



2013

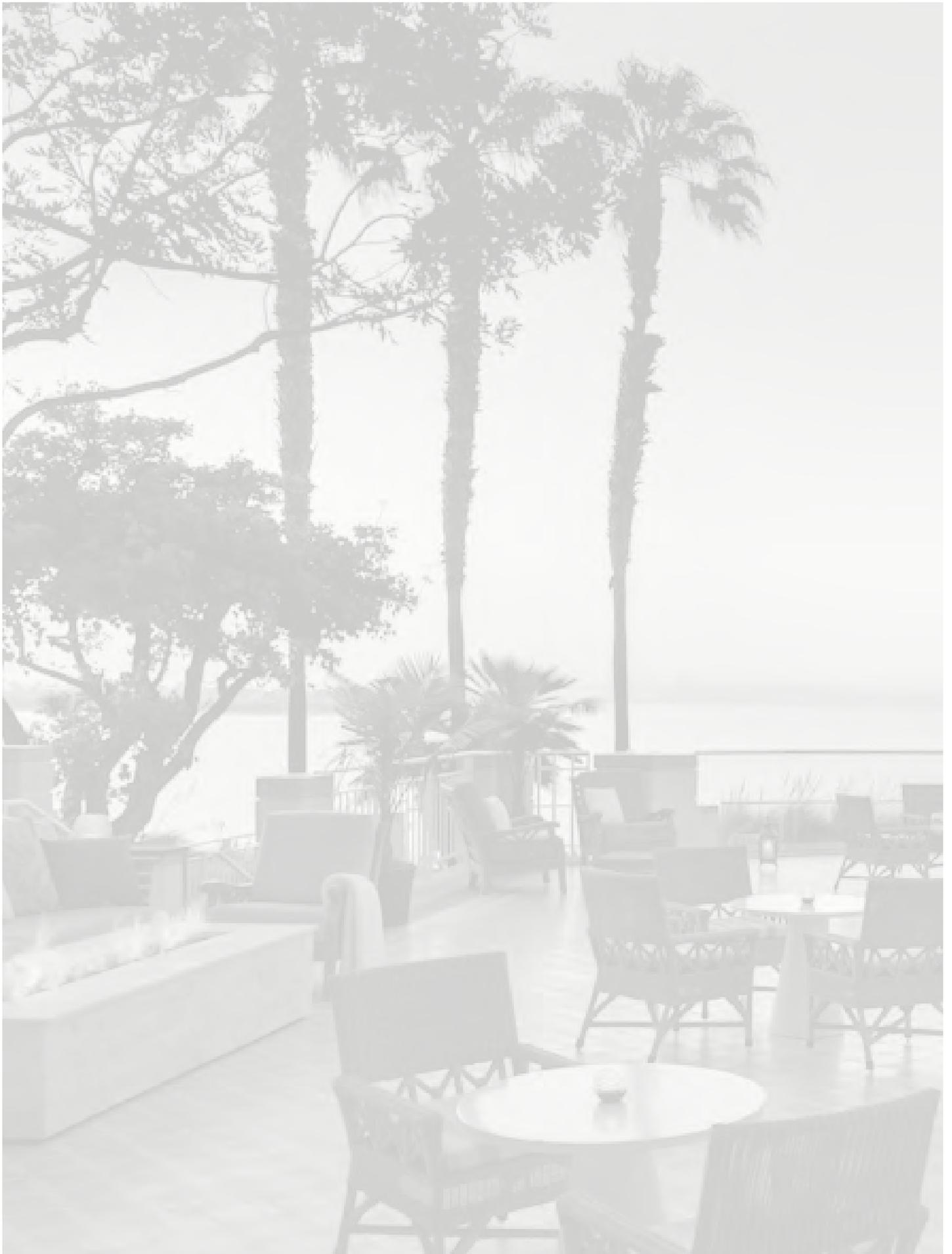
EDUCATING THE
EDUCATORS

JANUARY 30
LOEWS CORONADO BAY
SAN DIEGO, CALIFORNIA



PROVIDED BY
ASSOCIATION OF UNIVERSITY PROFESSORS OF OPHTHALMOLOGY
PROGRAM DIRECTORS COUNCIL

Meeting Syllabus



Educating the Educators 2013

The Association of University Professors of Ophthalmology's Program Directors Council would like to welcome you to the 10th annual Educating the Educator's conference being held in San Diego, California.

