2019
EDUCATING THE EDUCATORS

Meeting Syllabus

Association of University
Professors of Ophthalmology

Educating the Educators 2019

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

In its 16th year, the Educating the Educators meeting continues to be the leading forum for all educators, including residency program directors, medical student educators, program coordinators, and chairs to share ideas and best practices related to ophthalmic education.

This year, the morning session will include a free paper session of seven presenters who will share their projects related to education. There will also be a morning symposium on the topic of "Managing Difficult Situations in Graduate Medical Education," which will consist of a mix of six member and invited speaker presenters. The afternoon will include guest lecturer **Walter Eppich, MD, PhD**, Associate Professor of Pediatrics (Emergency Medicine) and Medical Education at Northwestern University's Feinberg School of Medicine, who will present on the topic of "Simulation in Medical Education."

New this year: an afternoon session titled "Shark Tank: Innovations in Resident Education." This session will consist of nine presenters who will attempt to "sell" their ideas to a group of "Sharks in a fun, quick hitting session patterned after the *Shark Tank* television show.

A review committee consisting of our peers has had the difficult job of selecting outstanding oral and poster presentations from among a record number of excellent submissions.

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

Grace Sun, MD
Co-Chair, Educating the Educators
Member-at-Large
AUPO Program Directors Council

Susan Culican, MD, PhD
Co-Chair, Educating the Educators
Member-at-Large
AUPO Program Directors Council

Jeff Pettey, MD
Co-Chair, Educating the Educators
Member-at-Large
AUPO Program Directors Council

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Educating the Educators 2019 Program

Wednesday, January 23 (continued)

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Free Paper Session

Implementation of a "Flipped Classroom" Model for Ophthalmology Resident Education

TATIANA DEVENEY, MD*; GALE OREN, MILS; KATHY WHITNEY; SHAHZAD MIAN, MD

Background:

The concept of a "flipped classroom" for education has gained popularity and attention in the last few years in both medical student and resident teaching. In brief, the model involves preparation of material (ex: recorded video lectures) to be reviewed in advance. In-person teaching time is then devoted to discussion and case-based presentations rather than to traditional lectures. This model has not been previously investigated for ophthalmology resident education.

Purpose:

The University of Michigan Ophthalmology residency education transitioned to a flipped classroom model in the 2017-2018 academic year. The goal of this project was to evaluate systematically the first year of this implementation from both the resident and faculty perspective.

Methods:

Data on the flipped classroom was obtained from residents and faculty during the first year of implementation. Objective measures included percentage of residents viewing online video podcasts, percentage of residents downloading cases for discussion and results on post sub-specialty teaching block quizzes. Subjective information from residents and faculty were also obtained by survey. Descriptive statistics were used to analyze the data.

Results:

Results from 21 residents (7 per training year) were analyzed. All ophthalmology sub-specialties with the exception of neuro-ophthalmology (which runs a separate 2-day educational course each year) participated in the flipped classroom. On average, 71.8% of online video podcasts were watched by the residents. Online viewing dropped over the course of the academic year (92% of videos reviewed in the first block versus 53.7% for the last block of teaching, $p < 0.0016$). 1st year residents viewed more videos on average (81.1%) compared to 2nd year (69.9%) and 3rd year (65.4%) residents. The average post sub-specialty quiz score was 83.1%. Completion of the quizzes dropped over the course of the year (100% of residents for the first block versus 68% for the last block, $p < 0.0136$). Faculty participation in the flipped classroom was high (75.6% of all lectures video were recorded in advance). Subjective feedback from residents was positive.

Conclusions:

A flipped classroom model for ophthalmology residency education can be successfully implemented. Online viewing of material by residents declined over the course of the year and continued engagement is likely required to maintain active participation.

Predictors of Success on the Ophthalmic Knowledge Assessment Program (OKAP) Examination

SHAZIA DHARSSI, BS*; SIDRA ZAFAR, MBBS; NEIL MILLER, MD; DIVYA SRIKUMARAN, MD; FASIKA WORETA, MD, MPH

Background:

The OKAP is a yearly assessment on clinical knowledge and has been shown to correlate with performance on the Written Qualifying Examination (WQE).

Purpose:

To identify resident characteristics that correlate with OKAP performance.

Methods:

Retrospective OKAP scores were collected from 2012-2018 at a single ophthalmologic residency training program. 28 residents from 5 different classes were included. Gender, marital and parental status, USMLE Step1 scores and PhD/other post-graduate degrees were noted. Multivariate logistic analyses were performed to determine relevant associations.

Results:

The average OKAP percentile was 59.8 ± 26.8 over the study duration, with no difference in scores over time. On multivariate analysis, USMLE Step1 scores were predictive of OKAP performance [OR=1.13 (95%CI: 1.10-1.26, p=0.021)]. Being female [OR 2.00 (95%CI: 2.15-2.39, p=0.568)], being married [OR=5.60, (95%CI: 0.19-16.02, p=0.314)], not having kids [OR=2.09 (95%CI: 1.62-7.14, p=0.091)], and having only an M.D. [OR=1.13 (95%CI: 0.23-5.54, p=0.885)] were associated with higher OKAP scores, however did not reach statistical significance.

Conclusions:

Resident USMLE scores are associated with higher OKAP performance. Further studies are needed to determine what other applicant data are correlated with OKAP success and how this translates to resident competency. In the final analysis, resident applications will be assessed with OKAP and WQE scores from 2000-2018 at multiple institutions.

