Association of University Professors of Ophthalmology

AUPO 2025 ANNUAL MEETING

JANUARY 29 – FEBRUARY 1 • FORT LAUDERDALE

EDUCATING THE EDUCATORS

MEETING SYLLABUS · JANUARY 29, 2025

PROVIDED BY AUPO PROGRAM DIRECTORS COUNCIL

MEETING SUPPORT

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Educating the Educators 2025

The Association of University Professors of Ophthalmology's Program Directors Council welcomes you to the 22nd annual Educating the Educators conference in Fort Lauderdale, FL.

The morning will begin with a lively, interactive point - counterpoint session exploring perspectives of virtual versus, in-person residency interviews. The morning also includes a Shark Tank session showcasing innovative ideas and the Keynote presentation "DEI in the Aftermath of the Supreme Court Ruling" by ACGME Chief Diversity and Inclusion Officer Dr. William A. McDade. 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 the "Free Paper Session" consisting of five presentations chosen from abstracts submitted for this year's meeting. Our session on Wellness will focus on providing support throughout residency programs even through the most difficult of challenges. The day will conclude with the "Creating a Network of Research Educators: CORE (Consortium of Ophthalmic Researchers in Education)" session, which will highlight outstanding projects from our consortium for multicenter educational research, with time for Q&A.

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

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

Jennifer Lindsey, MD, MBA
Chair, Educating the Educators
President-Elect
AUPO Program Directors Council

Jeff Goshe, MD
Chair, Shark Tank Session
AUPO Program Directors Council

Fasika Woreta, MD, MPH
Chair, Keynote Session
President
AUPO Program Directors Council

Robert Swan, MD
Chair, Free Paper Session
Member-at-Large
AUPO Program Directors Council

Saras Ramanathan, MD
Chair, Guidance with Gurus Sessions
Member-at-Large
AUPO Program Directors Council

Jamie B. Rosenberg, MD
Member-at-Large
AUPO Program Directors Council

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Wednesday, January 29

6:00 AM – 5:00 PM	Registration Open		Caribbean Registration
6:00 AM – 7:30 AM	EE Breakfast		Grand E
7:00 AM – 7:55 AM	**The Great Interview Debate: In-Person, Virtual, or Hybrid?** *Jeff Pettey, MD, MBA* - Moderator Join us for a lively, interactive point - counterpoint session exploring the virtues of virtual, in-person, and hybrid interviews.		Grand K-F
	7:00 AM – 7:03 AM	Welcome – *Jennifer Lindsey, MD, MBA*	
	7:03 AM – 7:09 AM	General Situation and Background, Introduction to the Combatants – *Jeff Pettey, MD, MBA*	
	7:09 AM – 7:15 AM	Opening Salvo In-Person – *Kathryn Colby, MD, PhD*	
	7:15 AM – 7:21 AM	Opening Salvo Hybrid – *Chris Alabiad, MD*	
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	7:36 AM – 7:46 AM	Q&A with Online Question/Comment Submission – *Rachel Simpson, MD*	
	7:46 AM – 7:50 AM	Closing Statements	
	7:50 AM – 7:55 AM	Wrap and Presentation of the Audience Response Question Trends – *Jeff Pettey, MD, MBA*	
8:00 AM – 8:10 AM	**Welcome and Announcements** – *Fasika Woreta, MD, MPH*		Grand K-F
8:10 AM – 9:00 AM	**Why Didn't I Think of That? Innovations to Implement in Your Education Program** *Jeffrey Goshe, MD* - Moderator *Nisha Chadha, MD; Ariane Kaplan, MD; Julius Oatts, MD, MHS* - Shark Tank Panelists This session will feature Shark Tank presentations of some of the best innovations from your fellow PDs, APDs and MSEs. Join us and help the Sharks choose the winner!		Grand K-F
	8:10 AM – 8:13 AM	Introductions	
	8:13 AM – 8:16 AM	VR-based Simulation Lab – *Roshni Vasaiwala, MD*	
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	8:35 AM – 8:38 AM	GOAT and PRIME Residency Pathways – *Anjali Shah, MD*	
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	8:46 AM – 8:49 AM	Surgical Mentorship and Resident Wellness – *Rachel Simpson, MD*	
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	8:57 AM – 9:00 AM	Conclusion and Results – *Jeffrey Goshe, MD*	

Educating the Educators Program

Wednesday, January 29 (continued)

9:00 AM – 9:45 AM	**Keynote: DEI in the Aftermath of the Supreme Court Ruling**		Grand K-F
	9:00 AM – 9:05 AM	Introduction – *Fasika Woreta, MD, MPH*	
	9:05 AM – 9:30 AM	Keynote Presentation – *William McDade, MD, PhD* William A. McDade, MD, PhD is the ACGME's first Chief Diversity and Inclusion Officer, leading the organization's internal and external diversity and inclusion activities. He focuses on national initiatives to diversify and include underrepresented groups throughout the medical education continuum with the goal of providing physicians with the knowledge and skills required to serve the American public in humanistic environments where clinician and patient well-being is promoted.	
	9:30 AM – 9:45 AM	Q & A	
9:55 AM – 10:25 AM	**EE Poster Presentation Session 1 (Posters 1-10) -** *Robert Swan, MD; Jamie Rosenberg, MD; Susan Culican, MD, PhD; Christina Prescott, MD, PhD* - Moderators		Caribbean Foyer
9:55 AM – 10:25 AM	Refreshment Break and Exhibit Hall Opens		Caribbean Ballroom
10:30 AM – 11:10 AM	**Guidance With Gurus Session 1** 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		Grand E
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	2.	Advice from a Chair: Increasing Support for Your Education Program – *Michael Rauser, MD*	
	3.	Career Counselling, Elevating Junior Faculty, and Retention / Promotion / Tenure for Educators – *Paul Phillips, MD*	
	4.	Counseling Your Students for a Successful Match – *Pavlina Kemp, MD*	
	5.	Designing a Structured Research Curriculum into Your Residency Program – *Seth Pantanelli, MD, MS*	
	6.	Elevating Your Profile on the Internet, Social Media and the Doximity Survey – *Chris Alabiad, MD and Brian Song, MD, MPH*	
	7.	Endangered Subspecialties: How to Increase Resident Enthusiasm for Uveitis, Pediatric and Neuro-Ophthalmology – *Andrew Melson, MD*	
	8.	Fostering Departmental Resilience and Wellbeing for Faculty and Residents – *Jonathan Li, MD*	
	9.	Going Global: Starting and Maintaining Global Experiences – *Hassan Shah, MD and Tetyana Schneider, PhD*	
	10.	Helping the Struggling Resident - Strategies for Success – *Parisa Taravati, MD*	
	11.	Holistic Review of Residency Applications - How Do You Do It? – *Anna Momont, MD*	
	12.	How Can My Program Accommodate All Students Interested in Ophthalmology? – *Neeti Parikh, MD*	
	13.	Incorporating Social Determinants of Health into Your Curriculum and Clinic – *Ambar Faridi, MD*	
	14.	Leveraging Urgent Consults for Resident Education and Revenue Generation – *Rachel Wozniak, MD, PhD*	
	15.	Navigating Generational Changes and Their Effect on Medical Education – *Jessica Randolph, MD*	
	16.	PGY1 Year Optimizing Preparation for Residency – *Misha Faustina, MD*	
	17.	Surgical Wet Lab: Optimizing Curriculum and Improving Funding – *Victoria Addis, MD*	
	18.	What Does a Vice Chair for Education Do and Why Does My Department Need One? – *Daniel Knoch, MD*	
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	2.	Counseling Your Students for a Successful Match – *Lorri Wilson, MD and Lindsay De Andrade, MD*	
	3.	Designing a Structured Research Curriculum into Your Residency Program – *Mandi Conway, MD*	
	4.	Endangered Subspecialties: How to Increase Resident Enthusiasm for Uveitis, Pediatric and Neuro-Ophthalmology – *Charline Boente, MD, MS*	
	5.	Fostering Departmental Resilience and Wellbeing for Faculty and Residents – *Jessica Randolph, MD*	

Educating the Educators Program

Wednesday, January 29 (continued)

	6. Helping the Struggling Resident - Strategies for Success – *Prithvi Sankar, MD; Paul Tapino, MD*		
	7. Holistic Review of Residency Applications - How Do You Do It? – *Jennifer Lindsey, MD, MBA*		
	8. How Can My Program Accommodate All Students Interested in Ophthalmology? – *Zachary Elkin, MD, MPH*		
	9. Incorporating Social Determinants of Health into Your Curriculum and Clinic – *Neeti Parikh, MD*		
	10. PGY1 Year Optimizing Preparation for Residency – *Daniel Tu, MD, PhD*		
	11. Preference Signaling: What I Did This Year – *Robert Swan, MD*		
	12. Surgical Wet Lab: Optimizing Curriculum and Improving Funding – *David Hinkle, MD and Ze Zhang, MD*		
	13. What Does a Vice Chair for Education Do and Why Does My Department Need One? – *Sachin Kedar, MBBS, MD*		
	14. Releasing a Resident from Your Program: Navigating the Process – *Christina Prescott, MD, PhD*		
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	1:00 PM – 1:02 PM	Welcome and Introduction – *Fasika Woreta, MD, MPH* - Moderator	
	1:02 PM – 1:08 PM	SF Match – *Dennis Thomatos*	
	1:08 PM – 1:14 PM	AUPO Oversight – *Jeff Pettey, MD, MBA*	
	1:14 PM – 1:20 PM	AAO Committee for Resident Education – *Robert Swan, MD*	
	1:20 PM – 1:25 PM	Organization of Program Director Associations – *Rachel Wozniak, MD, PhD*	
	1:25 PM – 1:30 PM	AAO State Affairs – *Victoria Tseng, MD, PhD*	
	1:30 PM – 1:35 PM	OphthPAC – *Jeffrey Henderer, MD*	
	1:35 PM – 1:40 PM	Association of Veterans Affairs Ophthalmologists – *Jigna Joshi, MD*	
	1:40 PM – 1:45 PM	Q&A	
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	2:20 PM – 2:26 PM	Looking Ahead: Ergonomics Education During Ophthalmology Residency to Increase Career Longevity – *Matthew Urban, BA*	
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	2:39 PM – 2:42 PM	Q&A	
	2:42 PM – 2:48 PM	Leveraging Artificial Intelligence for Learner Assessment: A SCOR Assessment Project – *Alina Husain, BS*	
	2:48 PM – 2:50 PM	Discussant – *James Tsai, MD, MBA*	
	2:50 PM – 2:53 PM	Q&A	
3:00 PM – 3:30 PM	**EE Poster Presentation Session 2** - *Susan Culican, MD, PhD; Christina Prescott, MD, PhD; Jamie Rosenberg, MD; Robert Swan, MD* - Moderators		Caribbean Foyer
3:00 PM – 3:30 PM	Refreshment Break and Exhibits		Caribbean Ballroom

