involves verbal communication with patients and colleagues. Further, passing a structured oral examination is required for ophthalmology board certification, yet no oral exam preparation or evaluation existed at the University of Wisconsin.

Purpose:

To describe early outcomes of the Case Discussion Curriculum.

Methods:

A pilot session occurred in spring of 2021. Sessions consist of timed rotations through four rooms, each staffed by faculty representing different subjects. Examinees describe evaluation, differential diagnosis, and management for up to six scenarios per room. Sessions were graded using a rubric adapted from the Accreditation Council for Graduate Medical Education milestones. Performance data and resident feedback was collected.

Results:

Resident feedback has been positive, prompting extension into a semiannual session. Examinee performance improved with successive testing, likely corresponding to both increased knowledge base and comfort in the testing environment. The oral board pass rate is 100% for resident graduates who participated in the curriculum.

Conclusion:

This curriculum created a new evaluation tool, and platform for residents to prepare for oral examinations by practicing verbal communication about common clinical scenarios. To date, the curriculum has helped resident education by both subjective and objective measures.

Longitudinal Evaluation of an Open Globe Curriculum

JENNIFER LARSON, MD*; CLARA KURANZ, BS

Background:

Surgical simulation promotes learning and refining of surgical skills and helps ensure safe patient surgery. An Open Globe Curriculum, including surgical simulation, was created at the University of Wisconsin to prepare residents for the medical and surgical management of open globes.

Purpose:

To report longitudinal outcomes of an Open Globe Curriculum.

Methods:

The Open Globe Curriculum began in 2020 and includes annual surgical simulation and didactics for PGY-2 residents. Data from four years was collected including a pre- and post-knowledge assessment, and feedback regarding comfort with open globe medical management and surgical skills before and after the curriculum.

Results:

The average score of the knowledge assessment was 74.3% before and 94.3% after the curriculum ($p < 0.001$). There was a statistically significant increase in comfort level for nine of the ten assessed open globe related skills. The most significant improvement in reported comfort level included slip knot suture tying ($p=0.001$), conjunctival peritomy ($p=0.001$), and intra-operative management of open globes ($p < 0.001$). The skill without a significant increase in comfort was 3-1-1 suture tying ($p=0.10$).

Conclusion:

Residents gained knowledge and comfort with the medical and surgical management of open globes after completing the Open Globe Curriculum.

Perspectives on Residency Interview Capping in Ophthalmology Residency Selection

FASIKA WORETA, MD*; SHWETHA MUDALEGUNDI, BS; MARISA CLIFTON, MD; SCOTT LIFCHEZ, MD; DAWN LAPORTE, MD; SARAS RAMANATHAN, MD

Background:

With the advent of virtual interviews, the potential for interview hoarding by applicants has worsened, given the lack of financial constraints associated with in-person interviews. Ophthalmology, the only specialty to have instituted an interview cap starting with 20 in 2020, currently is capped at 15. No other studies have assessed the applicants' perspectives on the interview cap.

Purpose:

To assess applicant attitudes towards the interview cap, which may be useful for other specialties.

Methods:

615 applicants to the Johns Hopkins Wilmer Eye Institute were invited to respond to a 22-item questionnaire in April 2023. Statistical analyses of aggregate data were conducted using R.

Results:

Of the 268/614 (44%) responses, 225 (84%) were in support of an interview cap. USMLE Step 1 score ($p=0.004$), number of interviews ($p < 0.001$), and number of programs ranked ($p < 0.001$) were all significantly associated with a difference in opinion regarding an interview cap. Ophthalmology applicants who were in support of an interview cap believed that on average the cap should consist of 13.7 interviews with a standard deviation of 2.68.

Conclusion:

Our findings highlight the desire for interview caps among the majority of ophthalmology applicants and thus this innovation may be considered by other specialties in the era of virtual interviews.

Nature vs. Nurture – The Impact of Faculty on Post-Residency Career Choice

LUKE OH, MD*; JOONPYO KIM, PHD; ZACHARIA NAYER, MD; GEORGE CIOFFI, MD; LORA GLASS, MD; ROYCE CHEN, MD

Background:

To improve understanding of factors that influence ophthalmology residents to pursue fellowship in a given field.

Purpose:

To identify whether faculty composition correlates with the fellowship choices of residents. To understand whether faculty composition affects the rate of residents pursuing fellowships in subspecialties-in-need.

Methods:

Public fellowship match data was obtained from residency program websites between 2013-2022. The proportion of residents pursuing fellowship and of faculty members in each subspecialty were calculated. Compositional regression analysis was performed to compare the groups. Subspecialties included glaucoma, retina, cornea, uveitis, neuro-ophthalmology, pediatrics, oculoplastics, oncology, and pathology. Kolmogorov-Smirnov testing was performed to determine if a threshold of subspecialists on faculty correlated with higher proportions of residents entering these specialties.

Results:

86 residency programs fit inclusion criteria including 3018 residents and 2410 faculty. Regression analysis demonstrated a correlation between the proportion of residents selecting a subspecialty and the proportion of faculty in that subspecialty ($p=0.006$). Kolmogorov-Smirnov testing revealed that programs where >10% of faculty were pediatric ophthalmologists had a higher proportion of residents pursuing pediatric ophthalmology ($p < 0.05$).

Conclusion:

Residents are likely to pursue specialties that are better represented by their full-time faculty. Increasing the proportion of pediatric ophthalmologists on faculty may lead to higher rates of residents pursuing pediatric ophthalmology.

Zooming In: Virtual Interviews on Ophthalmology Match for Applicants With vs. Without Home Programs

LAUREN ONG, BA*; ASHLEY NIU, MS; PRIYA MANHAS, MS; BHAGVAT MAHETA, BS; JOSEPH MARTEL, MD; MICHAEL WONG, MD, FACS

Background:

In the 2020-2021 match cycle, the ophthalmology residency (SF) match transitioned from in-person to virtual residency interviews.