Outcomes of Femtosecond Laser-assisted Cataract Surgery Performed by Resident and Attending Surgeons

JENNIFER LARSON, MD*; DANIEL KNOCH, MD; ANDREW THLIVERIS, MD, PHD

Background:

Femtosecond laser-assisted cataract surgery (FLACS) is an advanced technology available to augment traditional manual phacoemulsification. Teaching FLACS concurrently with manual cataract surgery may allow residents to become proficient in both surgical skillsets thereby improving surgical expertise and versatility in the safety of a dedicated learning environment. However, the intraoperative and postoperative outcomes of incorporating this technology into resident education are not well known.

Purpose:

To compare outcomes of resident performed FLACS, resident performed manual cataract surgery, and attending performed FLACS as part of a quality improvement project.

Methods:

All FLACS cases performed by University of Wisconsin (UW) resident surgeons during the 2017-2018 academic year were included. There were two control groups consisting of 30 manual cataract surgeries performed by UW residents and 30 FLACS cases performed with UW attending surgeons. For each control group, 15 cases were performed at an UW outpatient surgery center and 15 cases were performed at the Veterans Hospital. Post-graduate year 4 trainees completed all the resident surgeries.

Results:

There was no difference in phacoemulsification time, complication rate, or post-operative visual acuity. Attending FLACS cases were significantly faster (p 0.01).

Conclusions:

FLACS is a safe procedure to incorporate into resident education.

Quantifying the Educational Benefit of Additional Cataract Surgery Cases in Resident Education

DANIEL LIEBMAN, BA*; K. MATTHEW MCKAY, MD; MIRIAM J. HAVILAND, PHD; CAROLYN KLOEK, MD

Background:

Achieving competency in cataract surgery is a cornerstone of ophthalmology residency. While the majority of residents complete significantly more cataract surgeries than the ACGME minimum requirement, it is unclear what the optimal cataract surgery case number should be.

Purpose:

We aimed to quantify resident phacoemulsification learning curves, and to identify a case threshold at which marginal improvement became equivocal.

Methods:

Using case records for 40 residents at Massachusetts Eye and Ear from 2010 through 2015, we conducted a linear mixed-methods analysis to model consecutive primary resident cases with operative time. Individual residents were included as random effects in the model, in order to normalize between-resident variability.

Results:

2,096 cases were analyzed. Rapid sequential improvement was noted for initial cases (1-39), with more gradual but steady improvement subsequently noted for case numbers 40-149. We found no statistically significant improvement beyond residents' 150th case.

Conclusions:

Residents derive benefit from performing a greater number of cataract procedures than current minimum guidelines. However, cases far in excess of guidelines have diminishing educational return; this time may be more appropriately devoted to other training priorities.

The Efficacy of a Teleretinal Screening in a Medical Student Free Clinic with Resident Supervision

KELLY MITCHELL, MD*; NIGEL STIPPA, MD; DECLAN KIRK; COBY RAY, MD

Background:

While telemedicine in retinal digital imaging has proved to be effective and useful, more data is needed to demonstrate the benefit amidst the sizable resource cost in limited community-based free clinics. In addition, the educational value of telemedicine for medical students and residents and their usefulness within these programs has not been extensively studied.

Purpose:

To evaluate both the impact of a teleretinal screening program on the local community through a student-run free clinic and the educational merit for medical students and residents.

Methods:

A teleretinal screening program was employed in our local medical student-run free clinic for patients at risk for common retinopathies using a non-mydriatic fundus camera. Medical students acquired images and suggested diagnoses, which were subsequently transmitted to be evaluated by an ophthalmology resident and a supervising attending. Patients identified as needing additional examination were then contacted for in person follow-up.

Results:

284 patients had screening fundus photos from Aug 2016 to May 2018. Of these, 80 patients demonstrated pathology on photos ranging from possible glaucomatous cupping to macular edema requiring follow up. The concordance between the resident and supervising attending readings was 93.4%. Experienced medical students made the correct evaluation in 68.6% of eyes, which dropped to 54.6% with a change to new medical student photographers.

Conclusions:

Our program demonstrates its impact in identifying those needing higher retinal care and proves its value as an educational experience, giving medical students exposure to identifying ocular pathology and residents the opportunity to serve as independent evaluators.

Protective Eyewear for the Functionally Monocular Patient: A Quality Improvement Initiative

KYLE ROGERS, MD*; ANDREW A. WILSON, MD; R. MICHAEL SIATKOWSKI, MD

Background:

AAO PPP recommends that all individuals with visual acuity <20/40 in one eye wear protective eyewear full-time.

Purpose:

We evaluated the compliance rate of a large multi-specialty practice in adhering to this guideline.

Methods:

A retrospective chart review of qualifying patients over a 12-month period was performed. The outcome measure was the rate of prescriptions for impact resistance lenses (IRLs) within 90 days of presentation. Three sets of interventions within the EMR (pop-up reminder windows, defaulting to IRLs for selected providers, and defaulting to IRLs for all providers) were implemented to improve compliance.

Results:

At baseline, 48.7% of eligible patients received a prescription for IRLs. Mean compliance rate for non-defaulting providers was 3.4%. EMR interventions increased prescription compliance to 55.8%, 74%, and 64% respectively.

Conclusions:

Modifying EMR features can improve physician compliance for prescription of IRLs in functionally monocular patients. The compliance limiting factor remains performing a refraction for qualifying patients.