Educating the Educators Program

Wednesday, January 29 (continued)

3:40 PM – 4:30 PM	**Wellness: Cultivating Meaningful Connections in the Best and the Worst of Times** – *Jennifer Lindsey, MD, MBA* - Moderator This session will focus on how we as a community of ophthalmologists and educators can support one another, even through the most difficult challenges. We will use a case-based approach and panel discussion to explore how to: make wellbeing an institutional priority, destigmatize mental illness by removing barriers to seeking professional treatment, prevent suicide by recognizing the warning signs, and support our trainees and each other through times of grief along with times of joy.		Grand K-F
	3:40 PM – 3:50 PM	Introduction - Physician Wellbeing and Suicide Prevention - *Griffin Jardine, MD*	
	3:50 PM – 4:15 PM	Panel Discussion - Responding to the Challenge - *Ambar Faridi, MD, Rachel Simpson, MD, Lora Glass, MD, Alice Zhang, MD, Krupa Patel, MD, Arthi Venkat, MD, MS*	
	4:15 PM – 4:25 PM	Video - Death by Suicide of an Ophthalmology Resident - Parents' Perspective - *Parents of Dr. William West*	
	4:25 PM – 4:30 PM	Key Takeaways and Further Resources – *Jennifer Lindsey, MD, MBA*	
4:30 PM – 5:00 PM	**Creating a Network of Research Educators: CORE (Consortium of Ophthalmic Researchers in Education)** – *Saras Ramanathan, MD* - Moderator This session will highlight outstanding projects from our consortium for multi-center educational research, with time for Q&A.		Grand K-F
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5:30 PM – 6:30 PM	**EE Reception**		Oceanview Terrace

Visit EE Posters

CARIBBEAN FOYER

SESSION 1: 9:55 AM – 10:25 AM

1. Development of an Artificial Intelligence Tool for Residency Applicant Screening - *Jared Austin Moon, MEd, BS*
2. A Pilot Model for Artificial Intelligence Curriculum Integration Into Ophthalmology Residency - *Nariman Boyle, MD*
3. Artificial Intelligence Curriculum for Ophthalmology Residents - *Angela McCarthy, BS*
4. Transforming a Resident Clinic into an Urgent Eye Care Clinic: Impact on Resident Education - *Neil Sai Dogra, BS*
5. Transforming a Resident Clinic into an Urgent Eye Care Clinic: Impact on Health Equity - *Sharon Ojo, BA*
6. Introduction and Implementation of the Iowa Ophthalmology Laser Curriculum? - *Bilal Ahmed, MD*
7. Race to Zero: Implementation of a Carbon Neutral Ophthalmology Wet Lab - *Mahsaw Mansoor, MD*
8. Gender Differences in Salary and Faculty Rank Among Clinical Ophthalmology Faculty at U.S. Medical Schools - *Emily Sun, MD*
9. Sexual Harassment in Ophthalmology: A 5-Year Follow Up Study - *Grace Sun, MD*
10. Gender Diversity in Educational Leadership Positions in Academic Ophthalmology Departments in the US - *Aregnazan Sandrosyan, MD*

SESSION 2: 3:00 PM – 3:30 PM

11. Standardized Patient Simulations: A Pilot Program in the Ophthalmology Residency Curriculum - *Sydney Wheeler, BS*
12. Trainee Perspectives on Gray Area Surgical Complications of Strabismus Surgery - *Ashley Ooms, MD*
13. Characteristics of Successful Reapplicants to Ophthalmology from 2017–2023 - *Alice Zhang, MD*
14. Residency Factors Associated with Pediatric Ophthalmology Fellowship Pursuit - *Anika Kumar, BA*
15. Casting a Wider Net in the Resident Selection Process: Steps to Increase Diversity - *Anna Momont, MD*
16. Development of Novel Conjunctival and Scleral Suturing Model - *George Thomas Lin, MD*
17. Cataract Surgery Wet Lab Manual Curriculum - *Shawn Khan, BS*
18. Exam Under Anesthesia for Pediatric Glaucoma: A Simulation-Based Training - *Harita Anna Abraham, MBA, MHA*
19. Enhancing Resident Wellness Through a Structured Near-Peer Professional Skill Development Curriculum - *Ryan Sameen Meshkin, MD*
20. From Bright-Eyed to Burnout: Assessing Depression Among Ophthalmology Interns - *Karthik Reddy, BS*

Free Paper Abstracts

Predicting Future Cataract Surgery Volumes at the Department of Veterans Affairs (Hospital)

JORDAN DESAUTELS, MD*; MUBARIK MOHAMED MD; RACHEL SIMPSON, MD

Background:

320 of 509 ophthalmology residency positions in the U.S. are supported by the Department of Veterans Affairs (VA), and a large proportion of resident surgical training volume is obtained through VA hospitals. However, due to a decline in the draft-era veteran population, declining military enrollment, and changing patterns of VA utilization by veterans, the number of U.S. veterans is expected to decrease approximately 36%. This decline has significant implications for future ophthalmology trainees.

Purpose:

The goal of this project is to combine data from the Department of Defense's VetPop database, the U.S. census, and governement-commissioned studies of veteran population trends to project the number of cataract surgery eligible veterans in the U.S. out to the year 2050.

Methods:

The projected total and conflict-stratified veteran populations were extracted from the VetPop 2020 database out to the year 2050. These veteran population projections were then further stratified by veteran age. Veterans over 61 years old were labeled "cataract surgery eligible" given that 61 years is the average age of cataract diagnosis in the U.S. based on studies of large insurance databases. Internal Department of Defense data regarding veteran utilization of and reliance on VA health services were then used to adjust predictions of cataract surgery eligible veterans out to the year 2050.

Results:

The total U.S. veteran population is expected to decrease 36% by 2050. Amongst all veterans, approximately 50% use VA benefits. Only 66% of those using VA benefits use VA healthcare services. Additionally, only 30-45% of veterans using VA healthcare are truly reliant on the VA, with the remainder using a combination of insurances and third-party payors. Overall, the number of cataract surgery eligible veterans who rely on the VA for healthcare will decrease 40% by 2050.

Conclusion:

The major projected decline in cataract surgery eligible veterans within the VA hospital system over the next 25 years will require residency training programs to restructure and supplement the ways that thier residents receive surgical training.

Comparing Patient Characteristics in Cataract Surgery Cases by Residents Versus Attending Physicians

MUHAMMAD KHAN, MBBS*; ZAINAB RUSTAM MBBS; MUHAMMAD ALI, MBBS; GRACE SUN, MD; LAURA GREEN, MD; FASIKA WORETA, MD, MPH

Background:

Cataract surgery outcomes may be influenced by sociodemographic disparities, with vulnerable populations frequently experiencing barriers to care.

Purpose:

To examine differences in patient characteristics between cataract operations performed by residents versus attending physicians.

Methods:

We conducted a 5-year retrospective chart review from 2019-2024 on patients operated on by residents and matched them to randomly generated physician cases. Data were collected on patient age, race, sex, insurance status, and preoperative best-recorded vision (BRV). Pairwise chi-square and t-tests were used to compare categorical and continuous variables respectively. The percentages or mean difference (MD) have been reported.

Results:

We included 955 patients in the analysis. We observed a higher proportion of Black (60.8% vs 25.2%%; p < 0 .001), Hispanic/Latino (12% vs 3.3%; p = 0.04), non-English speaking (16.47% vs 5.25%; P < 0 .001) and Self-Pay/Uninsured (35.5% vs 21.23%; p < 0 .001) patients in resident-performed cases. A lower proportion of Non-Hispanic White patients (19.1% vs 59.5%%; p < 0 .001), were seen in resident-performed operations. Preoperative BRV was worse in resident-performed cases, with a mean logmar (Snellen equivalent) of 0.70 (20/100) compared to 0.41 (20/50) in attending cases (MD = 0.29; p < 0 .001).

Conclusion:

This study highlights that resident-performed cases involve more vulnerable populations underscoring the need for targeted interventions to address potential inequities.

Looking Ahead: Ergonomics Education During Ophthalmology Residency to Increase Career Longevity

MATTHEW URBAN, BA*; AVERY MORRISON BA; SAVANNAH KUMAR, BSC, MD; BENTZION KLEIMAN, BS; BRANDON BESSEN, BSC; ALICIA JIANG, MD; ELIZABETH DRUGGE, PHD, MPH; KELLY HUTCH, MD MBA; ABHA AMIN, MD

Background:

Over 50% of ophthalmologists worldwide experience musculoskeletal (MSK) pain, with 15% reporting work performance impact.

Purpose:

We aim to assess the effectiveness of ergonomics education (EE) in improving posture of ophthalmology residents through the application of an AAO-derived training protocol.

Methods:

This single center study from 7/27/23-2/28/24 quantifies the impact of EE on the posture of residents performing slit lamp examinations (SLEs) using the Rapid Entire Body Assessment (REBA) scale, where higher REBA scores indicate greater risk of MSK injury. A linear mixed models approach was used to evaluate the baseline and post-intervention difference in average REBA score between trained and untrained residents (α=0.05).