Purpose:

To compare the trends in matched ophthalmology residency applicants from schools with and without home residency programs during in-person (standard) versus virtual interview application years.

Methods:

US MD medical school graduates were assessed retrospectively for their match rate list published on each institution's official website and the SF Match (2019-2023). An odds ratio analysis and chi-squared test were conducted to determine the likelihood medical students with a home ophthalmology residency program successfully matched compared to those without a home residency program, pre-virtually and virtually.

Results:

563 applicants from 2019 to 2020 and 971 applicants from 2021 to 2023 application cycles were analyzed. Applicants with home programs were 1.5x more likely to match into an ophthalmology residency program versus those without home programs ($p < 0.001$); during the pre-virtual era, those with home programs were 1.3x more likely to match ($p < 0.001$), and 1.6x more likely during the virtual era ($p < 0.001$).

Conclusion:

Applicants from medical schools with home ophthalmology programs displayed an increased matching likelihood during the virtual compared to the pre-virtual era, resulting in a decreased matching likelihood for those with no home program.

Mastering the Retrobulbar Block: Using a Novel 3D Printed Simulator for Practical Training

BRITTANY POWELL, MD*; REMIGIO FLOR, MD; NICOLE MCMINN, MS; PETER LIACOURAS, PHD; RICHARD ROSEN, MD, SCD(HON), FACS, FASRS, FARVO

Background:

The retrobulbar block (RBB) is a procedure essential to achieving effective anesthesia of the eye and orbit. Simulation-based training provides an innovative and safe way to address barriers to learning. We developed a 3D-printed training model using a variety of biomimicry materials to simulate the anatomical structures and spaces of the orbit with high fidelity along with a retrobulbar block course incorporating this novel model within a curriculum that allows the trainee a safe, repeatable and economical option for this high-risk procedure prior to completing the block on a live patient.

Purpose:

The retrobulbar block is an essential procedure for achieving effective anesthesia of the eye and orbit, but currently has limited simulation options. We developed a 3D-printed training model to realistically mimic critical orbital anatomic features and evaluated whether the model could provide ophthalmologists with an effective simulation option for this high-risk procedure.

Methods:

The training model was created via 3D modeling of anatomical structures and printed using two different 3D printing technologies incorporating a variety of plastic and silicone materials. Training subjects consisted of 43 ophthalmologists who simulated administering retrobulbar anesthesia using the training model and completed pre- and post-training surveys. The primary outcomes measured included utility and anatomical fidelity of the training model. Secondary outcomes evaluated included previous experience of retrobulbar training, utility of the use of a training model for retrobulbar blocks, training period in ophthalmology, training status, and location of the simulation injected medication.

Results:

This 3D-printed training model realistically simulated ocular and orbital structures and optimized procedural learning. 16% (n=7) of participants had never previously performed an RBB. 84% (n=36) of participants reported that performing an RBB was part of their residency training, and none had performed an RBB with a simulator. In terms of anatomical fidelity, 46% (n=20) indicated that the model was similar or very similar to the actual procedure. Paired t-test analyses comparing pre-training to post-training outcomes suggested that the training improved the level of comfort with performance of an RBB ($P< 0.0001$). The extent to which the participants would include or plan to include an RBB as part of their clinical practice improved between the pre-training and post-training periods ($P= 0.0053$). Similarly, the extent to which participants believed that using a training model would improve their clinical practice increased between the pre-training and post-training periods ($P=0.11$). Anatomical fidelity, level of comfort and planning to include retrobulbar block as part of the clinical practice was strongly correlated with years of experience.

Conclusion:

A 3D-printed training model for retrobulbar anesthesia can realistically simulate ocular and orbital structures and successfully simulate critical orbital anatomic features sufficient for use as a training tool.

Can AI Accurately Answer: ”Who is the Expert Surgeon?”

SAFA SAEED, MBBS*; XINYI CHEN, BS; TAE SOO KIM, BS; SUBHASRI VIJAY, CS; ANAND MALPANI, PHD; GREGORY HAGER, PHD; SWAROOP VEDULA, MD; SHAMEEMA SIKDER, MD

Background:

Better surgical skill reduces complications and improves outcomes. Artificial intelligence (AI) allows objective video-based assessment (VBA) of surgical skill. However, AI algorithms can appear to be good or bad based on the ground-truth used to test them.

Purpose:

To evaluate the perceived performance of AI algorithms for VBA when they are tested against different ground-truths.

Methods:

We trained two algorithms – logistic regression (using time as the input) and a temporal convolutional neural network(using instrument tip locations on the video images) – to predict expert/novice labels for capsulorhexis. We used 63 videos to train the algorithms and 36 videos to test them. We created the ground-truth in six ways using ratings from six experts. We estimated accuracy, sensitivity, specificity and precision of the algorithms to predict each ground-truth.

Results:

For both the algorithms, the estimates across the six ground-truths differed by 15% or more. The precision of the algorithms varied more than the other estimates.

Conclusion:

AI for VBA of surgical skill will be useful only when it is tested against a relevant ground-truth. Surgeons must specify the relevant ground-truth in standardized benchmark datasets to advance AI for VBA.

Perceptions of the Ophthalmology Residency Application: A Survey of Applicants and Program Directors

SAGAR SHAH, BS*; JHANSI RAJU, MD; ROSHNI VASAIWALA, MD; ANJALI TANNAN, MD

Background:

The surging number of ophthalmology residency applications burdens both applicants and program administration.

Purpose:

Assess perceptions of the ophthalmology match process from the perspectives of applicants and program directors (PDs).

Methods:

An AUPO-endorsed survey targeted PDs and medical student directors (MSDs) from the 2021 and 2022 cycles. MSDs relayed the survey to cycle applicants.