Factors Influencing Ophthalmology Residents Post-graduate Career Choices

SIDRA ZAFAR, MD*; XINYI CHEN, BS; DIVYA SRIKUMARAN, MD; LAURA GREEN, MD; SARAS RAMANATHAN, MD; STEVE GEDDE, MD; JEFF PETTY, MD; MICHAEL BOLAND, MD, PHD; FASIKA WORETA, MD, MPH

Background:

Limited data currently exists on factors influencing career choices among graduating ophthalmology residents.

Purpose:

To identify factors in graduating ophthalmology residents' decision-making to pursue subspecialty training or enter comprehensive ophthalmology.

Methods:

A national anonymous electronic survey of 2018 ophthalmology residency graduates was performed between June 2018-July 2018.

Results:

The response rate was 31.6% (112/354). Among graduating residents, 78.6% (88/112) were pursuing fellowship training and 21.4% (24/112) were entering comprehensive ophthalmology. Respondents pursuing subspecialty training were more likely to be unmarried (40.9% versus 16.7%, p=0.028), have a greater number of first-author publications (4.3 versus 1.2, p<0.001) and were more likely to intend to practice in an academic setting (44.3% versus 12.5%, p=0.019), whereas those entering comprehensive ophthalmology were more likely to intend to practice in group private practice and in suburban/rural locations (30.7% versus 70.9%, p<0.001). On multivariate analysis, factors most predictive of subspecialty training were desire to acquire special skills [OR=10.3, (95%CI: 1.9-56.9, p=0.008)], working with new technology [OR=8.5 (95%CI: 1.3-54.9, p=0.024)], being unmarried [OR=5.0 (95%CI: 1.1-25.0, p=0.044)] and role models/mentors [OR=4.5 (95%CI: 1.0-19.1, p=0.045)]. Additionally, lifestyle considerations [OR=4.3 (95%CI: 0.96-20.0 p=0.057)] were less important for those pursuing subspecialty training.

Conclusions:

In this study, marital status, a desire to obtain special skills, working with new technology and mentors had the greatest impact on ophthalmology residents plan to pursue subspecialty fellowship training.

Poster Abstracts

Assessing the Feasibility of a Smartphone-based Application for Evaluation of Ophthalmology Resident Surgical Performance

JEANINE BAQAI, MD*; HERCULES LOGOTHETIS, MD; NICHOLAS VOLPE, MD

Background:

Many current methods to assess resident surgical performance are laborious and therefore often not feasible on a daily basis. A smartphone-based application, SIMPL (System for Improving and Measuring Procedural Learning), assesses resident operative performance using the 4 point Zwisch scale of operative autonomy and has the potential to simplify the resident surgical performance evaluation.

Purpose:

The purpose is to assess feasibility of a smartphone-based application designed to measure resident operative performance in ophthalmology.

Methods:

Before implementation, faculty and residents underwent training to develop a frame of reference to the Zwisch scale. After surgical procedures, residents were asked to send an evaluation request to the supervising attending. Attending surgeons had 72 hours to evaluate the resident's performance.

Results:

Between August 2017 and January 2018, 704 procedures were performed and 191 SIMPL evaluations were requested. The evaluation completion rate was 62%. By the end of the six months, there was a steady decline in attending participation during the surgery and an increase in resident autonomy.

Conclusions:

This smartphone-based application, SIMPL, is feasible and demonstrates above average engagement data. The application allows for rapid, documented feedback of resident performance and level of autonomy.

Curriculum for Improving Emergency Department Care of Orbital Compartment Syndrome

ANTHONY CHUNG, MD*; MATTHEW BENAGE, MD; AUSTIN FOX, MD; BENJAMIN JANSON, MD; HEATHER STIFF, MD; THOMAS A. OETTING, MD; ERIN M. SHRIVER, MD

Background:

Orbital compartment syndrome (OCS) is often managed by the ophthalmology service at academic centers. However, emergency medicine (EM) physicians are commonly the first clinicians treat patients with OCS prior to evaluation by the ophthalmologist. Timely diagnosis and treatment of OCS is critical for vision preservation. Review of recent OCS cases at the University of Iowa revealed nearly half of surviving patients had final vision of light perception or worse. Thus, a need for education on OCS for emergency medicine providers was identified to prevent unnecessary vision loss.

Purpose:

The purpose of this curriculum is to educate emergency medicine, surgery, and other medical residents on timely diagnosis and treatment of OCS.

Methods:

An ophthalmology led curriculum was developed to educate EM and surgery residents about OCS. The curriculum consisted of a pre-test, self-study materials prior to an ophthalmology-led didactic session, and a post-test. Data from the pre-test and post-test were used to evaluate the residents' understanding and comfort level in diagnosing and managing OCS.

Results:

Thirty-three residents completed the pre-test and 22 the post-test. Confidence in the ability to identify OCS increased from 27% to 86% (p<0.0001) and confidence in the ability to perform lateral canthotomy and cantholysis increased from 21% to 67% (p=0.0021) between the pre- and post-tests.

Conclusions:

This curriculum improved the understanding of OCS and its management by EM and surgery residents. Increased awareness of OCS should improve visual outcomes of patients presenting in the emergency setting, however, future studies are needed to assess the clinical benefit.

Educational Impact of Integrated Ophthalmology Internships

LESLEY EVERETT, MD, PHD; SARAS RAMANATHAN, MD*

Background:

Integrated ophthalmology internships (IOIs) may provide improved residency preparation compared to traditional internships. While IOI prevalence grows annually, no study has evaluated the educational impact of IOIs.