Results:

A total of 143 SLEs were performed by 7 residents. Average REBA scores decreased across the trained cohort of 4 residents (n=85 SLEs, p<0.0001), but did not change in the untrained control group of 3 residents (n=58 SLEs, p=0.4).

Conclusion:

Our findings suggest that EE training improves resident posture and underscores the need for increased awareness and research in the field of medical ergonomics. Implementing similar EE across residency programs may improve MSK health and promote healthy habits for future ophthalmologists.

PhacoTrainer: An Online Dashboard with Artificial Intelligence-Enabled Surgical Performance Metrics

SOPHIA WANG, MD, MS*; JOSHUA MARTINEZ BS, MS; ROSS CAMPBELL, BS; CAROLYN PAN, MD

Background:

Cataract surgical video review is routinely used in surgical education. We previously developed deep learning models to identify major steps of surgery, surgical instrument (SI) locations, and anatomical landmarks. AI-enabled SI metrics, including total path length, area covered, and maximum velocity of SI were shown to correlate with surgeon skill.

Purpose:

To develop a dashboard that deploys our AI models on cataract surgical video, delivering automated feedback and enhancing cataract surgical training.

Methods:

We developed the PhacoTrainer dashboard, a web application to which surgeons can upload videos. A cloud-based virtual machine runs our deep learning models on uploaded videos, generating performance metrics which are then displayed on the dashboard.

Results:

The PhacoTrainer dashboard (Figure) displays graphs of time spent on each step of surgery, use of special techniques (i.e. trypan blue or iris expansion devices), occurrence of complications, and SI metrics, while tracking performance over time. Users can review individual videos with an AI-annotated timeline and enter metadata related to each case, including preoperative characteristics and clinical outcomes.

Conclusion:

PhacoTrainer may be a useful tool to improve surgical training by enabling surgeons to receive performance feedback in a standardized objective manner, track their progress, identify trends, and pinpoint areas for improvement.

Leveraging Artificial Intelligence for Learner Assessment: A SCOR Assessment Project

ALINA HUSAIN, BS*; MICHAEL PRAIRIE MD; EVAN (JAKE) WAXMAN, MD, PHD; SUSAN CULICAN, MD, PHD

Background:

The Surgical Curriculum for Ophthalmology Residents (SCOR) aims to provide standardized surgical training and assessment in advanced cataract and anterior segment skills to PGY-4 ophthalmology residents. The online component of the curriculum contains educational modules that teach residents physiology, pathophysiology, and surgical techniques via distance learning.

Purpose:

To develop multiple-choice assessments for the learning modules in this curriculum using generative artificial intelligence (AI).

Methods:

Custom Generative Pre-trained Transformers (GPTs) were created for each module using ChatGPT Plus. Each GPT contained a specific set of instructions to create multiple-choice questions and a transcript of the module from which to derive ophthalmology content. Questions were then produced using ChatGPT (Versions 4 and 4o) based on high-yield module content identified by content experts. Content experts reviewed generated questions to select questions for inclusion and to edit questions for quality.

Results:

523 questions were selected for review by content experts following question generation. Following review and editing, 266 questions across 39 modules were selected for inclusion.

Conclusion:

The authors describe a novel and accessible approach to produce multiple-choice assessments for ophthalmology learner assessment. Limitations of this approach included difficulty producing plausible distractor answer choices and content “hallucination” by ChatGPT.

Live Poster Abstracts (Session I)

Development of an Artificial Intelligence Tool for Residency Applicant Screening

JARED MOON, MED, BS*; OWEN SORENSEN BS; ILYAS IYOOB, PHD; GENE KIM, MD

Background:

The volume of residency applications and data per applicant is increasing with emphasis on holistic review and application inflation. Studies have shown that AI could augment human review in resident selection and reveal successful candidates that may otherwise be overlooked.

Purpose:

We propose the use of AI in resident selection to improve efficiency and objectivity of the process.

Methods:

We prospectively analyzed 642 applications for ophthalmology residency received by Dell Medical School for the February 2024 San Francisco Match cycle. The application data of all applicants was studied to predict their match outcomes based off a faculty generated and an artificial intelligence generated rank list.

Results:

Both the AI rank list and faculty rank list were predictive of matching to an ophthalmology residency spot (P-values < 0.001). Each ten-percentile increase of the AI ranking had a 16% increase in the odds of a match (OR = 1.16, 95% CI: [1.11, 1.21]), and each ten-percentile increase of the faculty rank list had a 40% increase in the odds (OR = 1.40, 95% CI: [1.29, 1.53]).

Conclusion:

AI accurately predicts match outcomes and can be used as an adjunct aide to faculty review of applications to reduce the immense administrative workload and human bias.

A Pilot Model for Artificial Intelligence Curriculum Integration into Ophthalmology Residency

NARIMAN BOYLE, MD*; PATRICIA PAHK MD; I.V. RAMAKRISHNAN, PHD; PRATEEK PRASANNA, PHD; ROBERT HONKANEN, MD

Background:

With the rapid impact of artificial intelligence (AI) on clinical medicine, educating a new generation of AI aware residents is increasingly important.

Purpose:

To present a pilot model for integrating AI curriculum into an ophthalmology residency.

Methods:

A team of AI experts and clinicians was assembled. The learning objectives were defined, and the residents’ level of knowledge was assessed in a pre and post-course questionnaire. Didactics covered the fundamentals of AI, the role and impact of AI on the workflow in ophthalmology, the regulatory requirements and ethical considerations of AI-applications. Additional workshops with hands-on experience included building an algorithm, and discussion about available platforms. Pre and post surveys were analyzed using a Wilcoxon rank-sum test.

Results:

There was a 100% response rate in pre and post-curriculum surveys (n=12 participants). The pre-course survey showed a 100% interest in AI use in clinical ophthalmology. Pre and post surveys comparison showed a significant change in participants’ knowledge about AI and their insight into its applications in ophthalmology.

Conclusion:

Incorporating an AI curriculum into an ophthalmology residency is feasible and perceived important. It changes participants’ knowledge and skills for implementing AI in ophthalmology. This pilot curriculum may serve as a starting point as the domain continues to evolve.

Artificial Intelligence Curriculum for Ophthalmology Residents

ANGELA MCCARTHY, BS*; LORA GLASS, MD; IVES VALENZUELA MD; ROYCE CHEN, MD; KAVERI THAKOOR, PHD

Background:

Ophthalmology residents need artificial intelligence (AI) education to be equipped with the necessary skills to effectively evaluate and implement artificial intelligence in their practice while prioritizing patient safety.

Purpose:

This curriculum aims to bridge the gap in AI education, fostering a new generation of ophthalmologists who are both knowledgeable and proactive in integrating AI into their practice.

Methods:

An interdisciplinary team of AI experts and ophthalmologists developed a three-part curriculum.

Results:

The first part covers discriminative AI, which categorizes variables, and is commonly used in diagnosing patients based on medical images. This simple type of AI can be used to explain the fundamentals of AI design. Key topics include evaluating training data with a focus on demographics, bias risk, data augmentation, and ground truth accuracy. The second part focuses on generative AI, including ChatGPT and other medical language models for tasks like scribing and image generation. We highlight the main considerations for physicians, including hallucination, bias in training data, and responsible use and liability. The final part features collaborative meetings between residents and AI experts to explore applications in ophthalmology and direct future projects toward clinically beneficial outcomes.

Conclusion:

This curriculum equips ophthalmology residents to safely integrate AI into their future practice.

Transforming a Resident Clinic into an Urgent Eye Care Clinic: Impact on Resident Education

NEIL DOGRA, BS*; DAVID DILORETO MD, PHD; RACHEL WOZNIAK, MD, PHD; WEN HU, MD, PHD

Background:

To reduce healthcare inequities, we transformed our Resident Clinic (RC) into an Urgent Eye Care (UEC) clinic in July 2022. The resident curriculum shifted to 3-month longitudinal rotations within the faculty practice.

Purpose:

To evaluate the impact of dissolving the RC on resident education.

Methods:

Resident schedules and graduating resident procedural case volume from 7/1/2017-6/30/2019 (RC) and 7/1/2022-6/30/2024 (UEC) were compared. Between cohorts, we assessed patient visit volumes, level of acuity (using scheduled follow-up times), and breadth of clinical pathology (using diagnosis codes).

Results:

Residents spent 64% time in RC in 2017-2019 vs 15% time in UEC in 2022-2024; faculty practice exposure correspondingly increased from 28% to 77% time, respectively. During those timespans, 16,261 patient encounters were seen in RC, and 5,636 patient encounters were seen in UEC.

Compared to RC, UEC diagnosed more high-acuity (38% vs 20%), traumatic (16% vs 1%), infectious (22% vs 5%), and inflammatory (12% vs 4%) etiologies. UEC included more frequent corneal, neuro-ophthalmologic, oculoplastic and uveitic diagnoses.

Compared to 2017-2019, graduating PGY4 primary cataract surgery volume in 2022-2024 increased by 33%, primary laser procedure volume increased by 22%, and primary glaucoma surgery volume increased by 88%.

Conclusion:

Transitioning to a faculty practice and Urgent Eye Care-based resident educational model increased trainee exposure to subspecialty and acute pathologies while augmenting surgical and procedural experience.

Transforming a Resident Clinic into an Urgent Eye Care Clinic: Impact on Health Equity

SHARON OJO, BA*; DAVID DILORETO MD, PHD; RACHEL WOZNIAK, MD, PHD; WEN HU, MD, PHD

Background:

Resident-run clinics can exacerbate healthcare disparities. We transformed our Resident Clinic (RC) into an Urgent Eye Care (UEC) clinic in July 2022. All prior RC patients were assigned to the Faculty Practice (FP) and trainees now evaluate patients in the UEC under faculty supervision.

Purpose:

To evaluate the impact of dissolving the RC on structural disparities in ophthalmic care delivery.