Results:

Of PD respondents (37.2% of 121), 88.9% supported capping the number of programs one could apply to and suggested a median of 40 programs per applicant. Among the 57 applicant responses, unmatched applicants (14) were unanimously pro-cap compared to 69.8% of matched applicants (p=0.025). When asked whether applicants believed that programs did a holistic review, only 7.1% unmatched vs. 41.9% matched candidates responded in the affirmative (p=0.021)

PDs and applicants highlighted similar capping benefits: sharper applicant focus, holistic reviews, and reduced costs. Concerns with capping included biases against FMGs and DOs and fostering an anticompetitive attitude.

When asked what aspects of their application programs should focus most on, applicants noted: recommendation letters, personal statements, leadership roles, research, and USMLE scores.

Conclusion:

Most PDs and applicants favor application capping. Such a move may reduce administrative and financial burden, while enabling a holistic application review.

Effect of Ocular Trauma Surgical Skills Curriculum on Preparing Residents for Trauma Call

JOANNA SILVERMAN, MD*; JACLYN HAUGSDAL, MD; PAVLINA KEMP, MD

Background:

Structured surgical curricula decrease intraoperative complications and enhance performance confidence. Operative management of open globes poses nuanced surgical demands and is infrequently simulated.

Purpose:

To assess the efficacy of a standardized surgical curriculum in preparing PGY4 residents to manage ocular trauma.

Methods:

Eligible PGY4 residents attended a lecture and wet-lab simulation on open globe repair. Self-perceived preparedness via Likert scale (1-5) was determined prior, just after, and 10-weeks after educational intervention. PGY2-4 residents who attended lecture, but not wet-lab, served as controls.

Results:

Four PGY4 residents and 6 controls participated. Baseline confidence in open globe surgical management was statistically similar between groups (mean PGY4 3.17 [SD 1.86] vs control 1.0 [SD 0.0]; p=0.09), although skewed by one PGY4 with high pre-intervention confidence. Among PGY4s, confidence was unchanged immediately post-simulation (mean 3.03 [SD 1.44]; p=0.39) and increased, albeit insignificantly, at 10-weeks post-simulation (mean 4.4 [SD 0.56]; p=0.18). Longitudinal confidence remained significantly elevated amongst PGY4s compared to controls (mean 2.22 [SD 1.17]; p < 0 .005). Additionally, longitudinal confidence was elevated amongst PGY4s compared to controls regarding management of post-operative sequela (mean PGY4 4.75 [SD 0.55] vs control 3.5 [SD 1.26]; p=0.002).

Conclusion:

This curriculum effectively increases self-perceived preparedness amongst residents managing ocular trauma, especially after practical call experience.

Feedback Friday: A Solution to Improve On-Rotation Feedback for Residents

ALLIE SIMPSON, MD*; ARIANA LEVIN, MD; KATHERINE HU, MD; THERESA LONG, MD; GRIFFIN JARDINE, MD; MARISSA LAROCHELLE, MD; JEFF H. PETTEY, MD, MBA; RACHEL G. SIMPSON, MD

Background:

During the 2021-2022 AGCME survey, the residency program performed poorly regarding resident satisfaction with faculty member feedback.

Purpose:

To improve resident satisfaction with on-rotation feedback.

Methods:

"Feedback Friday" was initiated. It included twice monthly reminders to faculty and residents to give and ask for feedback, respectively. A rubric was created to help guide conservations and keep feedback short and actionable. A survey of the residents was given at the end of each academic year.

Results:

Survey **Results** from 2021-2022 and 2022-2023 were analyzed. After initiation of Feedback Friday, improvements were seen in the areas of frequency and effectiveness of feedback. Resident satisfaction with feedback improved by 59%, with only 11% of respondents reporting dissatisfaction with feedback after Feedback Friday compared to 70% before its implementation. This trend was also reflected in the 2022-2023 ACGME survey, where the mean score associated with satisfaction with feedback increased 0.9 points.

Conclusion:

Feedback Friday was an effective intervention to improving on-rotation feedback. Reminders will continue for the 2023-2024 academic year with the long-term goal of promoting a culture of increased organic feedback in the residency program.

Using ChatGPT-4 as a Python Developer to Solve Complex Resident Scheduling

MAXWELL SINGER, MD*; DESPOINA THEOTOKA, MD, MSC; CHRISTOPHER TENG, MD, MBA

Background:

While several studies have investigated ChatGPT's applications in ophthalmology, its potential as a Python developer for complex tasks like resident scheduling remains unexplored.

Purpose:

We explore the use of ChatGPT-4 as a Python developer to create a resident call schedule for five Yale PGY-2 ophthalmology residents.

Methods:

ChatGPT-4 and Python programming were used to develop a complex resident scheduling system. The objective was to distribute the call schedule evenly between 5 residents while adhering to specific constraints. The scheduling task involved multiple constraints, such as ensuring that only one resident is assigned per day, allocating specific weekdays for certain residents, avoiding consecutive calls, and accounting for unavailable dates and holidays. We designed a separate Python script to validate the generated schedule which was also manually validated by the chief resident.

Results:

Through an iterative process with ChatGPT-4 and Python programming, we successfully developed a working model that fulfilled all requirements. The schedule was validated by the validation code and manually reviewed by the chief resident.

Conclusion:

This study demonstrates the potential of AI language models like ChatGPT-4, in addressing complex administrative tasks in healthcare with an aim of improving efficiency and reducing administrative burden.

Enhancing Ophthalmology Resident Orientation with an Experiential Simulation Lab using Virtual Reality

SARAH TAJRAN*; ROSHNI VASAIWALA, MD; JHANSI RAJU, MD; ANJALI FERRIS

Background:

Simulation-based medical education is well accepted for procedural training. We are expanding simulation to improve diagnostic skills and understanding of anatomy.

Purpose:

To evaluate the effectiveness of an educational Virtual Reality (VR) simulation for Chicagoland PGY-2 ophthalmology residents.