Purpose:

We test the hypothesis that an IOI provides stronger preparation for ophthalmology residency (relative to non-IOIs), as evaluated by clinical faculty. The relative benefits of surgical and internal medicine (IM) IOIs are compared, as well as key rotations for each.

Methods:

PDs and faculty from programs with an IOI (42-responses) and without an IOI (68-responses) were surveyed. Relevant qualities of PGY-2 residents who completed an IOI were compared to previous non-IOI PGY-2 residents. Faculty also rated essential IOI curricular elements. Likert scale data were analyzed by t-test, and ordinal data by Mann-Whitney-U test, with post-hoc correction for multiple comparisons.

Results:

PGY-2 residents who completed an IOI were ranked statistically significantly higher than non-IOI PGY-2 residents in every category/skill-set of interest. Outcomes from surgical and IM-based IOIs were comparable. The majority of faculty members consider IOIs a positive curriculum development.

Conclusions:

Faculty report that IOIs better prepare residents for the PGY-2 year compared to non-IOIs. The results of this study will aid future decision-making for ophthalmology residency programs.

The Effect of Block Curriculum Changes on Resident Satisfaction and OKAP Performance

ANDREW HENDERSHOT, MD*; JONATHAN RAMSEY, MD

Background:

To improve resident OKAP scores and satisfaction with the morning lecture curriculum, the schedule of the lectures was rearranged to group lectures into blocks organized by subspecialty. Each block was organized to allow lectures to follow the Basic and Clinical Science Course (BCSC) book of that subject.

Purpose:

To improve OKAP test performance and resident satisfaction with the educational curriculum.

Methods:

De-identified OKAP scores were collected before and after intervention and compared by paired t-test. The percentile, raw score, and subject-specific scaled scores were all analyzed. A survey was collected of resident satisfaction with the curriculum before and after intervention and average responses were analyzed with unpaired t-test.

Results:

No statistically significant change was noted for percentile score, and the average percentile score after intervention was found to be non-inferior. A statistically significant increase in raw score was noted as residents progressed in training. Resident satisfaction with the curriculum showed a statistically significant improvement.

Conclusions:

The new curriculum was found to be non-inferior and resident satisfaction improved. As the first year after the intervention, more data will be gathered to determine if there is a measurable difference in OKAPS scores. Using resident feedback to make changes resulted in improvement in resident satisfaction with the lecture curriculum.

Using a Virtual Reality Ophthalmic Surgery Simulator to Improve Surgical Observation Experiences for Medical Students

DANIEL HUTTER, MD*; KARA CAVUOTO, MD

Background:

Medical students pursuing a career in ophthalmology spend considerable amounts of time observing eye surgery. The benefit of the time spent in surgical observation is unclear, as students may not possess the knowledge to appreciate the nuances of surgery.

Purpose:

To assess whether training with a virtual reality haptic ophthalmic surgery simulator improves the surgical observation experience for medical students who plan to go into ophthalmology.

Methods:

Medical students answered questions to assess their experience in the ophthalmology operating room, both before and after training on the HelpMeSee ophthalmic surgery simulator. Training consisted of four-hour, one-on-one sessions led by an ophthalmologist with expertise in simulation education. These sessions covered surgical ergonomics, surgical microscope adjustment, and uses/features of surgical instruments. The study employed a mixed methods design: quantitative data derived from selected-response written survey items, and qualitative findings comprised of responses to open-ended written and semi-structured interview questions.

Results:

Preliminary data suggest that after training, students increased their awareness of the nuances of surgery and became more active learners in the operating room.

Conclusions:

Virtual reality simulation improves medical students' observation experience in ophthalmic surgery.

Leading Horses to Water and Making them Drink: Interventions to Increase Resident Surgical Simulator Usage

LINDSAY MANDEL, BA*; ANA ALZAGA FERNANDEZ, MD; LINDSAY MANDEL, BA; GRACE SUN, MD; NOA KAGEYAMA, PHD; CHRISTOPHER SALES, MD

Background:

The EyeSi® surgical simulator has joined wet-lab training in making ophthalmology residents into proficient cataract surgeons, yet in many institutions, the simulator remains underutilized despite substantial capital investment.

Purpose:

To demonstrate that the addition of gamification to a conventional curriculum increases resident use of a cataract surgery simulator.

Methods:

Access to the simulator had been granted 24 weeks prior to the study. Eight residents were enrolled in the study and encouraged to practice over 12-weeks. The residents were subject to incentivized team competitions during the study. Practice time on the simulator was analyzed.

Results:

The cohort was comprised of 3 PGY2's, 3 PGY3's, and 2 PGY4's. Prior to the study, 4 of 8 residents had logged a median of 1 hour of practice on the simulator [range: 0-6.9], with 19 aggregate hours for the group. During the study, median practice time increased to 7.7 hours [range: 1.0-12.2] among all 8 residents and aggregate time increased to 51 hours.

Conclusions:

Time spent practicing increased substantially after the introduction of team competitions observed (and cheered-on) by faculty. By incentivizing individual performance and fostering camaraderie, gamification seems to be effective in creating a culture that results in greater engagement with the simulator curriculum.

Can Practicing Under Stress on a Surgery Simulator Protect Ophthalmology Residents from Choking Under Pressure?

LINDSAY MANDEL, BA*; NOA KAGEYAMA, PHD; GRACE SUN, MD; ANA ALZAGA FERNANDEZ, MD; CHRISTOPHER SALES, MD

Background:

Performance psychology research shows that practicing under stress is protective against "choking under pressure." This approach hasn't been studied in surgeons.