Methods:

425,700 clinic visits to the Flaum Eye Institute between 7/1/2017-6/30/2019 and 7/1/2022-6/30/2024 were categorized into four cohorts: FP 2017-2019 (61,847 patients), RC 2017-2019 (6,819 patients), FP 2022-2024 (79,001 patients) and UEC 2022-2024 (5,124 patients). Cohorts were compared with respect to insurance payor, self-identified race/ethnicity, use of interpreter services, and continuity of care.

Results:

FP 2017-2019 differed demographically compared to RC 2017-2019, with 16% vs 56% of patients utilizing Medicaid, 12% vs 32% of patients identifying as Black/African American, and 2.7% vs 12% of patients requiring interpreter services, respectively (p 50% of their visits, compared to 82% of patients in FP 2022-2024 (p < 0 .0001).

Conclusion:

Transformation of the Resident Clinic to an Urgent Eye Care clinic reduced disparities in care for multiple sociodemographic populations and improved continuity of care.

Introduction and Implementation of the Iowa Ophthalmology Laser Curriculum

BILAL AHMED, MD*; JACLYN HAUGSDAL MD; PAVLINA KEMP, MD

Background:

On a routine basis, patients in ophthalmology clinics receive office-based procedures in the form of laser treatments for various disease states. Traditionally, the "see one, do one" approach has been the norm for residents to learn and perform these procedures. Ultimately, as with any procedure, there are risks for adverse outcomes based on numerous factors. To limit these risks and ensure patient safety, trainees need to be properly educated and equipped in procedural and laser competence to confidently be able to perform the procedure.

One way to do so is through simulation. Over the last two years, model eyes specific to each of the four main laser procedures used in ophthalmology have increased in availability and improved in educational utility. By utilizing models to practice the laser procedures, the trainee can confidently learn effective techniques which minimizes the risk for patient harm. These model eyes can be used for demonstration, instruction, and for individual practice.

This modern way of updating and redesigning procedural training to ensure competency aims to improve patient care and clinical education within ophthalmology.

Purpose:

To provide a structured simulation-based curriculum to ensure safe skill acquisition for beginning residents learning laser procedures in ophthalmology.

Methods:

The PGY-1 residents will participate in four sessions throughout the course of the year to learn four respective laser procedure (YAG capsulotomy, SLT, LPI, PRP). Following an instructional lecture, the residents will proceed to practice the techniques discussed on a specific model eye using the laser equipment. These skills based sessions will be performed with direct supervision from a faculty member with expertise in the laser procedure being simulated. A pre-course and post-course assessment will be completed to evaluate competency with each learner. A program evaluation survey will also be completed at the conclusion of each course to assess the degree of confidence in performing the procedure for each learner.

Results:

An initial session with YAG capsulotomy was performed in the Fall of 2023. Preliminary survey-based data showed that a majority of trainees had improved confidence in performing a YAG capsulotomy and in identifying the indications of the procedure following the session compared to before the session. In addition, a majority of trainees had improved confidence in recognizing the appropriate energy usage for the procedure and in providing the appropriate post-procedure management following the session compared to before the session. Trainees indicated that following this exercise, they are mostly worried about complications and effectively performing the procedure on patients. Procedural settings and practice of technique were the most useful skills acquired from this simulation session according to survey results. The mean score on the pre-course assessment was 48%. The mean score on the post-course assessment was 88%.

Conclusion:

Beginner residents acquire procedural competence and confidence with the use of simulation based curriculum for learning office-based laser procedures.

Race to Zero: Implementation of a Carbon Neutral Ophthalmology Wet Lab

MAHSAW MANSOOR, MD*; THOMAS OETTING MD; JACLYN HAUGSDAL, MD

Background:

Ophthalmology residency training programs commonly incorporate wet laboratory experience to enhance surgical skills. However, establishing new surgical simulation facilities may have environmental impacts. At the University of Iowa, we addressed this challenge by setting a goal of achieving a carbon-neutral ophthalmology wet lab.

Purpose:

The primary objective of this project is to create a model for carbon neutrality in ophthalmology wet labs by integrating sustainable practices into the core curriculum. Achieving this required an inventory of greenhouse gas (GHG) emissions and an analysis of current practices to identify measurable ways to offset our carbon footprint.

Methods:

We utilized the Health Care Emissions GHG Impact Calculator to assess scope 1, 2, and 3 emissions.

Results:

The University of Iowa Wet Lab was found to emit an estimated 22.11 metric tons of carbon-dioxide-equivalent (MTCO2e) annually. To offset these emissions, we implemented strategies like conducting waste audits, optimizing energy use, and establishing recycling programs. Results on GHG offset measurements are currently pending.

Conclusion:

This initiative demonstrates that through diligent assessment and strategic intervention, ophthalmology wet labs can establish an internal accountability structure to reduce their carbon footprint. By incorporating sustainability education into the residency program, we set a precedent for environmentally responsible ophthalmic training.

Gender Differences in Salary and Faculty Rank among Clinical Ophthalmology Faculty at U.S. Medical Schools

EMILY SUN, MD*; AMBAR FARIDI MD; GRACE SUN, MD; LAURA GREEN, MD; SUSAN BURDEN, MD; FASIKA WORETA, MD, MPH

Background:

Gender differences in salary and faculty rank exist among ophthalmologists, though few studies have examined whether this extends to clinical ophthalmology faculty.

Purpose:

To examine differences in salary and faculty rank distribution by gender among U.S. ophthalmology faculty.

Methods:

The study included all clinical assistant, associate, and full professors at U.S. ophthalmology departments in states mandating public salary disclosure. Gender and faculty rank were obtained from department websites. Salaries (university and VA) were obtained from GovSalaries.com. Differences in rank and salary by gender were analyzed using student t-test.

Results:

Salaries were available from 18 departments (10 states), encompassing 205 ophthalmologists (51.2% women). A smaller proportion of female faculty were clinical full professors (23.8%) compared to male faculty (39.0%). A larger proportion of female faculty were clinical assistant professors (51.4% vs. 37.0%) compared to males. Women had lower average salaries compared to men overall ($288,049 vs. $432,764, $p<0.001$), and at the clinical assistant and full professor level (assistant: $214,934 vs. $282,448, $p=0.02$; associate: $302,916 vs. $397,210, $p=0.16$; full professor: $430,514 vs. $597,252, $p=0.03$).

Conclusion:

Significant gender differences in salary and rank exist among clinical ophthalmology faculty, who are typically educators. Targeted interventions on contract negotiation, mentorship, and pay transparency are imperative for promoting gender equality.

Sexual Harassment in Ophthalmology: A 5 Year Follow Up Study

GRACE SUN, MD*; MICHELLE CABRERA MD; LAURA ENYEDI, MD; OLIVIA KILLEEN, MD; LEONA DING, MS

Background: In 2018, a survey was conducted in the ophthalmology community which highlighted the prevalence of workplace sexual harassment among primarily female ophthalmologists and ophthalmology trainees; 59% (265/447) of respondents had experienced sexual harassment during their ophthalmology career; the majority of sexual harassment cases involved trainees;. Among all participants, 42% observed sexual harassment as a bystander and of these, a third took no action. Since 2018, there has been an increased awareness of the prevalence of sexual harassment in the public as well as in academic medicine. Various institutional strategies have been implemented including increased resources for reporting harassment, anti-harassment policies, and mandatory education on sexual harassment and training in bystander interventions.

Purpose: In the wake of the 2017 #MeToo movement, awareness of sexual harassment in medicine has increased, and many medical organizations have reported a rise in sexual harassment reports and associated investigations. Here we report the results of a 5-year follow up survey to understand whether rates of sexual harassment in ophthalmology have changed in the past 5 years due given increased awareness and interventions. Additionally, given that sexual harassment is one form of gender discrimination, the current survey explores gender discrimination, when someone is treated unequally or disadvantageously based on their gender but not necessarily in a sexual nature.

Methods: A survey designed to parallel the 2018 survey, with additional questions regarding gender discrimination, was administered anonymously using Google Forms (Google, Mountain View, CA, USA) through the Women in Ophthalmology email blast list in August and September 2023. Eligible participants included ophthalmologists or ophthalmology trainees in the United States or Canada. Participants had the option to enter a raffle to win one of 72 $50 Target gift cards. Cochran-Armitage Trend statistical tests were used to compare survey results between 2018 and 2023. Quantitative data were analyzed with IBM SPSS Statistics for Windows, Version 29.0.2.0 (Armonk, NY: IBM Corp) and SAS software version 9.4 (SAS Institute Inc., Cary, NC, USA).

Results: Among 1,051 emails sent, 692 were opened, of which 289 eligible participants (41.8%) responded, including 282 females (93.1%), 3 males (1.0%), 1 non-binary/third gender (0.3%), 1 prefer not to say (0.3%), and 1 prefer to self-describe (0.3%). The plurality were 31-40 years old (N=113, 39.2%) followed by 41-50 years old (N=71, 24.7%). In total, 172 (59.5%) experienced sexual harassment in ophthalmology (compared to 59.3% previously, P=0.95). The majority of sexual harassment cases involved trainees in both surveys (P= 0.10). 107 (62.2%) experienced sexual harassment within the last 5 years (compared to 47.2% previously, P < 0 .001) and 41 (24.1%) reported their most severe experience to an authority (compared to 15.1% previously, P=0.02). Only 19.5% of bystanders took no action compared to 32.8% previously (P < 0 .001). Most participants had experienced gender discrimination (N=244, 85.0%), most commonly feeling that their ideas or opinions were less valued (N=197, 80.7%) and feeling negatively recognized for being outspoken or stern (N=152, 62.3%).