The free paper section of the conference had a few firsts this year. Due to the numerous quality submissions, the presentations were selected by a review committee. An online submission process was instituted to facilitate submission and review of abstracts. We hope these efforts will enhance the quality of the meeting program and further encourage medical education research in ophthalmology.

In addition, this year's program was organized after careful review of 2012 conference evaluations. We are excited to have Luanne Thorndyke, MD from the University of Massachusetts talk to us about mentorship and its impact on our career development. Our colleagues from Emory,

Paul Pruet, MD and Blaine Cribbs, MD will be giving us an insider view of the role played by the Associate Program Director in an Ophthalmology residency program.

Last but not least, we are looking forward to having our close partners, the program coordinators, join us at this year's meeting. Because they play such a big role in the success of our programs, we have asked Ms. Susan Bony, coordinator for the Oregon Health and Science University program to speak to us about her role and the development of the new program coordinator's group.

We hope you will join us for the social immediately following the meeting.



Laura L. Wayman, MD



Shahzad Mian, MD

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MEETING SUPPORT

Educating the Educators is supported by an independent medical education grant from Alcon Laboratories, Inc.

The Educating the Educators Reception is sponsored by the San Francisco Matching Program.

Educating the Educators 2013 Program

Wednesday, January 30

7:30 am – 8:00 am	Registration & Continental Breakfast
8:00 am – 8:05 am	Welcome and Announcements – Laura L. Wayman, MD
8:05 am – 8:08 am	Welcome New Program Directors – Andreas K. Lauer, MD
8:08 am – 8:15 am	The First Decade of Educating the Educators in Ophthalmology – Andreas K. Lauer, MD
8:15 am – 8:25 am	San Francisco Match Program Update – Dennis S. Thomatos
8:25 am – 9:55 am	Free Papers (Part I)
8:25 am – 8:40 am	iLearn: An Educational Experiment in Teaching Life-Long Learning – Timothy W. Olsen, MD
8:40 am – 8:55 am	Emergency Department and Inpatient Assessment of Basic Eye Function Prior to Ophthalmology Consultation – Ryan K. Wong, MD and John J. Huang, MD
8:55 am – 9:10 am	Current Advocacy Education in Ophthalmology Residency Programs – Kimberly Crowder, MD
9:10 am – 9:25 am	Introducing a Mental Skills Curriculum into an Ophthalmology Residency: A Pilot Program – Travis Frazier, MD
9:25 am – 9:40 am	Education and Training of Referring Physicians Decreases At-Home Call Demand – Léon-Paul Noël, MD and Abhishek Nemani, MD
9:40 am – 9:55 am	Transforming Existing Resident Performance Data Into Actionable EPAs – Jonathan M. Skarie, MD, PhD
9:55 am – 10:15 am	Break
10:15 am – 12:00 pm	Free Papers (Part II)
10:15 am – 10:30 am	Incorporating Kitaro in the Wet Lab Curriculum – Yousuf M. Khalifa, MD
10:30 am – 10:45 am	A Residency Program with Online Teaching: An Exercise in Social Entrepreneurship – Ramesh Ayyala, MD, FRCS
10:45 am – 11:00 am	Outcomes of Cataract Extraction in Eyes with 20/400 or Worse Cataracts Stratified by Level of Training – Sandra M. Johnson, MD and Eric Areiter
11:00 am – 11:15 am	Resident Conformance with the AAO PPP for Primary Open Angle Glaucoma – Pratap Challa, MD
11:15 am – 11:30 am	Residents as Educators – A Novel Approach – Michelle Diaz, MD and Sandeep Grover, MD
11:30 am – 11:45 am	Effects of an Intensive Review Course on Residents and Fellows – Mark Lelli
11:45 am – 12:00 pm	Developing a Resident Research Handbook – Rachelle Rebong, MD, Anne Fung, MD and Susan Day, MD
12:00 pm – 1:30 pm	Lunch (included)
1:30 pm – 2:30 pm	Role of the Residency Education Coordinator in an Ophthalmology Training Program – Susan Bony, Residency Program Coordinator, Casey Eye Institute
	Role of the Associate Program Director in an Ophthalmology Training Program – Paul Pruett, MD, Director of Resident Education; Blaine Cribbs, MD, Associate Director of Resident Education, Emory Eye Institute
2:30 pm – 2:45 pm	Break
2:45 pm – 4:15 pm	Building a Mentoring Relationship that Matters: Tools for Success – Luanne Thorndyke, MD, Vice Provost for Faculty Affairs, Professor of Medicine, University of Massachusetts School of Medicine
4:15 pm – 4:30 pm	Wrap-Up & Adjournment
5:00 pm – 6:30 pm	Reception – Sponsored by San Francisco Match