Purpose:

To ascertain whether residents perform better on the EyeSi® surgical simulator at a stressful team competition when they practice under comparable stressors.

Methods:

Six residents with established baseline performance were randomized into groups A and B and encouraged to practice individually. During phase 1, A also practiced under faculty observation, the "stressor." Performance was reassessed under the stress of competition. Phase 2 was identical except both groups practiced under stress. Differences in aggregate scores (individual scores) between baseline and each competition were computed to ascertain effects of the intervention.

Results:

Each group had a PGY2, PGY3, and PGY4. Group A accumulated fewer practice hours than B (A: 13.1, B: 16.7 hours), yet exhibited smaller decline in aggregate score between baseline and first competition (A: -12.6, B: -13.7 points). After the stressor was equalized between groups, both showed improvement from baseline to second competition (A: +19.4, B: +5.3 points).

Conclusions:

While the data from this pilot study are insufficient to conclude whether stress training benefited surgeons' performance under stress, the observed trend of improvement warrants further investigation in a larger controlled study.

Ophthalmology Resident Experience with Complex Cataract Surgery at a VA Hospital

COLLEEN MATURANA, MD*; PAUL LEE, MD; NISHA CHADHA, MD

Background:

Ophthalmology residents should be exposed to cataract surgery that is diverse in difficulty and technique.

Purpose:

To evaluate the third year resident experience with complex cataract surgery at a VA medical center where approximately 50% of their experience is gained.

Methods:

A chart review of resident cataract surgeries from July 2015 through July 2017 at James J. Peters VA Medical Center was performed categorizing by CPT code, 66984 indicating routine and 66982 indicating complex. Reason for complex categorization and use of non-standard device/technique were recorded.

Results:

617 routine and 43 complex cataract surgeries were performed by 8 different residents. Average cases per resident were 77 routine (range 48 to 98) and 5 complex (range 1 to 9). Reasons for complex categorization included intraoperative floppy iris syndrome/small pupil (76.7%), zonular instability (27.9%), and mature cataract (4.7%). Non-standard techniques/devices included: iris hooks (62.8%), Malyugin ring (16.3%,) extracapsular cataract extraction (4.7%), and scleral sutured IOL (3%).

Conclusions:

Approximately 7% of the resident surgical experience involved complex cases, but experiences among residents are not consistent. Education in cataract surgery should extend beyond achieving minimums to focus on variety and complexity in order to optimize training.

Myers-Briggs Personality Types of Ophthalmology Residents

FAISAL RIDHA, MD*; JOHN LING, MD; POUYA JOUHARIAN; OSAMA SABBAGH, MD; MASHAL AKHTER, MD; LAURA KEUNY, MD; KATRINA CHIN LOY, MD

Background:

There are few studies examining resident personality types in different areas of medicine. Differences in Myers Briggs Type Indicators have been noted in PM&R, pediatrics, anesthesia, general surgery, and ENT. However, there is nothing reported for ophthalmology trainees. This is of particular interest, given the unique nature of ophthalmology as an outpatient surgical subspecialty.

Purpose:

The goal of this project was to examine which personality types may be more prevalent amongst current ophthalmology residents and recent graduates. We further wished to evaluate if there were differences between trainees of different programs, and whether certain personality types were predictive of fellowship training.

Methods:

The Myers Briggs Type Indicator (MBTI) assessment, form M, was administered to the participants of the study along with a short survey aimed at identifying those who pursued a fellowship, and whether they went on to work in private practice versus academic settings. The voluntary survey was sent to current residents and recent graduates of 5 different ophthalmology training programs: Howard University Hospital, Georgetown University, George Washington University, Kresge Eye, and University of Texas Medical Branch in Galveston.

Results:

65 out of 138 total residents completed the survey, comprised of 48 current residents and 17 recent graduates. 14 of the 16 personality types were represented in the responses. ESTJ (Extroverted, Sensing, Thinking, Judging) was the most common MBTI type of ophthalmology residents surveyed. Statistically, ophthalmology trainees were more likely to be extroverted, thinking, and judging. Interestingly, the prevalence of judging personality type seemed to increase with increasing levels of post graduate year training.

Conclusions:

Certain MBTI types were more common amongst ophthalmology residents surveyed in our cohort. Variations in program makeup, PGY level, and subspecialty selection may be influenced by individual index types. Therefore, future surveys of larger cohorts may be worthwhile to identify personality trends of ophthalmology trainees, subspecialty selection, and work environment.

Increasing Ophthalmology Diversity: Piloting A Multi-year Mentorship Pipeline Program

ARIANE KAPALAN, MD*; MASON SHANER, BS; KEVIN HEINZE, MD; RAHUL IYENGAR; CHARLES R. FRANK; ANGELA ELAM, MD; ALAN SUGAR, MD; LAUREN PRISK; SHAHZAD MIAN, MD

Background:

Studies demonstrate ethnic concordance between physician and patient improves patient compliance and therapeutic benefit. Ophthalmology remains a specialty of low diversity.

Purpose:

We piloted a program to recruit first-year medical students (M1s) of underrepresented minority backgrounds (URM) into ophthalmology.

Methods:

We targeted recruitment to M1 members of URM organizations. We arranged a clinical mentorship program between first-year ophthalmology residents (PGY2s) and interested M1s. Selected faculty participated in an education program. We surveyed M1s and PGY2s biannually.