Conclusion: In the five years since the first survey on sexual harassment in ophthalmology, not much has changed. Despite an increase of awareness of sexual harassment, increased institutional policies surrounding reporting and mandatory education, rates of sexual harassment in ophthalmology remains disturbingly high amongst medical students, residents, and fellows. In fact, experiences of sexual harassment from 2018 to 2023 rose compared to 2013 to 2018; it is unknown whether this reflects increased recognition or increased incidents. Our study did demonstrate an increase in bystander interventions and reporting of most severe incidents in this time period, suggesting that mandatory bystander training and strengthened reporting mechanisms may be effective. However, our findings suggest that efforts to address harassment have not been sufficient in effectively decreasing harassment, and more innovative approaches to creating safe and inclusive environments are imperative for academic medicine. Effective anti-harassment initiatives beyond bystander training are needed. Protecting target identity and establishing transparent ways to report, investigate, and resolve sexual harassment experiences while holding perpetrators accountable are a path to establishing a culture of zero tolerance towards harassment and discrimination that is necessary to build positive, safe and inclusive learning environments. Limitations of this study include low male and non-white representation as well as possible response bias.

Gender Diversity in Educational Leadership Positions in Academic Ophthalmology Departments in the US

AREGNAZAN SANDROSYAN, MD*; ANAM AKHLAQ MD; ISABELLA SODHI, N/A; NITHYA SRIKUMARAN; FASIKA WORETA, MD, MPH

Background:

Although female representation in leadership positions for ophthalmology education has increased over the last decade, recent data on gender distribution and research productivity in educator positions are limited.

Purpose:

We sought to analyze gender diversity in educational leadership positions in US academic ophthalmology departments in 2024 and compare scholarly output between genders for these educator positions.

Methods:

Demographic data and indices of research output of Department Chairs, Residency Program Directors (PDs), Associate Residency Program Directors (APDs), and Directors of Medical Student Education (DMSE) for 117 Ophthalmology residency programs across the US were collected from department websites and analyzed.

Results:

A total of 61.8% (63/102) DMSE, 59.8% (64/107) APDs, 44.4% (52/117) PDs and 18.8% (22/117) Department Chairs were female. The median (range) year of appointment was 2016 (2003-2024) for female chairs and 2013 (1991-2024) for male chairs (p=0.05). Apart from the H-index for female chairs being significantly higher than male chairs (p < 0 .04), H-index or National Institute of Health (NIH) grant numbers did not differ by gender among the educator positions.

Conclusion:

Despite similar research productivity and overall increased female representation in ophthalmology education than in the past, females remain underrepresented in higher-ranking leadership educator positions. Strategies to increase female representation within these higher ranks are warranted.

Live Poster Abstracts (Session II)

Standardized Patient Simulations: A Pilot Program in the Ophthalmology Residency Curriculum

JESSICA RANDOLPH, MD*; SYDNEY WHEELER, BS; YUSRAH HASAN MD; STEPHANIE SAADEH-JACKSON, MD

Background:

Practitioners at all levels of training consistently report breaking bad news to patients as a challenging task. Standardized patient simulations are used in medical education to improve technical skills and communication skills.

However, patient simulations teaching soft skills in ophthalmology are not commonly found in the literature.

Purpose:

The aim of this study is to demonstrate the implementation of such a curriculum at one institution and provide preliminary survey data from participants.

Methods:

This series of simulations was implemented at the Virginia Commonwealth University Ophthalmology Residency program among three cohorts of residents in 2019, 2020 and 2021. Each simulation involves a case scenario in which the learner must synthesize clinical information to recognize a patient's diagnosis and deliver bad news to the patient in a tactful manner. Post-simulation surveys were completed by the 2020 and 2021 cohorts of residents to assess attitudes towards the simulation as a learning tool. Learners were observed by attending physicians who provided individualized feedback on their performance.

Results:

All learners felt that the experience improved their communication skills with patients. Most residents endorsed feeling that the simulations were effective and wanted more simulations incorporated into the curriculum. In the year that resident evaluation data is available for, most residents used the SPIKES protocol to deliver bad news and the majority demonstrated good communication skills.

Conclusion:

In this study, residents demonstrated overall improvement in confidence with delivering bad news after participation in annual patient simulations. This patient simulation exercise is an original curriculum designed specifically for implementation in ophthalmology residency programs to improve skills and communication in handling difficult patient conversations. To our knowledge, this work is the only documented longitudinal ophthalmology simulation curriculum conducted at a residency program.

Trainee Perspectives on Gray Area Surgical Complications of Strabismus Surgery

ASHLEY OOMS, MD*; MACEY BLAKLEY BA; MEGAN SZYMANSKI, BS, BA; ANDREW MELSON, MD; TAMMY YANOVITCH, MD, MHSC

Background:

There is no standardized teaching regarding strabismus surgery complication management. Most surgeons agree complications, like lost muscles, require disclosure. However, there are “gray area” surgical complications (GASC) which lack consensus on their need for disclosure and present challenges in teaching their management to trainees.

Purpose:

This study aims to evaluate trainees’ attitudes towards GASC compared to attending physicians.

Methods:

An anonymous, online survey of 11 GASC scenarios was distributed to strabismus surgeons via AUPO, AAPOS, and NANOS listservs. Respondents used a Likert scale to rate the likelihood of GASC causing postoperative complications, their obligation to disclose GASC to patients and in operative reports, and their baseline anxiety regarding GASC.

Results:

183 subjects (151 attendings, 32 trainees) completed the survey. Trainees were more likely to believe GASC would cause postoperative complications (0.22, p=.023), more likely to disclose GASC to patients (0.23, p=.017), and more likely to disclose GASC within operative reports (0.46, p<.01) compared to attendings. Trainees were not more likely to experience anxiety if GASC occurred (p=0.11).

Conclusion:

This study illustrates that trainees, compared to attendings, may be more transparent regarding GASC disclosure. Survey response variability highlights the need for guidelines on GASC management for trainees.

Characteristics of Successful Reapplicants to Ophthalmology from 2017–2023

ALICE ZHANG, MD*; SIMRAN OHRI BA; CHRISTOPHER WIESEN, PHD; O'RESE KNIGHT, MD; SARAS RAMANATHAN, MD

Background:

Over 30% of applicants do not secure a residency position in ophthalmology. There is limited guidance for these individuals on how to improve their chances when reapplying.

Purpose:

This study investigates the factors influencing the success of reapplicants success in the ophthalmology match.

Methods:

We analyzed the SF Match database of reapplicants from 2017 to 2023, focusing on applicant characteristics and match outcomes.

Results:

Out of 311 reapplicants, 51.8% were successful in matching. 208 (66.9%) were male. Key factors associated with a successful match included presence of a home program (p=0.007), high USMLE Step 1 and 2 scores (p=0.005; p < 0 .0001), letters of recommendation from academic ophthalmologists (p=0.011), AOA status (p < 0 .0001), non-URM status (p=0.048), and the choice of research year over non-research gap year (p=0.003). Allopathic US reapplicants were more likely to match compared to osteopathic or IMG reapplicants (p=0.0004). Non-Under Represented in Medicine (URiM) students were more likely to match compared to URiM students (p=0.048). Allopathic students had significant higher Step 2 scores than IMG reapplicants (p < 0 .0001), but fewer publications (p < 0 .0001). Gender, research productivity, and advanced degrees were not significant factors.

Conclusion:

Reapplicants to ophthalmology should prioritize securing strong letters of recommendation from academic ophthalmologists and consider taking a research year. Additionally, having a home program and achieving high USMLE scores had a positive correlation with match success. Allopathic US reapplicants generally have a higher likelihood of matching compared to osteopathic or IMG reapplicants.

Residency Factors Associated with Pediatric Ophthalmology Fellowship Pursuit

ANIKA KUMAR, BA*; JONATHAN MORSE MPH; RUPA WONG, MD; JULIUS OATTS, MD

Background:

The current shortage of pediatric ophthalmologists leaves many children without access to timely, quality care.

Purpose:

To investigate residency factors associated with pursuit of a fellowship in pediatric ophthalmology.

Methods:

A 10-item survey was sent to program directors from all U.S. ophthalmology residency programs eliciting information about program characteristics and pediatric ophthalmology exposure. Univariate logistic regression models were used to assess factors associated with programs having at least one resident pursue a pediatric ophthalmology fellowship between 2018 and 2023.

Results:

The response rate was 54% (66 of 121 eligible programs). Mean±SD number of total days of exposure to pediatric ophthalmology was 66.32±27.90 days. Forty programs (60.6%) graduated ≥1 residents between 2018 and 2023 who pursued a pediatric ophthalmology fellowship. Larger program size, higher number of pediatric ophthalmologists on faculty, and presence of a home pediatric ophthalmology fellowship were all significantly associated with programs having ≥1 residents pursue a pediatric ophthalmology fellowship (all $p < 0 .05$).

Conclusion:

Our analysis demonstrates the importance of relational factors in resident pursuit of pediatric ophthalmology fellowship. This suggests that increasing access to pediatric ophthalmology faculty, connecting residents to pediatric ophthalmology fellows, or organizing pediatric ophthalmology mentorship programs, may help facilitate interest in this career pathway.

Casting a Wider Net in the Resident Selection Process: Steps to Increase Diversity

ANNA MOMONT, MD*; TETYANA SCHNEIDER PHD; BEVERLY HUTCHERSON, MS

Background:

Resident selection is a complex process with competing priorities. Program Directors, along with their selection committees, wish to identify candidates that will be academically and clinically successful. At the same time there is a national push to recruit underrepresented in medicine (URiM) residents to improve representation within our specialty. However, personal and institutional biases can prevent inclusion of qualified URiM candidates for resident positions. It is important to refine recruitment and selection processes to increase diverse representation in the physician workforce and improve health outcomes.

Purpose:

To describe the process and tools implemented by a mid-size ophthalmology residency program in the Midwest to increase the diversified candidate pool in resident selection.

Methods:

Outcome measures were in the number of URiM candidates interviewed and ranked in the top third of the final rank list.

Results:

A three-fold increase in URiM candidates interviewed and a five-fold increase in URiM candidates “ranked to match” was seen over a five-year period after initiating structural changes in the recruitment and selection process.