iLearn: An Educational Experiment in Teaching Life-long Learning

TIMOTHY W. OLSEN MD

BACKGROUND:

Traditional lectures to residents in training serve a valuable purpose. For example: to review evidence-based treatments, to demonstrate a classic disease-specific presentation and to review small case series or research topics. Socratic method are commonly used to engage the learners and also to engender more independent thought on a specific topic.

PURPOSE:

The goal of iLearn is to encourage life-long learning through continuous reading and analysis of the ophthalmologic literature. Resident physicians are required to attend a monthly, one-hour iLearn session. During the first half hour, the facilitator uses traditional teaching methods (above). During the second half hour, a resident physician is randomly selected to present an important article that she/he has read in the past 2 months, that may 1) change or alter the pre-existing standard of care, 2) present new and informative data on patient management, 3) present a topic, therapy, or issue that is important for the residency class.

METHODS:

The iLearn methodology has been implemented over the past 4.5 years at Emory. The initial half-hour session is determined by needs of the teaching program, are delivered in conjunction with the pre-arranged lecture series, Socratic in nature, and enable feedback on the learning aspects of the residency program. Each year, there has been positive feedback for this course, and the methodologies for the resident-led half hour have evolved. Initially, the residents could present a publication on any topic, and had no limits on the publication date of the article. However, we found that a 2 month window for presenting the resident publication encouraged continuous reading. Since only one or two (of 18 residents) presented randomly each month, the residents had to continuously keep new material ready and available for presentation. The random nature of the resident selection encouraged to be both present and prepared. Finally, audience response systems were used to anonymously analyze the value of the presentation to the residency team.

CONCLUSIONS:

The iLearn method is an active learning methodology, developed to encourage life-long learning skills and discipline during the residency program. The random, resident lead half of the lecture encourages continuous reading of the ophthalmologic literature, screening the literature to highlight resident-led presentations of more relevant articles, and involves an anonymous peer-review process with instant feedback for the presenter.

ILEARN: AN EDUCATIONAL EXPERIMENT IN TEACHING LIFE-LONG LEARNING - TIMOTHY W. OLSEN MD



iLearn
An
Experiment
in Life-Long
iLearning

Timothy W. Olsen, MD
F. Phinizy Calhoun Sr. Professor
Chairman, Ophthalmology
Emory University



iLearn

Purpose: To stimulate Life-long Learning
In Ophthalmology



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INDUSTRY
NONE

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Patents
Scleral Depressor 8,083,751 B2 (US, 12-27-2011)
Tissue Support Structure: 13/511,690 (US Pending)
#1 986 581 (Europe Oct-3-2012)