Methods:

Chicago-land ophthalmology PGY-2s were invited for a session consisting of assessing pupil & cranial nerve dysfunctions on virtual patients & understanding of the iridocorneal angle anatomy and aqueous flow using VR simulators. Improvement was scored by Loyola faculty using a rubric. Participants completed a brief questionnaire for subjective evaluation of the value of this experience.

Results:

Fourteen PGY-2 residents from 4 ophthalmology residency programs participated. By objective assessment, 57.1% of participants improved their understanding of iridocorneal angle anatomy, 50% improved their understanding of aqueous flow and 42.8% improved their pupil & cranial nerve diagnostic skills. An improvement in understanding the angle was significantly correlated with an improvement in understanding the aqueous humor flow ($p=0.026$). 92.8% participants found the session to be interactive and engaging and would like more sessions and expansion to other topics.

Conclusion:

VR based simulation improved participants' examination skills & anatomy concepts. Participants feedback suggests there is value in extending simulation to enhance the training of early-stage ophthalmology residents.

Virtual Poster Abstracts

Emotional Intelligence: The Key to Decreased Burnout among Ophthalmology Residents?

CODY BLANCHARD, MD; DIANA KHAIR, MD; DANIEL MOORE, MD

Background:

Emotional intelligence (EI) has been associated with decreased burnout in medical students, surgical residents, and attendings across multiple specialties. However, this relationship has never been studied in ophthalmology residents.

Purpose::

Determine if a relationship exists between EI, burnout, and professional fulfillment levels among ophthalmology residents.

Methods::

An online survey consisting of the Brief Emotional Intelligence Scale and the Professional Fulfillment Index (PFI) was sent to all ophthalmology residency program coordinators to be distributed to their residents. The PFI measured burnout symptoms experienced over the two weeks prior to survey completion.

Results::

Ninety-one residents spanning all four postgraduate years completed the survey. EI and the Professional Fulfillment subscale of the PFI were positively correlated ($R = 0.48$, $p < 0.01$), while EI and the Work Exhaustion subscale of the PFI were negatively correlated ($R = -0.50$, $p < 0.01$). According to preset cut scores for the PFI, only 26/91 respondents (28.5%) were professionally fulfilled with their role as an ophthalmology resident while 55/91 respondents (60.4%) were experiencing burnout at time of survey.

Conclusion::

Higher EI is associated with decreased burnout and increased professional fulfillment in ophthalmology residents. Areas of future study include whether EI is static or can be improved as well as a similar assessment in practicing ophthalmologists.

Fellowship and Career Placement among New York State Ophthalmology Residency Graduates, 2016–2021

MEGHAN LOCKWOOD, MD; OLIVIA ALLEN

Background:

Investigating career trajectories of recent graduates is central to understanding the national workforce.

Purpose::

To systematically explore career paths of recent ophthalmology graduates.

Methods::

Cross-sectional study of ophthalmology residents graduating from New York state (NY) residency programs between 2016-2021, using publicly available information.

Results::

Out of the expected 341 NY ophthalmology residents graduating from 2016-2021, public data were available for 260 (76%). 58% were male and 42% were female. Fellowship was completed by 86%, most commonly cornea and/or refractive (34%), surgical retina (21%), glaucoma (18%). More men than women went into surgical retina (87% male, p < 0 .001). Residents attended fellowship across the country, but the greatest portion stayed local: NY (25%), tri-state area (30%), and Northeast (42%). Most graduates entered private practice (75%), with a median practice size of 6 ophthalmologists, which was similar for men and women (p = 0.50). 65% of private practices had optometrists (median of 3 optometrists). 31% of women and 20% of men went into academia (p=0.085).

Conclusion::

Ophthalmologists from NY residency programs tend to work in the Northeast in private practices. These data may help inform career advising for trainees.

Patient Surgeon Preferences and Outcomes of Resident Toric Cases at Iowa

THOMAS OETTING, MD

Background:

Companies in some cases provide reduced fee premium intraocular lenses (IOL) to allow resdients to gain experince. We wanted to investigate how likely it is that patients will select this service and the outcome in hopes of providing our best consent to ourpatients. At the University of Iowa when patinets select to have the PGY4 residnet perfrom their surgery they recieve the Alcon Toric IOL at not additional cost above insurance. However if they chose to have faculty perfomr the surgery they pay an additonal 900$ out of pocket.

Purpose:

To report patient preferences, refractive and complication outcomes of resident performed versus faculty performed cataract surgery at the University of Iowa

Methods:

We conducted a retrospective review of patients undergoing cataract surgery with placement of a toric IOL at the University of Iowa from 1/24/20-3/14/23. Preoperative visual acuity, refractive error, and corneal astigmatism, postoperative visual acuity and residual astigmatism, and complications were gathered. Patients were given the choice of cataract surgery to be performed by a resident under faculty supervision or by a faculty. In addition to routine monofocal non-toric options, eligible patients were informed that toric IOLs were not covered by insurance and there would be a premium charge if faculty performed, but there would be no such extra charge if performed by a resident. Surgeries were performed by residents in their final year of training with a faculty assisting

Results:

A total of 141 resident toric IOLs were placed and 21 faculty toric IOLs were placed. 87% (141/164) of patients elected to have a resident perform the surgery. We found an increasing number of patients elect to have the resident perform their surgery over the years (47% between 2013-2016 and 91% between 2021-2023). The mean preoperative corneal cylindrical power was 1.71 D in the resident cohort and 1.80 D in the faculty cohort. The mean postoperative cylindrical power was 0.54 D for resident performed surgeries and 0.54 D for the faculty performed surgeries (p-value < 0.05). The mean uncorrected distance postoperative visual acuity (logMAR) was 0.22 for residents and 0.20 for faculty (p-value < 0.05). There were no reported complications of posterior capsular tear, endophthalmitis, or TASS in either group. An average of $923 was the out-of-pocket charge when faculty performed the case.