Conclusion:

Intentional structural changes in the recruitment and selection process can lead to increasing the diversified candidate pool in resident selection.

Development of Novel Conjunctival and Scleral Suturing Model

GEORGE LIN, MD*; ANJU PATEL MD, MS; RISHI HOSKERI, BS; CHELSEA REIGHARD, ; ZAHRA NOURMOHAMMADI, PHD; MARGUERITE WEINERT, MD; DAVID ZOPF, MD, MD

Background:

Trainee surgical simulation provides a zero-risk environment for skill acquisition. Preserved cadaveric and animal eye models have been used but are limited by variable preservation quality and portability. Optimized surgical simulation tools are needed.

Purpose:

Using our team's expertise in medical 3D printing, we designed and validated the utility of an inexpensive, easily produced, high-fidelity, tri-layer model eye simulating vitreous, sclera, and conjunctiva.

Methods:

Vitreous was simulated by soaking a commercially-available hydrogel polymer sphere. This sphere was dipped thrice in silicone to simulate sclera. Sausage casing was wrapped over the silicone to simulate conjunctiva. A 14-question survey, with preliminary validation, was developed to assess fidelity and educational value. Five attending ophthalmologists and seven residents in surgical wetlabs assessed the model.

Results:

Attending assessment of realism rated an average of 3.4/4 or greater in all domains. Residents (mean PGY 1.7) improved self-rated experience (mean 1.8/5 to 2.8/5) and improved confidence (mean 2.5/5 to 3.5/5) in scleral and conjunctival suturing following the wetlab. Residents assessed the value of the model at 4.4/5.

Conclusion:

Our novel synthetic eye demonstrates value as an ophthalmology simulation model with high realism scores. Low-cost production and limited biologic materials facilitate use in global outreach and education.

Cataract Surgery Wet Lab Manual Curriculum

SHAWN KHAN, BS*; EMMA CARPENTER BS; SOHUM SHETH, BS; KHUSHI SAIGAL, BS; RAFAEL BOURRICAUDY, BS; YUJIA ZHOU, MD; ANKIT SHAH, MD; MARK DISCLAFANI, MD

Background:

Cataract surgery is one of the most common and technically demanding procedures in ophthalmology and, as such, there is a critical need for resources which enable residency programs to develop structured, hands-on training for ophthalmology residents.

Purpose:

We aim to develop a lab manual which residency program leaders may use to develop a de novo wet lab curriculum at any institution. Our comprehensive training program seeks to bridge the gap between theoretical knowledge and practical application, ensuring that trainees gain hands-on experience in a controlled and monitored low-risk environment.

Methods:

Using experience from the development of a wet-lab at University of Florida, a series of step-by-step chapters were developed detailing 1) instructions for establishing a physical wet lab with curriculum and 2) a curriculum for essential surgical techniques.

Results:

Our curriculum consists of chapters covering topics including suturing, capsulorrhexis, hydrodissection/hydrodelineation, phacoemulsification, IOL insertion, MSICS, ECCE, amongst others. Non-surgical topics are also covered, such as instruments and anatomy.

Conclusion:

This curriculum is designed to standardize training, enhance competency, and ensure that trainees develop the necessary skills and confidence to perform cataract surgery safely and effectively. Additionally, it suggests a model for other surgical training programs, underscoring the importance of hands-on practice and standardized education in ophthalmic surgery.

Exam Under Anesthesia for Pediatric Glaucoma: A Simulation-Based Training

HARITA ABRAHAM, MBA, MHA*; ALEJANDRO MARIN ARISTIZABAL MD; POOJA PENDRI, MD; ELENA BITRIAN, MD

Background:

Examination under anesthesia (EUA) of a pediatric patient with glaucoma is an important component of ophthalmology and glaucoma training. Inadequate training creates challenges in the operating room. Exposure to basic knowledge and complex EUA techniques can be taught in a systematically efficient manner. We have developed a standardized method for EUA training, allowing trainees to enhance their skills.

Purpose:

To introduce a simulation-based training for exam under anesthesia in pediatric glaucoma for ophthalmology trainees to increase expertise, efficiency, knowledge and exposure of EUA.

Methods:

Specialized mannequins with 3-D printed eyes were used to simulate infants and the environment of an EUA in the operating room. Participants completed a pre and post-training survey. Survey results were analyzed to assess performance.

Results:

Out of the 18 participants, 100% agreed that the session was a beneficial training tool for pediatric EUA. Additionally, 89% agreed that the training session increased their basic knowledge and skills. Another 83% of participants agreed that the session increased their efficiency, expertise and exposure.

Conclusion:

This model provides an effective and safe way to train for exam under anesthesia of a pediatric patient with glaucoma. It provides a clear method to analyze the progress of trainees while providing insight on areas for improvement.

Enhancing Resident Wellness Through a Structured Near-Peer Professional Skill Development Curriculum

RYAN MESHKIN, MD*; NICHOLAS BUTLER MD; ETHAN LESTER, PHD; CLIFFORD KIM, MD; ALICE LORCH, MD, MPH

Background:

National surveys indicate high rates of depression and occupational burnout for residents, with limited attention paid to interpersonal skills aimed at improving residents’ well-being.

Purpose:

To develop a professional skills curriculum for incoming PGY2 ophthalmology residents led by a near-peer resident (PGY-3).

Methods:

Anonymous, pre/post online surveys with multiple-choice and free-response questions. The group-based curriculum included guided discussions on attitudes/behaviors impacting residency culture, goal-setting exercises for the PGY-2 year, and role-playing scenarios of challenging interpersonal conflict likely to occur during residency.

Results:

All PGY2 residents (n = 9) completed pre and post-surveys. On a 5-point Likert scale assessing confidence in their ability, residents reported the greatest mean increase in the following domains after the curricular intervention: Share feedback with a co-resident (pre: 2.7; Δ+1.1), Provide feedback for residency improvement (pre: 2.9; Δ+1.4), Communicate effectively through issues of conflict with co-residents (pre: 3.1; Δ+0.9), Approach mistakes as integral to overall learning (pre: 3.4; Δ+0.8), Recognize burn-out and strengthen resilience practices (pre: 3.1; Δ+0.8). All residents reported feeling at least ‘Fairly Confident’ in their ability to ‘maintain the ideals that first drew [them] to a career in medicine’ and rated the curriculum as ‘moderately’ (66%) or ‘extremely’ effective (33%).

Conclusion:

A near-peer professional skill development curriculum for incoming PGY2 trainees was well-received and enhanced confidence in interpersonal skills. Programs emphasizing these skills may help address features of residency burnout and enhance resident wellness.

From Bright-Eyed to Burnout: Assessing Depression Among Ophthalmology Interns

KARTHIK REDDY, BS*; SRIJAN SEN MD, PHD; JOAN ZHAO, MS; NATHALIE TSIMHONI, NA; AMY ZHANG, MD; JAQUELINE STOUTIN

Background:

Intern year marks a critical transition in medical training, with notably high rates of depression among trainees. Limited work has assessed mental health among ophthalmology interns.

Purpose:

To better understand the mental health of ophthalmology interns and factors influencing their mental health.

Methods:

The Intern Health Study (IHS) is a multi-institutional study assessing mental health. A subset of ophthalmology interns (n = 98) between 2015-2023 were periodically surveyed. Paired t-tests were performed between baseline and 12-month patient health questionnaire (PHQ-9). Work-related factors were correlated.

Results:

Ophthalmology interns' depressive symptoms were significantly worse at the end of intern year (M = 5.71, SD = 6.09) compared from baseline (M = 2.28, SD = 2.37; t = -5.05, p <.001). 40% had mild to severe depression.

Intern year work hours were positively correlated to worse depressive symptoms (r = 0.496, p < 0.001). Intern year sleep hours were negatively correlated to worse depressive symptoms (r = -0.580, p < 0.001).

Conclusion:

Ophthalmology interns experienced a significant increase in depressive symptoms from baseline to the end of their intern year, with 40% showing some level of depression by year-end. Longer work hours were associated with worse depressive symptoms, while more sleep was associated with lower depression scores.

Virtual Poster Abstracts

Vice Chairs of Education in Academic Ophthalmology Departments: Current Status and Future Directions

AISHAH AHMED, BA; FASIKA WORETA MD, MPH

Background:

Increasing numbers of medical academic departments have appointed Vice Chairs of Education (VCEs) to oversee teaching and learning. However, there are no studies examining VCEs in academic ophthalmology.

Purpose:

To determine the number and role of VCEs in academic ophthalmology departments across the United States.

Methods:

Using the FREIDA US Residency Program Database, we identified academic ophthalmology departments. Faculty directories from departmental websites were then reviewed to calculate the prevalence of VCEs and their role descriptions.

Results:

Among 126 academic ophthalmology departments, 21 (16.7%) had VCEs, totaling 23 VCEs. Only 1 VCE (4.3%) had a publicly available role description. All 23 VCEs held Doctor of Medicine (MD) degrees (100.0%); two held an additional Doctor of Philosophy (PhD) degree each (8.7%), one held an additional Master of Business Administration (MBA) degree (4.3%), one held a Master of Science (MS) degree (4.3%), and one held a Master of Education (MEd) degree (4.3%). No departments had public information about VCE funding.

Conclusion:

While VCEs are present in several academic ophthalmology departments, their prevalence is not uniform, and their roles are poorly defined publicly. Future research should focus on expanding VCE positions, defining their roles, and identifying pathways to this position.

Artificial Intelligence for Residency Application Screening

JAMES EDMONDS, BS; DARVIN YI PHD; PETER MACINTOSH, MD

Background:

Residency application review is a critical yet lengthy process that requires reviewers to process a large amount of data in a short amount of time.

Purpose:

In the absence of large datasets and in favor of 'personalized-to-institution' review, residency interview committees may benefit from an estimator that serves as a bias metric and early-pass candidate filter.