Results:

All seven PGY2s and nine M1s continue to pilot the program. M1 and PGY2 biannual responses reviewed the program favorably. All M1s stated increased interest in ophthalmology since beginning the program and feeling "satisfied" or "very satisfied" with the program. 100% of responding PGY2s recommended future residents participate in the program, and identified the program as a means to connect with students from different backgrounds and an opportunity to gain educator experience.

Conclusions:

We present a "pipeline" program to recruit URM M1s into ophthalmology, successful within its first year as measured by the cohort's increasing interest in ophthalmology. We plan continued mentoring that supports education, research, surgical skill, and strategic residency application towards completion of ophthalmology residency.

National Survey of Parental Leave in Ophthalmology Residency

DIVYA SRIKUMARAN, MD; BENJAMIN LEE, MD*; FASIKA WORETA, MD, MPH; SARASWATHY RAMANATHAN, MD; ERIC L. SINGMAN, MD, PHD; DIVYA SRIKUMARAN, MD

Background:

In graduate medical education, generous parental leave policies are restricted by training and funding.

Purpose:

This project evaluates parental leave policies among ophthalmology residency programs to facilitate discussion.

Methods:

A 19 item electronic survey about resident parental status, parental leave policies, and the effects of childbearing on residents was administered to program directors at accredited ophthalmology residency programs in July 2018.

Results:

The response rate is 61.7% (74/120). 40% of residents were female. Female residents were less likely to be a parent than male residents (16% versus 25% respectively, $p<0.001$). 89% of programs had a maternity leave policy (median leave 6 to <8 weeks, minimum 2 to <4, maximum 8+), while 73% had a partner leave policy (median leave 2 to <4 weeks, minimum <2, maximum 8+). 77% of programs had at least one resident take maternity leave, and 68% for partner leave. Extension of training due to parental leave was uncommon (15%). Program directors perceived that becoming a childbearing parent had a negative effect on resident surgical skill/volume and scholarly activities ($p<0.001$).

Conclusions:

The need for parental leave is common in ophthalmology residency, however program directors report large variability in the amount of leave permitted.

Educational Impact of a Podcast Covering Vitreoretinal Topics: One-year Survey Results

MICHAEL VENINCASA, BS*; LOUIS Z. CAI, MD; ANGELA CHANG, BS; AJAY E. KURIYAN, MD; JAYANTH SRIDHAR, MD

Background:

Podcasts are gaining traction as sources of medical education.

Purpose:

To determine demographics and educational preferences of those listening to a vitreoretinal podcast.

Methods:

Cross-sectional, online survey; Podtrac and Squarespace platform analytics.

Results:

Since podcast inception, quarterly episode downloads increased from 684 in 1Q17 to 11,766 in 2Q18. 102 participants completed the survey, consisting of 82 (80.4%) men with 67 (65.7%) aged 25-34 years. Respondents included 68 (66.7%) retina attendings or fellows, 20 (19.6%) ophthalmology residents, and 4 (3.9%) medical students. Most respondents listened to over 15 episodes (36; 44%) while commuting (68; 66.7%) in order to either "stay up to date" or to "learn more about the field of retina" (67; 65.7% each). Those with more extensive listening history agreed more that podcasts are useful for medical education and result in changes in practice, but not that podcasts have surpassed traditional educational methods. There was no difference in perceived usefulness between podcasts, peer-reviewed journals, and national conferences; these ratings did not differ based on respondent listening histories.

Conclusions:

Podcasts are effective at distributing clinically-relevant educational material and are valuable adjuncts to peer-reviewed journals and national conferences.

Research: A Marker of Grit in Future Ophthalmology Residents?

BENJAMIN WEST, BS; MICHAEL RAUSER, MD; SAMANTHA E. PEREA, MD; LEILA M. KHAZAENI, MD*

Background:

Grit, defined as a passion and perseverance for long-term goals, is a characteristic that has recently been used to predict successful performance in residency.

Purpose:

To determine whether research, an endeavor that demands high levels of long-term goal-directed effort, can be used to predict grit in Ophthalmology residency applicants.

Methods:

The validated Short Grit Survey was emailed to individuals who trained in the Ophthalmology Residency program at The Loma Linda University Eye Institute between 2007 and 2018. Additional questions assessing the individuals' research experience including number of posters, projects and publications at the time of residency application were included. A PubMed search was performed to confirm publications.

Results:

33 of 56 current and former residents (20 male, 13 female) completed the survey. The average grit score was 31.6 (range 19-39). A higher correlation was found between a higher grit score and number of publications (Pearson =0.29), compared to poster presentations and projects (Pearson = -0.104 and 0.19 respectively).

Conclusions:

Our results suggest that involvement in a research project that leads to publication may be a greater predictor of grit than participation in unpublished research. This information could prove valuable in the selection of applicants that will excel and endure through the rigors of ophthalmology residency.

The Impact of a Resident-led Case-based Ethics Curriculum on Ophthalmology Resident Understanding of Bioethics

AMANDA WONG, MD*; JASON ZHANG; JAMES KEMPTON; JESSICA CHOW

Background:

Bioethics is a critical part of medical education as medical professionals are involved in multiple roles - student, teacher, educator, clinician, and researcher. Peer-to-peer teaching as a method for integrating bioethics education into a curriculum is often overlooked, though peer-to-peer teaching is an important part of resident training.

Purpose:

To design a resident-led bioethics curriculum that effectively enhances resident understanding of bioethics through a peer-led case review and discussion.