Conclusion:

To our knowledge, this is the first study comparing the safety and outcomes of resident-performed versus faculty-performed implantation of torc IOLs. Patients largely elected to have a resident perform their toric cataract surgery when no premium charge was required. There was no significant difference in complications or postoperative refractive results in toric cataract surgeries performed by residents versus faculty

Resident Cataract Complications by Supervising Surgeon Experience

JAMIE NORD, MD; PARAS SHAH, BA; JULES WINOKUR, MD; ISHA CHEELA, DO

Background:

Resident surgical cases are supervised by attendings of varying experience levels.

Purpose:

To determine whether years of experience of supervising attendings was associated with increased likelihood of complications during resident cataract surgeries.

Methods:

Cataract surgeries over a one-year period were included (n=703). Complications documented included posterior capsular (PC) tears, capsulorrhexis extensions (CE), utilization of anterior vitrectomy (AV), and cases where a one-piece intraocular lens (IOL) was not placed. The attendings' years of experience was divided into four groups (0-1, 2-5, 6-25, and 25+ years). Cases were also subdivided into first or second half of the year. Chi-square test was utilized for statistical analyses.

Results:

Over the entire year, attendings in the least experienced group supervised significantly more cases with PC tears (p=0.040) and AV (p=0.004). In the first six months of the year, the least experienced group of attendings staffed a significantly increased rate of PC tears (p < 0 .001), AV (p < 0 .001), and non-one-piece IOL (p=0.002). These relationships did not achieve significance in the second half of the year.

Conclusion:

While residents are on a surgical learning curve, there is also a learning curve for supervising attendings on how to teach most effectively.

Implementing a "Surgery Olympics" in Ophthalmology Residency

ABHISHEK MANJUNATHAN, MD; ROBERT FEDER, MD; MANJOT GILL, MD; DMITRY PYATETSKY, MD; NICHOLAS VOLPE, MD; JESSICA KANG, MD

Background:

A "Surgery Olympics" was created where residents complete surgical tasks specific to their PGY level in both a Summer (beginning of the academic year) and Winter Olympics.

Purpose:

To determine whether this program will promote inter-class mentorship, camaraderie, and excitement for practicing surgical skills.

Methods:

Residents are split into "families" composed of one resident per PGY class to facilitate near-peer mentorship. They complete tasks in the microsurgical lab and are scored by time and quality using a standardized rubric. Highest scoring and most improved families are awarded. A survey before and after implementation of the Surgery Olympics queries residents' perception of their surgical skills, personal surgical practice time, and factors facilitating or posing barriers to practice.

Results:

In the pre-event survey, 40% of residents reported practicing surgical skills 0-1 hours per month. Building surgical confidence and having attendings turn over more cases were listed as motivating factors to practice. Lack of a defined surgical curriculum, mentorship, and protected time were reported barriers. The post-event survey will be completed January 2024.

Conclusion:

We predict that the Surgery Olympics will encourage resident near-peer teaching, promote department camaraderie and excitement towards surgical training, and increase surgical practice time.

Prevalence of Musculoskeletal Pain among Ophthalmology Trainees

AMY ZHANG, MD; OSAMA AHMED, MD

Background:

Studies show that musculoskeletal symptoms and related disability are common among ophthalmologists, but little is known about the prevalence among trainees.

Purpose:

The goal of this study was to determine the prevalence, severity, and functional limitation of neck/shoulder and back pain among trainees.

Methods:

An anonymous Qualtrics survey was emailed to all ophthalmology residents and fellows at University of Michigan Kellogg Eye Center during the academic 2022-2023 year. The survey was reviewed by the University of Michigan IRB and found to be exempt.

Results:

73% of trainees (27/37) completed the survey. 19 (70%) reported neck/ shoulder pain episodes in the past 3 months. Regarding neck/shoulder pain, participants reported an average pain severity and functional limitation of 3.21 out of 10 (std dev=1.5) and 1.58 out of 10 (std dev=1.2) respectively. 13 (48%) participants had lower back pain episodes in the last 3 months.

Conclusion:

This observational survey study found a high prevalence of neck/shoulder and back pain among ophthalmology residents with relatively low subjective ratings of pain severity and functional limitation. Future multi-institution studies with larger sample sizes are warranted to assess the prevalence of pain and to develop preventative strategies.

Predictors of Ophthalmology Resident Research Engagement

NATALIE HOMER, MD; SHREYA LUTHRA; KAREN GOLD, PHD

Background:

U.S Ophthalmology Residency programs employ varying strategies to foster academic productivity.

Purpose:

To evaluate these initiatives in promoting research engagement.

Methods:

A survey was administered to U.S. ophthalmology residents. Primary outcomes were peer-reviewed publications (PP) and national conference presentations (NCP) during residency.

Results:

Eighty-one ophthalmology residents participated (Table 1). Programs significantly varied in research curriculum, mentorship, project requirements and time allocation (Table 2). Opinions on research time (Table 3) and resident academic productivity were collected (Table 4).

Predictors of PP during residency included PGY year, pre-residency PP ($p = 0.018$), required presentation/project ($p = 0.05$) and academic career plans ($p = 0.036$). When excluding case reports, these variables were not associated with increased academic productivity. Allocated research time did not lead to increased PP.

Seventy-nine percent of respondents reported NCPs. Only pre-residency PP predicted NCPs ($p = 0.005$), while academic career aspirations, research time, and research requirements did not. Resident age, gender and region did not correlate with outcome measures.

Conclusion:

We confirmed that PGY year and pre-residency PP correlate with academic productivity. Required research and academic aspirations predicted increased PP when including case reports. These results may aid in developing curriculum to promote academic productivity.

Applying Motivational Interviewing to Improve Glaucoma Management: A Pilot Study with Eye Residents

NISHA CHADHA, MD; JENNY LIN, MD, MPH

Background:

Motivational interviewing (MI) is effective in promoting behavioral change in medicine, but is not commonly used in ophthalmology, despite its myriad applications.