Methods:

We developed and validated a model to determine the likelihood of applicant interview invitation using SFMatch applications to the UIHealth Department of Ophthalmology from 2021–23. We examine five features: USMLE Step2 Score (S2), USNWR Combined Medical School Rating (MSR), Gold Humanism (GH), AoA Selection (AOA), and Summed Impact Factor of Peer Reviewed Papers (SIF).

We preprocessed the data by removing or imputing missing values. A StandardScaler was used for S2, MSR, and SIF; and OneHotEncoder for GH and AOA. We employed a RandomForestClassifier with grid-search hyperparameter tuning assessed with 5-fold cross-validation.

Results:

The RandomForestClassifier achieved a mean ROC-AUC of 0.94 across the 5-fold cross-validation.

Conclusion:

The RandomForestClassifier successfully favors the invitees. This method may approximate the Residency Committee's early review process, with the ability to rank applicants by approximate strength.

Ophthalmology Education Program for Emergency Medicine Residents

TAYLOR GEMPERLINE, MD; MICHAEL CUSICK MD, MHSA; ELEANOR BURTON, MD; MOIRA SMITH, MD

Background:

Patients with ocular complaints frequently present to emergency departments. Emergency Medicine (EM) providers are critical in evaluating, diagnosing, and treating ocular conditions. Exposure to Ophthalmology has declined in medical school education.

Purpose:

To improve EM resident ophthalmic skills and knowledge through structured education sessions at the University of Virginia (UVA).

Methods:

The EM residents at UVA participated in a hands-on workshop to learn the standard ophthalmic workup and use of common instrumentation including the slit-lamp and tonometry. The EM residents also participated in a case-based learning session led by Ophthalmologists where a reference sheet was provided. Assessment of EM resident confidence in ophthalmic skills was evaluated by a pre-session and post-session survey.

Results:

Twenty-one EM residents completed the pre-session survey. All residents had less than ten hours of prior ophthalmic training. Pre-session, 63% of EM residents felt confident in identifying ophthalmic emergencies, and 42% felt prepared to complete an ophthalmic work-up. Seven EM residents completed the post-session survey where improvements in confidence were reported.

Conclusion:

Although limited by sample size, many EM residents lack sufficient ophthalmic education to work-up and diagnose common ophthalmic conditions. Preliminary data suggest a structured education program may improve EM residents' ophthalmic skills.

Determining the Economic Value of an On-Call Ophthalmology Resident

TIMOTHY GROSEL, MD; JEREMY JONES, MD

Background:

Ophthalmology residents provide the majority of off-hour and overnight care. While these on-call activities are vital for resident education, they can also impact resident wellness. The number and types of consultations as well as the economic value of these consultations are not well defined.

Purpose:

To review the on-call activities of an ophthalmology resident and to determine the economic value of on-call consultations and procedures.

Methods:

This quality-improvement, retrospective study evaluated a single resident's on-call activities from 7/1/2021 to 5/30/2024. The location and type of consultation was recorded, as well procedures performed. Consultations and procedures were assigned a CPT code, then converted to work relative value unit (wRVU), then to a dollar amount.

Results:

A total of 563 unique consultations covering 990 on-call hours were included. The total economic value for a single resident's on call activities over a 3-year residency was around $75,000, or $450,000 for a class of 6 residents.

Conclusion:

On-call ophthalmology residents provide economic value for their institutions. Data can be used to implement solutions to improve resident on-call experience without sacrificing the educational value of on-call activities.

Assessing Motivations, Perceptions and Impact of the Resident Research Showcase

EDWARD LU, MD; LORI NEWMAN MED; JULIE IRISH, PHD; ANKOOR SHAH, MD, PHD; ALICE LORCH, MD, MPH; ERIC GAIER, MD, PHD

Background:

The Resident Research Showcase (RRS) is an annual event designed to promote resident-faculty research relationships and productivity.

Purpose:

Assess resident and faculty motivations, views of the RRS, and its impact on resident research productivity.

Methods:

The RRS, held annually since 2020, is a 2-hour virtual or hybrid event during which faculty (median 13, range 10-17) present project "pitches." Residents subsequently contact faculty to establish connections. Surveys from residents and faculty were collected after the 2023 event, and ACGME surveys were analyzed.

Results:

Residents attended to learn about research in the program (94%, 16/17) and expand research opportunities (53%, 9/17), while faculty participated to showcase research (86%, 18/21) and identify mentees (48%, 10/21). All residents (8/8) and 81% (17/21) of faculty indicated the RRS effectively exposes residents to mentors and projects. From 2020-2023, 55% of residents (11/20) reported contacting mentors, 35% (7/20) started a project, 25% (3/12) presented as primary authors, and 17% (2/12) completed at least one project. One-third (7/21) of faculty were contacted by a resident. Conference presentations increased after the first RRS, from 27 in 2020 to 69 in 2021 and 54 in 2022.

Conclusion:

Findings indicate the RRS effectively connects residents with mentors and research projects, and may increase conference presentations.

Vision for Wellness: Developing a Pilot Wellness Curriculum for Ophthalmology Residents

DELARAM MIRZANIA, MD; ALEXANDER VALENTINE MD; RACHANA HALIYUR, MD, PHD; AMY ZHANG, MD

Background:

Surveys of ophthalmology program directors and residents have demonstrated a need for improvement in wellness programming nationally.

Purpose:

This study aims to evaluate residents' sentiments toward a new wellness curriculum at a U.S. ophthalmology residency program.

Methods:

A one-year wellness curriculum and budget was designed and implemented. Main objectives included 1) establishing a resident wellness committee, 2) securing departmental funding for programming, and 3) curriculum design aimed at advancing professional development, improving coping skills, and increasing wellness resources. Ophthalmology residents were surveyed at the end of the year to evaluate the impact and relevance of the program.

Results:

Fifteen of 21 (71.4%) residents responded to the survey. Ten (66.7%) reported wellness programming was adequate and 13 (86.6%) found resident lounge upgrade with healthy snack availability to be most effective. Other effective areas included formal wellness speakers (67%) and organized celebrations of milestones (80%). The most common theme in qualitative comments was increased protected time for wellness.

Conclusion:

We demonstrate resident-reported effectiveness in improving wellness through a one-year curriculum. Future directions include hosting group reflection seminars during protected time to enhance resilience through self-reflection and perspective reframing and development of other domains of wellness.

Outcomes of Resident-Performed Cataract and Refractive Surgery

PARSA MOKHTAR, MPH; ABDULRAHMAN ALMALOUHI MPH; SHAWN LIN, MD; STACY PINELES, MD; MITRA NEJAD, MD

Background:

In 2018, the UCLA Ophthalmology Residency program introduced the Cataract and Refractive Surgery rotation. Residents provide corneal refractive surgery (LASIK) and laser cataract surgery with premium lens implants at discounted rates.

Purpose:

To analyze the success of the cataract surgery segment of this rotation based on safety, refractive success, and resident satisfaction.

Methods:

Charts of 78 patients (119 eyes) who underwent resident cataract surgery were reviewed. Pre- and post-visual acuities, refractive errors, intraoperative complications, and usage of femtosecond laser, limbal relaxing incisions, and premium intraocular lenses were recorded. Participating residents were surveyed about the rotation.

Results:

Of 119 eyes operated on, 6 (5.04%) experienced an intraoperative complication (PC tear/rupture), 87 (73.11%) were femtosecond-laser assisted, and 24 (20.17%) had multifocal lenses implanted. Of those receiving refractive surgery, 63 (72.41%) and 79 eyes (90.80%) resulted within 0.5 and 1.0 diopters (D) of spherical equivalent (SE) from their initial target, respectively. One hundred percent of residents surveyed felt the rotation positively impacted their refractive surgical training, and 91% recommended other programs create a similar rotation.

Conclusion:

Given the safety, refractive success, benefits for resident education, and greater accessibility of LASIK1 and cataract surgery for patients, more residency programs may consider implementing a similar rotation.

Ophthalmology Residency Competency with Orbital Trauma After Completing an Orbital Trauma Course

ASHTON NICHOLSON, MD, MBA

Background:

According to the ACGME residents must complete a minimum of 4 globe trauma procedures in order to graduate. However, the specific type of globe trauma and number seen can vary among residents.

Purpose:

To describe resident competency after completing an orbital trauma course focused on improving resident understanding and surgical competency for trauma cases.

Methods:

We analyzed 20 resident evaluations based on a rubric, formed from multiple ophthalmologist educators, after completion of a weeklong orbital trauma course focused on improving resident competency for various ocular trauma scenarios.

Results:

20 residents from 5 different training programs completed the course. Showing an average competency of 4.73 out of 5 for various trauma scenarios in oculoplastic, anterior segment, chemical injury, posterior segment, and endophthalmitis.

Conclusion:

An orbital trauma course focused on exposing residents to various scenarios, sometimes seen in few numbers during residency, resulted in showing an average competency of 4.73 out of 5 further improving residents surgical competency and improving upon the case minimums set by the ACGME.

Exposure to Various Career Paths after Completion of Residency: A Resident Education Curriculum

BLAKE OBERFELD, MD; KRISTIN ATES HICKS MD, PHD; JONATHAN HU, MD

Background:

Recently, there have been significant changes in the practice of ophthalmology, with less sole-ownership, more private equity acquisition, and changing trends in sub-specialization. With residency education occurring predominantly in an academic setting, many programs fail to educate residents on available opportunities yielding risk to job dissatisfaction and turnover.

Purpose:

We designed a curriculum at the University of Florida to expose and educate ophthalmology residents regarding (1) practice models, (2) the business of medicine, and (3) negotiation strategies, alongside consideration of (4) personal goals and (5) burnout.

Methods:

Through moderated discussion, guest lecturers spoke to residents about their practice environments. Preliminary and feedback surveys were conducted.

Results:

In our preliminary survey, over 60% of residents were not comfortable with practice management, billing, salary, reimbursement, or contract negotiation. In early results, a majority of residents report better insight into the featured practice settings and that the curriculum helped them to feel more positively about residency training as a whole. A majority of residents also reported that education on future career options and career goals reduces burnout and anxiety.