Methods:

A senior ophthalmology resident selected four cases, which covered fundamental research ethics principles, informed consent, IRB protocol, ethical guidelines of patient compensation, placebo and minimal risk. A one-hour teaching session was allotted and 12 ophthalmology residents were present. The senior resident guided fellow residents through each case and asked questions to encourage thoughtful discussion. Two faculty members were also present and assisted with stimulating further discussion. Participants were evaluated using a pre- and post-test.

Results:

No significant difference in the pre-test scores was found between trainees of different genders or training levels. A significant improvement in post-test scores was found in all participants.

Conclusions:

The implementation of a resident-led bioethics curriculum in ophthalmology residency education may be beneficial in enhancing resident understanding of bioethics.

Preparedness of Ophthalmology Residents for Open Globe Repair

SIDRA ZAFAR, MD*; XINYI CHEN, BS; FASIKA WORETA, MD, MPH; SHAMEEMA SIKDER, MD

Background:

No data currently exists on how confident ophthalmology residents feel regarding different steps of open globe repair.

Purpose:

To assess perceived preparedness and competence of ophthalmology residents with different steps of open globe repair as well as to identify learning methods residents find most useful.

Methods:

A national anonymous electronic survey was sent to ophthalmology residents between November 2017 and April 2018. Information on program characteristics, surgical training methods, perceived initial preparedness, and competence was collected from the survey.

Results:

From the 118 responses that were received, the large majority of residents had performed ≤ 10 globe repairs (n= 98/118, 83.1%). Most residents felt moderately prepared-very prepared for different steps of globe repair (range: 57.9%-78.5%). Patient chart review as well as case discussion with faculty/senior resident was associated with improved perceived preparedness among residents in several areas, including corneal and scleral laceration reapproximation. Supervised laboratory practice was associated with greater resident-perceived competence. With respect to learning methods, most residents found one-on-one faculty interaction in the OR to be most useful in developing their surgical skills (n=103/118, 87.3%), followed by performing surgeries other than globe repair (n=82/118, 69.5%) and one-on-one faculty interaction in practice labs (n=63/118, 53.4%).

Conclusions:

Educational resources, such as supervised wet labs and case discussions with senior faculty were found to be associated with higher resident-perceived preparedness competency for open globe repair.

Shark Tank: Innovations in Resident Education

Integrating Case Logs with your EHR

MICHAEL BOLAND, MD, PHD*

Idea Description:

We have implemented an electronic case log system that can be launched directly from our EHR, pulling in patient and resident information automatically. We also recently completed an integration with the ACGME case log so our residents no longer have to engage in duplicate data entry. We can therefore collect additional information about particular procedures (complications, say) in our log and only send the core information to the ACGME. This proved impossible when we asked residents to enter the data twice (once for us and once for the ACGME).

A New Web Based Resident Cataract Surgery Tracking Tool

PETER VELDMAN, MD*; ANDREW SCHNEIDER, MD, MS

Background:

ACGME cataract reporting is limited. Degree of resident operative involvement is variable. Greater specificity regarding the degree ofresident involvement would be useful. Recognizing these facts, we have developed a tool to facilitate the collection, analysis and reporting of more detailed resident cataract surgery data.

Purpose:

To develop a cataract surgery tracking application to efficiently collect, analyze and synthesize resident surgical data.

Methods:

Our team developed a phone-optimized web app to collect case data (no PHI), primary/assist status, role/performance in each of the core steps, complications, case time, CDE, degree of supervision, self and attending assessment and notes. This information is aggregated, analyzed and presented in a dashboard format to the resident and program director.

Results:

Data entry takes approximately one minute (final analysis pending). The dashboard provides useful and interactive information including both raw and trended data (with graphs) of the metrics listed above. Additional analysis includes trended progression of the degree of resident case involvement. Attending data can be evaluated for degree of resident involvement in cases far beyond but including percentage of cases as primary surgeon (PD report only).

Conclusions:

We have created a useful (and free) tool for tracking resident cataract surgery.

Fitness for Residents

GARY LEGAULT, MD*; BRETT DAVIES, MD

Idea Description:

Physical fitness is essential for wellbeing and a healthy lifestyle. In medicine fitness is often ignored due to a demanding work schedule. Residents should learn the importance of physical fitness through a mandatory annual physical fitness test. Additionally, each program should implement monthly physical fitness activities to include soccer, ultimate Frisbee, volleyball, etc. which will improve morale.

EHR Best Practices for Resident Staffing

THOMAS HWANG, MD*

Idea Description:

Does it take you forever to review resident notes to sign off on them on EHR? Is it impossible to tell what they did because of copy forward? Simplify the template and make them enter data in structured manner to increase efficiency for you and for them while implementing practices that are best for patient safety.

Virtual Reality Simulation for Ocular Incision and Dissection Training

DANIEL HUTTER, MD*

Idea Description:

In the current era of making clear corneal incisions in cataract surgery, residents are rarely taught how to create scleral tunnels.

Scleral tunnels were the primary task during which residents became proficient in ocular incision and dissection skills. No new technology has yet been widely incorporated into resident training to teach these skills.

As a result, many residents are now deficient in ocular incision and dissection skills, which are essential in manual small incision cataract surgery, conversion to scleral tunnel in complicated clear cornea phaco cases, secondary IOL placement and trabeculectomy.