Purpose:

To introduce ophthalmology residents to MI techniques.

Methods:

A 1-hour workshop was developed which included original videos demonstrating glaucoma counseling with and without MI. A standardized patient encounter (SPE) requiring glaucoma counseling assessed MI skills. Ten PGY-2 residents were randomized to complete the SPE either before the workshop (control group) or after (intervention group). SPE performance between groups was compared to assess for differences in MI skills. Pre and post surveys were administered to evaluate the workshop.

Results:

Residents in the intervention group performed better in the SPE (average score of 82% vs. 63% in the control group). No one in the control group demonstrated any MI skills, whereas the intervention group covered 75% of the MI-specific skills. Resident confidence using MI improved from 58% to 88% from pre to post-workshop. All residents reported they were likely to use MI skills and would recommended the workshop.

Conclusion:

This brief MI workshop was effective in improving residents' confidence and MI skills in glaucoma counseling.

Impact of Internship Rotation Structure on Resident Ophthalmology Preparedness

DANIEL TU, MD, PHD; JOHN CLEMENTS, MD; AMBAR FARIDI, MD; AMANDA REDFERN, MD; SUSAN MINNIEWEATHER; THOMAS HWANG, MD; ANDREAS LAUER, MD

Background:

The ACGME requires ophthalmology residency programs to include an integrated or joint preliminary internship year. Ophthalmology rotations are limited to 3 months total during the first postgraduate year (PGY-1), but individual programs determine formatting of these rotations. It is not well understood how the format of ophthalmology internship rotations impact resident preparation for subsequent ophthalmology training.

Purpose:

Compare relative contributions of varying formats and components of ophthalmology internship on resident perception of preparedness for subsequent ophthalmology training requirements.

Methods:

Anonymous survey of ophthalmology residents who have completed the transition from integrated internship to PGY-2 at the Casey Eye Institute.

Results:

Ophthalmology rotations structured as focused (continuous period, 5 days a week for 1 month) versus distributed (2-3 days of ophthalmology per week, for 1 month blocks intermittently spaced throughout the year) were rated on a Likert scale as “very useful” by 90% and 100% of respondents respectively. The focused format contributed on average 29.5% (SD=9.5) of residents‘ sense of ophthalmology preparedness versus 43% (SD=7.2) for the distributed rotation format. Lectures and practice call sessions contributed on average 13% (SD=8.2) and 14.5% (SD=3.7) to resident perception of ophthalmology preparation respectively.

Conclusion:

A distributed ophthalmology experience during internship such as 2-3 days of ophthalmology training per week over a longer period of time may be advantageous for ophthalmology preparation.

Comparison of Refractive Surgery Outcomes between Residents and Experienced Refractive Surgeons

NIKITA PIRYANI, BS; ERIC HABBE, MD; JUDY HOGGATT, MD; JOHN SUSON, MD

Background:

Numerous studies have demonstrated that resident-performed phacoemulsification has a higher complication rate compared to experienced surgeons. However, a paucity of data exists examining the risk profile of refractive surgeries, although ACGME mandates residents perform six refractive procedures.

Purpose:

The aim is to evaluate the outcomes and complications for laser-assisted refractive surgery, including LASIK and PRK, between residents and attendings. Identification of these variables will improve student proficiency.

Methods:

The study is a retrospective, primary analysis of patients who underwent LASIK or PRK from 2018-2021 by a resident (N=42) and attending (N=60). Data collected included demographics, pre-operative refraction, complications, and post-operative uncorrected visual acuity (UCVA). Attending and resident data were compared.

Results:

The post-operative UCVA did not show any significant difference between both groups with 94.9% to 100% of resident and 88.2% to 97.1% of attending cases achieving >20/20 or 20/25 vision, respectively. There were no intraoperative complications reported in either group. Resident cases had an increased rate of epithelial defects (P=0.01).

Conclusion:

Residents have comparable outcomes to an experienced refractive surgeon. An increased rate of epithelial defects occurred; however, there were no long-term differences. The limitation of this study is that only one academic center was studied under the supervision of one refractive surgeon.

Analysis of Social Media Engagement among Ophthalmology Residency Programs via Twitter (X)

AMANDA ZONG, BS; ANNE BARMETTLER, MD

Background:

Social platforms are an important way for ophthalmology residency programs to connect with residency applicants. To date, few studies have examined usage and effectiveness.

Purpose:

To investigate trends in social media engagement among ophthalmology departments from 2022-2023 on Twitter/X.

Methods:

The Twitter accounts associated with accredited ophthalmology programs were analyzed. For the top 20 programs, Twitter posts were categorized and engagement was quantified by the number of reposts, likes, and comments. T-tests and one-way ANOVA were used for statistical analysis.

Results:

Of 120 programs, 53 (44%) had a Twitter account. Of the 53, 45 (85%) posted at least once during the 2022-2023 application cycle. The number of followers for the top 20 programs made up the majority (66%) of total number of followers for all 53 accounts. Increased number of posts was significantly associated with greater number of followers (p=0.02). The “Institutional Awards” category had the greatest average engagement (14.1/post), followed by “Resident Events/Achievements” (12.5/post), “Research” (10.3/post) and “Faculty Events/Achievements” (9.5/post) (p=0.46).

Conclusion:

Ophthalmology residency social media engagement can be optimized by increasing number of posts, highlighting institutional awards, and featuring resident social events and achievements.

Core Entrustable Skills and Qualities for Entering Ophthalmology Residency: A National Survey

SHRAVIKA LAM, BS; JANICE LAW, MD; JENNIFER LINDSEY, MD

Background:

Little information is available regarding the proficiencies expected of incoming ophthalmology residents. As exposure to ophthalmology in medical school declines, it is necessary to define the skills and qualities expected of ophthalmology trainees at the start of residency.