Conclusion:

Early results suggest a majority of residents have considerable uncertainty regarding the business of ophthalmology, yet have vested interest in learning more.

Effects of Instituting a Post-call Half Day on Ophthalmology Residents' Perceived Well-being

MADISON PERCHIK, MD; GRIFFIN JARDINE MD

Background:

Several studies have linked extended work hours in residency to an increased risk of depression, motor vehicle accidents, and adverse patient events.

Purpose:

The goal is to elicit the impact of a post-call half day on the mental health of Moran Eye Center residents. Before, residents worked a full day, took home call overnight, then worked another full day.

Methods:

A survey with 11 multiple choice questions and 2 free response questions was sent to the 8 ophthalmology residents who experienced call before and after the post-call half day was instituted. Seven responded to the survey.

Results:

All 7 residents rated working a full day post-call as a major negative factor of residency, with 3 residents (43%) rating it as residency's most negative aspect. All residents reported that after the post-call half day was implemented, they noticed a positive change in their mental health (71% very true, 29% resoundingly true). All residents felt that implementing a post-call half day showed that the residency program cares about their well-being (86% very true and 14% resoundingly true).

Conclusion:

The mandatory post-call half day has improved the self-reported wellness of Moran Eye residents.

Simulation Lab for IM Residents to Enhance their Ophthalmic Knowledge and Eye Examination Skills

JHANSI RAJU, MD; JOEL VANDELUNE MD CANDIDATE; SHEENA KHANNA, MD, PGY3; ROSHNI VASAIWALA, MD; JUSTIN FLOOD, BS

Background:

The socioeconomic burden of eye disease is on the rise while ready access to ophthalmologists continues to decline. To address this gap, skills to diagnose common eye diseases are essential for all physicians. However, ophthalmology education is optional in most medical schools. A Virtual Reality (VR) simulation Lab was initiated for Internal Medicine residents at Loyola Medical center as a potential solution.

Purpose:

Integration of a VR simulation Lab into the Internal Medicine curriculum aims to enhance knowledge, eye examination skills and confidence in diagnosing common ocular diseases through experiential learning.

Methods:

IM residents (80) attended a simulation session hosted by ophthalmology faculty. VR models were used to review anatomy, and virtual patients were used for eye exam skills practice. Pre and post surveys (62) were completed and analyzed.

Results:

Objectively, knowledge of ocular anatomy increased by 25.98% and diagnostic accuracy improved by 67.66 %. Subjectively, residents reported an increase in concept clarity and confirmed relevance of the session to their clinical practice.

Conclusion:

A VR based simulation lab can be an effective method to enhance clinically relevant ophthalmic knowledge and skills for IM residents.

The Value of Positive Feedback: an Underutilized Tool in Ophthalmology Resident Education

JESSICA RANDOLPH, MD; MEAGAN SHINBASHI MD

Background:

Little research has been performed on the use of positive feedback (PF) as a teaching tool in ophthalmology postgraduate medical education settings. There is a paucity of research assessing the effectiveness of feedback from trainees' perspectives.

Purpose:

To address the gaps in medical education by exploring the possible effects of PF on ophthalmology resident self-confidence, performance and wellness.

Methods:

In this survey, PF regarding trainees was anonymously collected from staff and faculty and read aloud to each of the residents during an ophthalmology wellness session. Residents were surveyed on their feelings regarding the quality of their work, confidence, and self-esteem before and after the intervention using a Likert scale.

Results:

Of the 14 eligible residents, 11 completed the pre-survey and 9 completed the post-survey. Over 66% of participants reported improvements in their self-esteem following the exercise and 77.7% reported that the exercise was helpful. All additional comments expressed approval of the exercise and desire to permanently incorporate it into the wellness curriculum.

Conclusion:

Residents reported increased confidence in their abilities following the exercise. Notably, residents reported experiencing less imposter syndrome. Proper use of PF can significantly improve trainees' self awareness and confidence and should be utilized more in surgical education.

Assessing Burnout in Ophthalmology Departments after Covid-19 Pandemic: A Survey of two Institutions

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Background:

Amongst ophthalmologists in the US, the rate of burnout has risen from 30% to 48% since 2020.1 This study aimed to assess burnout rates among ophthalmologists at two major academic institutions during and after the Covid-19 pandemic.

Kane L. Medscape national physician burnout & suicide report 2020: The Generational Divide. 2020. Available at: htpps://www.medscape.com/slideshpw/2020-lifestyle-burnout-6012460?0=reg=1#2.

Purpose:

To identify factors influencing burnout and elucidate potential interventions for mitigating future burnout rates.

Methods:

This observational study combined cross-sectional data from surveys conducted at the University of Michigan in 2022 and at Weill Cornell Medicine in 2023. Participants included faculty and trainees from both institutions. Burnout was assessed through self-reported measures, utilizing a validated single-item questionnaire.2,3

2. Schmoldt RA, Freeborn DK, Klevit HD. Physician burnout: Recommendations for HMO managers. HMO Practice. 1994; 8(2): 58-63.

3. McMurray JE, Linzer M, Konrad TR, Douglas J, Shugerman R, Nelson K. The work lives of women physicians: Results from the Physician Work Life Study. J Gen Intern Med. 200; 15(6): 372-380.

Results:

Between the two institutions, a total of 63 faculty and 28 trainees completed the single-item burnout assessment, representing a response rate of 47.4% and 38.4% among faculty and trainees, respectively. Burnout rate was determined by the proportion of respondents who reported experiencing ≥1 symptom of burnout. Total burnout rate was 55.6% among faculty and 46.4% among trainees.

Conclusion:

Overall, this study underscores a marked increase in burnout rates among ophthalmologists in the time surrounding the Covid-19 pandemic. Future efforts will focus on implementing targeted strategies to mitigate burnout and improve overall well-being and job satisfaction within ophthalmology departments.

What Do We Need to Teach Residents about Artificial Intelligence?

BENJAMIN STEREN, MD; LOUIS PASQUALE MD; PAUL SIDOTI, MD; JAMES TSAI, MD, MBA; NISHA CHADHA, MD

Background:

Rapid advancements in artificial intelligence (AI) are increasingly influencing medicine, with ophthalmology being particularly impacted. Despite these advances, AI curricula for trainees have lagged.

Purpose:

We conducted an AI curriculum needs assessment of US ophthalmology residency programs.

Methods:

A 42-item survey was distributed to ophthalmology program directors (PDs) via the AUPO listserv. It included queries on importance of AI curricula, methods of delivery, access to experts, and barriers to implementation.

Results:

30 PDs (25%) responded, representing all geographic regions. Most PDs (25, 83%) felt that AI education should be part of the residency, yet only 1 (4%) reported having an existing curriculum, while 6 (25%) were planning to develop one. Nearly half (14, 47%) reported having faculty with AI expertise. The top three topics respondents felt should be covered were AI fundamentals, AI applications in ophthalmology, and the use of AI to answer clinical questions. A majority (63%) felt 2-5 hours should be dedicated to AI education in a longitudinal format. The preferred modalities for delivering this content were lectures and online modules. Barriers to implementation included lack of time, content experts, and funding.

Conclusion:

There is currently an unmet need for AI education in ophthalmology residencies. Our survey findings may guide future AI curriculum development.

Residency Retreats in United States Ophthalmology Training Programs

SARON TEDLA, BS; MOMOKO PONSETTO MD; AMBAR FARIDI, MD; JOHN CLEMENTS, MD; AMANDA REDFERN, MD; LAURA GREEN, MD; JESSICA KANG, MD; SARAS RAMANATHAN, MD; FASIKA WORETA, MD, MPH; DANIEL TU, MD, PHD

Background:

There is growing recognition that resident well-being can significantly impact medical training. Residency retreats have been shown to enhance trainee well-being. However, gaps in knowledge exist regarding the current state of ophthalmology residency program retreats and well-being curricula.

Purpose:

This study aims to describe the prevalence, content, and implementation challenges of residency retreats in U.S. ophthalmology programs.

Methods:

An anonymous survey was distributed to the program directors of 122 ACGME-accredited ophthalmology residency programs in 2024 and descriptive statistical analysis performed.

Results:

In total, thirty-four ophthalmology residency program directors responded, of which 52% have a residency retreat. In those programs, 82% agree or strongly agree that residency retreats can improve resident well-being and reduce burnout. The majority of retreats incorporated team-bonding (82%) and residency program improvement activities (65%), while fewer included activities focused on professional (35%) or self-development (29%). In programs without a retreat, 94% agree or strongly agree that insufficient coverage and funding are barriers to retreat implementation.

Conclusion:

Ophthalmology residency programs acknowledge the positive impact of retreats on resident well-being, but limited clinical coverage and funding hinder broader adoption. Overcoming these barriers could enhance resident well-being and success.

Evaluation of Research Information Present on US Ophthalmology Residency Websites

ZAINAB RUSTAM, MBBS; MUHAMMAD KHAN MBBS

Background:

Residency program websites are increasingly used by prospective residency applicants to gain information about programs. Information available on research activities and expectations may influence an applicant's decision to apply.

Purpose:

To characterize and evaluate information present on research on program websites.

Methods:

A cross-sectional review of ophthalmology residency websites. Websites were reviewed for research statements, program interests and dedicated time for research during residency. Top-20 hospitals were determined from U.S News Health.

Results:

Of the 120 websites reviewed, 63% (80% of top 20) had a research statement, 54% (50% of top 20) mentioned they require residents to do research and present during residency, 42% (60% of top 20) mentioned research interests of the institute,18% (20% of top 20) had a resident research publications tab, 9.2% (20% of top 20) mentioned they gave protected time for research, and 2.5% (10% of top 20) programs have a research track. Test of comparison between top-20 programs and non-top-20 programs were not significant (p-values>0.05).

Conclusion:

Results of this study show some of the programs do not have complete information on research opportunities and expectations on their websites. Although this does not determine completely how a program emphasizes research in residency, it can affect an applicant's decision to apply.

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