High fidelity virtual reality simulation with haptic feedback, built atop physics models of surgical instrument and eye tissue interactions, has the ability to elucidate the mechanics of ophthalmic surgery. It is the ideal platform on which residents should be taught the skillful use of ophthalmic instruments to efficiently perform ocular incisions and dissections.

Ophthalmology Diversity Equity Inclusion Mentorship Pipeline Program

ARIANE KAPLAN, MD*

Idea Description:

The field of ophthalmology is grossly underrepresented by underrepresented minority (URM) physicians. The goal of this program is to inspire URM medical students to pursue a career in ophthalmology through an innovative longitudinal pipeline mentorship program between medical students and ophthalmology residents. This peer-to-peer mentoring program matches an incoming medical student with an incoming ophthalmology resident. During the course of the year, mentors and mentees meet for skills nights, shadow experiences in clinic and OR, and social events allowing for early introduction to the field of ophthalmology. This program was launched in 2017 with 9 mentees and 7 mentors, and overwhelmingly the response has been positive for all participant.

Establishing your ERA

ANDREW HENDERSHOT, MD*

Idea Description:

A simple and small monthly award given to a resident who has gone above and beyond that month. Residents nominate one another by filling out a short comment card online. Winner gets pick of a $20-25 gift card. Helps to highlight and reward those doing well.

Night Float (Call Coverage)

TATIANA DEVENEY, MD*; SHAHZAD MIAN, MD

Idea Description:

Call getting busier and more time consuming for residents? Tired of duty hour violations? Be ahead of the curve with a dedicated night float rotation for call. Improves resident efficiency and learning with and decreases resident stress and fatigue.
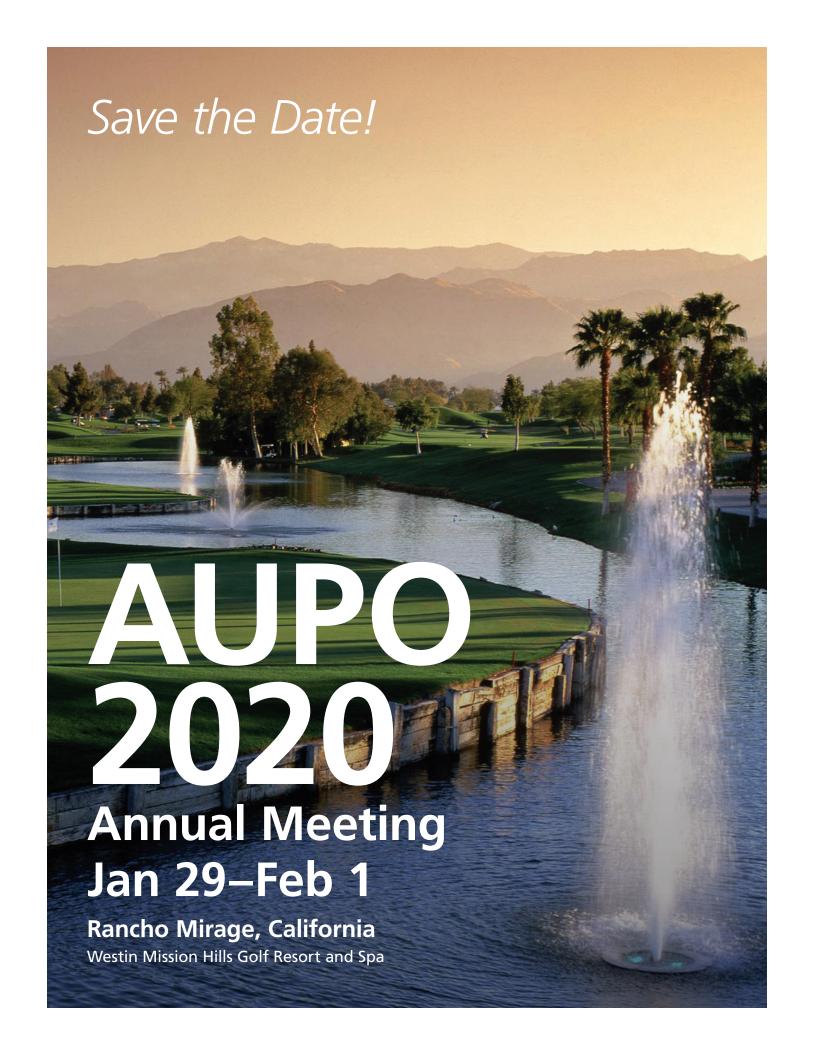
Buddy Call Checklist

CASEY BEAL, MD*

<u>Idea Description</u>:

Tired of getting called by the ED for something that one of YOUR residents did (or didn't do)? Do you have those black cloud and white cloud residents who have far different call experiences? Now here's a way to standardize the call experiences for all of your 1st year residents: The handy dandy Buddy Call Checklist! Each 1st year has full buddy call (an upper level sees every patient with them) for the first 8-10 weeks. They each carry their own checklist. An upper level or attending signs off each time they see a patient with one of the listed findings with the 1st year. After 8 -10 weeks, once the first year sees and manages 3 of each of these diagnoses/findings, then they no longer necessarily need to have an upper level see the next patient that comes in with that same diagnosis. It provides graduated autonomy for patient care and standardizes the call experience across all 1st year residents. It will make you look like a genius to those hard working ED physicians and creates an easy way to provide your 1st years with appropriate on call support.

Notes

Notes

Notes

Save the Date!

AUPO 2020

Annual Meeting
Jan 29–Feb 1

Rancho Mirage, California
Westin Mission Hills Golf Resort and Spa