Purpose:

To assess which core skills and qualities ophthalmology residents are expected to possess when entering their internship period.

Methods:

A 29-question survey was sent to Association of University Professors of Ophthalmology (AUPO) program directors (PDs) and associate program directors (APDs) on May 10th, 2023. Fisher's exact test was used to compare responses based on respondent and program characteristics.

Results:

45 complete surveys were received from 21.6% of queried participants. Core skills rated as moderately important or higher by at least 50% respondents included collaborating as part of an interprofessional team (100%), gathering an appropriate ocular history (87%), and giving/receiving patient handover (80%). Ranking of characteristics was highest for "Integrity" (mean ranking 3.9, standard deviation (SD) 3.7), "Professionalism" (mean ranking 4.1, SD 3.4) and "Compassion and empathy toward patients" (mean ranking 4.1, SD 3.6).

Conclusion:

Incoming PGY-1 ophthalmology residents are expected to display proficiency in systems-based practice, patient care skills, and basic specialty-specific skills. This study may aid in curriculum development and self-directed learning of trainees.

Administrative Burden among Ophthalmology Residents

CHLOE LI, MD, MA; LORA GLASS, MD

Background:

Administrative workload is correlated with decreased career satisfaction and increased burnout among attending physicians.

Purpose:

To characterize the administrative tasks performed by ophthalmology residents.

Methods:

A 25-question survey inviting residents to participate was sent to all ophthalmology residency programs in the United States.

Results:

Among 41 respondents, most were in their PGY3 or 4 year (68%). About half were female (51%). 71% see patients in a resident-run clinic and see greater than 15 patients per day. 44% of residents schedule follow-up visits without ancillary support; 36% schedule imaging and laboratory tests without support. 59% of residents schedule and perform their own pre-operative measurements for surgery. 44% are responsible for obtaining pre-operative medical clearance. 54% submit their own prior authorizations (PAs) for medications; 29% submit PAs for imaging and procedures. 56% of residents did not have protected time to complete administrative work, while 12% reported fewer than 4 hours per week allotted. 56% report that their administrative workload significantly detracts from their education and contributes to burnout.

Conclusion:

Ophthalmology residents are expected to perform many administrative tasks related to patient care. They feel that this administrative burden negatively impacts their education and wellness.

Ethics and Professionalism Education of Ophthalmology Residents: A National Survey

KATHLEEN GU, BS; LORA GLASS, MD

Background:

Medical schools are strengthening ethics and professionalism curricula; this progress likely lags in residency programs. Surveys primarily target program directors. Resident insight would help optimize education.

Purpose:

This study aims to identify U.S. ophthalmology residents' perceptions of current ethics and professionalism curricula to uncover potential gaps in education.

Methods:

An anonymous Qualtrics survey was emailed to all U.S. ACGME-accredited ophthalmology residency programs for distribution to current and recent residents, exploring respondent and program demographics, ethics and professionalism curricula exposure and perceptions, and medical school and residency comparisons.

Results:

68 responses were received. Half (32/62, 52%) had attended formal ethics programming; only 14/51 respondents with ≥1 year of residency training (27%) had involvement in cases requiring ethics consultation. Respondents felt residency lacked ethics emphasis compared to medical school (30/37, 81%, $p < 0$ .001), with decreased topic diversity ($p < 0$ .001). 31/38 respondents (82%) agreed that ethics training is valuable; this was associated with perceiving that it was valuable to faculty (53%, p=0.019) and to peers (42%, p=0.004). Discrepancies exist between published teaching strategies and those that were engaged in and found effective by respondents.

Conclusion:

Trainee feedback on ethics and professionalism can benefit curricular development in all years of training.

Updates to ACGME Residency Minimums - When do Residents Really Achieve Competency?

DHRUV SETHI, MD, MBA, MPH; VENKATKRISH KASETTY, MD; OBADEH MOHIDDIN, BS; EVGENY GELMAN, MD, MHA; NITIN KUMAR, MD; UDAY DESAI, MD; ABDUALRAHMAN HAMAD, MD, MS; DAVID GOLDMAN, MBA, MD

Background:

Intravitreal injections (IVI) are the most commonly performed ophthalmic procedure. Appropriate technique and injection location is paramount for preventing vision-threatening consequences.

Purpose:

To assess the accuracy and precision of IVI distances based on training status.tip

Methods:

Prospective cohort study of attending ophthalmologists, fellows and residents simulating IVI using a 1cc syringe and 30-gauge needle on a model eye. They were instructed to inject 4mm from the limbus. Calipers were used post-IVI to measure distance from model corneal limbus (mm).

Results:

Retina attendings, retina fellow, comprehensive staff, oculoplastics staff and residents participated in this prospective cohort study. Average distances from limbus were recorded to demonstrate accuracy and precision was recorded by sample variance, both of which were then compared with ACGME volume of injection cases logged. Significant trends found in tighter sample variance with more training experience with threshold changes corresponding to cases logged.

Conclusion:

As expected, retina attendings and fellows were very precise. Our study provides a foundation for updating ophthalmology ACGME minimums which currently requires 10 injections and potentially highlights the need for revisiting other ACGME minimums with an objective, data driven, evidence based rationale.

Increase in Ophthalmology Consult Volumes and Adaptations to Primary Call Coverage Systems

NIHAAL MEHTA, MD; A. ITZAM MARIN, MD; JEFFREY SOOHOO, MD; MONICA ERTEL, MD

Background:

Consult volumes at our institution have grown rapidly, which risks inadequate trainee rest, excessive workload, and suboptimal patient care. We recognized a need to adapt primary call systems to accommodate this growth.

Purpose:

To examine trends in ophthalmology consult volumes at three academic medical centers and change primary call systems to preserve workload management and trainee wellness while ensuring quality care.

Methods:

The number of ophthalmology consults at three sites was totaled from 1/1/2018 to 12/31/2022. Changes to our call system were implemented from 2019, including a night float system and shortening a weekend call shift from 48 to 24 hours.

Results:

In 2018, we received 817 consults at University of Colorado Hospital, 479 consults at Denver Health, and 512 at Children's Hospital Colorado. In 2022, we received 1719 consults (+110% versus 2018) at University of Colorado Hospital, 777 (+62%) at Denver Health, and 993 (+94%) at Children's Hospital Colorado.

Conclusion:

Amidst growing volumes, ophthalmology residencies must adapt to maintain trainee wellness and timely, high-quality patient care. Changes can include night float and making call shifts shorter but more frequent. Future directions include extending night float to weekends and mandatory post-call rest when trainees are inadequately rested.

The Impact of a Research Year for Matched US-MD Seniors

JUSTIN FLOOD, BS; SAGAR SHAH, BS; JHANSI RAJU, MD; ROSHNI VASAIWALA, MD

Background:

With Step 1 becoming P/F, more students are considering taking a pre-residency research year in ophthalmology.

Purpose:

To compare outcomes between matched US-MD ophthalmology applicants with and without a dedicated research year.

Methods:

Self-reported data from the publicly available OphthoMatch spreadsheets (2021-2022 and 2022-2023 cycles) were analyzed. Inclusion criteria: US-MD senior applicants. Exclusion criteria: MD/PhD students.

Results:

23 of 127 (18.1%) matched US-MD senior applicants reported taking a research year. Baseline characteristics including URM status, gender, class quartile, USMLE Step 2 score, number of ophthalmology rotations, and having a home department were similar between both groups.

Research year students had a significantly lower Step 1 score (243.1 + 8.7) compared to traditional students (247.3 + 10.8; p=0.030) as well as significantly lower Alpha Omega Alpha (AOA) membership (33.3%) compared to traditional students (46.5%; p=0.026).

Both groups received a similar number of interview offers (p=0.260). Research year students significantly matched higher on their rank lists (1.9 + 1.8 choice) compared to those without a research year (3.0 + 2.1 choice; p=0.002).

Conclusion:

US-MD matched students completing a research year before applying to residency tend to have lower Step 1 scores and AOA membership rates, yet match closer to their top choice compared to traditional students.

ABO and OKAP Exam Performance: Other Known Associations and Predictors

TARA UHLER, MD

Background:

Logically, poor performance on in-service exams could predict future failure on Board exams. Such correlations have been reported previously for Ophthalmology and other fields and drive curricular changes and advice provided to trainees.

Purpose:

To identify associations and predictors of performance on OKAP and Board exams used for annual program evaluation and improvements.

Methods:

OKAP and ABO exam performance of more than 100 residents in a single training program were reviewed, year after year, for over a decade to identify areas for improvement in the curriculum and/or advice for Board preparation.

Results:

Order of rotation, career choice, previous test performance, and program resources or delivery method were not well correlated with performance over the timeframe. Poorer OKAP performance was not a good predictor of ABO performance. The latter remained much higher than would be expected based upon published studies of the correlations between OKAP and Board exam performance.

Conclusion:

Potential predictors of performance continued to be personal study effort and competing extracurricular activities. A seemingly logical, but untested theory, is the perception of OKAPs as "low stakes" by trainees in a program which uses deidentified, aggregate results for program evaluation but only shares individual scores with the CCC.

Feedback Trends of an Ophthalmology Night Float Consultation Review System: A Retrospective Study

BRYAN ZARRIN, MD; JAMIE ROSENBERG, MD; JEE-YOUNG MOON

Background:

Some ophthalmology residencies utilize a resident night float system for overnight consults, with varying levels of supervision.

Purpose:

To determine the impact of daily program director (PD) oversight of the night float service, and to characterize how that impact compares from the first half to the second half of the year.

Methods:

A retrospective chart review of the Monday-Thursday overnight consults evaluated by the first-year night float resident was performed to determine the frequency of residents' calling a senior resident, of the PD changing versus approving the patient-care plan, and of learning points provided. Two groups were compared: July-December and April-July.

Results:

The senior resident was called more in the first half of the year ($p < 0.001$) and the plan was changed by the PD the next day more often in the first half of the year ($p < 0.001$). There was a learning point made for every 2 consults reviewed at the beginning of the year and for every 3 consults reviewed at the end of the year.

Conclusion:

Daily review of weeknight consults has led to improved resident education and patient safety. The residents required more adjustments to their patient-care plans in the first half of the year.

Exploring the Potential of Cataract Surgery Video Rounds on Ophthalmology Surgical Training

ERIC CHEN, MD, MB; NAVEEN MYSORE, MD, PHD

Background:

Cataract surgery proficiency remains a crucial objective in ophthalmology training, yet optimal methodology for surgical instruction continues to evolve. While surgical videos are becoming more prevalent in ophthalmology, the optimal way to utilize this resource remains unknown. Here we propose a format of cataract surgery video rounds as a formal methodology for training residents in cataract surgery.

Purpose:

To evaluate the impact of interactive cataract surgery video rounds on resident cataract surgery training.

Methods:

Monthly video review sessions with discussion featuring three surgical cataract videos (two resident cases, one attending case) emphasizing complications were held over three years at the Flaum Eye Institute. A cross-sectional study was administered to participating residents and graduates of the program.

Results:

88.9% of respondents (n=9) found surgical video-based rounds “extremely valuable” versus 44.4% for traditional didactics in understanding cataract surgery. Additionally, all survey participants found that having an attending present their own surgical complications, and 88.9% found having a safe space to present surgical videos, was “extremely valuable.” Graduates reported sustained utilization of acquired skills from these sessions (88.9% responded “often” or “always”).

Conclusion:

These findings underscore the potential of cataract surgery video rounds, showcasing the value a collaborative discussion-based training approach can have on effective surgical training.

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