ILEARN: AN EDUCATIONAL EXPERIMENT IN TEACHING LIFE-LONG LEARNING - TIMOTHY W. OLSEN MD







ILearn: AN EDUCATIONAL EXPERIMENT IN TEACHING LIFE-LONG LEARNING - TIMOTHY W. OLSEN MD

How to Learn on a Regular Basis:



Preparing to Present

- Must read consistently
- Always need something to present
- Assumption: Present Something of Interest
- Encourage: Critical Review of the Literature



Introduction to iLearn

- 1 lecture x 30 minutes on a general topic
- Each Resident has a topic prepared
 - Chosen Randomly



ILEARN: AN EDUCATIONAL EXPERIMENT IN TEACHING LIFE-LONG LEARNING - TIMOTHY W. OLSEN MD

Problem #1

- The canned talk



Solution #1

- Something that you've read in < 2 months



Problem #2

- Topics priorities are too obscure



ILEARN: AN EDUCATIONAL EXPERIMENT IN TEACHING LIFE-LONG LEARNING - TIMOTHY W. OLSEN MD

Solution #2

- Determine Criteria of relevance
- Peer-Review



Problem #3

- Motivation



Solution #3

- Bribery Works!
- Money/Prizes(competition)
- Prestige (competition)
- Peer Review



ILEARN: AN EDUCATIONAL EXPERIMENT IN TEACHING LIFE-LONG LEARNING - TIMOTHY W. OLSEN MD

Criteria

- Overall Score
- Direct Impact on Patient Care
- Improves my Clinical Relevant Knowledge
- Optimizes Evidence-Based Care
- Optimizes my Communication Skills
- Improves my System-Based Practice



Format

- Journal Article or Recent News
- Problem-Based Learning
 - Present a Case: Assign a Discussant
 - Present a Topic: Assign a Discussant



Problem #4

- Uniform Scoring
- Buddy Systems



ILEARN: AN EDUCATIONAL EXPERIMENT IN TEACHING LIFE-LONG LEARNING - TIMOTHY W. OLSEN MD

Solution #4

- Audience Response
- Anonymity
- Immediate Feedback
- Educate about Goals



Summary for i-Learn & Life-Long Learning

- Self-Directed Learning
- Relevant to the Field
- Emphasis on *Evidence-Based Practice*
- Stress *Core Competencies*
- *Early* Feedback and guidance are Essential
- *Secret Recipe of iLearn: The Learner is Teacher!*



Emergency Department and Inpatient Assessment of Basic Eye Function Prior to Ophthalmology Consultation

RYAN K. WONG, MD AND JOHN J. HUANG, MD

BACKGROUND:

Many non-ophthalmologist physicians may be inadequately trained in the initial management or appropriate referral of ophthalmic disease.

PURPOSE:

We aim to characterize the rate and accuracy of basic ophthalmic assessment performed by emergency department or inpatient services prior to ophthalmology consultation.

METHODS:

A chart review of new consultations to the ophthalmology service from September 2010 to August 2011.

CONCLUSIONS:

566/1,399 (40%) charts had documentation of the primary service's initial ophthalmic assessment of VA, EOM, and pupillary exam. Of these consultation requests 129/566 (23%) had assessed VA quantitatively, 101/566 (18%) assessed VA qualitatively, 367/566 (65%) assessed EOM, and 375/566 (66%) assessed pupillary function prior to calling the ophthalmology service. Our study shows: 1) many emergency department and inpatient services do not assess VA, EOM, or pupillary function prior to requesting ophthalmology consultation and 2) the reported VA is often worse than that measured by the ophthalmology service. These findings may have important implications on the appropriate triage of patients with ophthalmic complaints and the utilization of limited medical resources. Possible areas of improvement are an increased emphasis on ophthalmology in medical school and non-ophthalmology residency education. Ophthalmologists can actively engage in this endeavor and use this opportunity to play a more active role in hospital-based medicine.

Current Advocacy Education In Ophthalmology Residency Programs

KIMBERLY CROWDER, MD

BACKGROUND:

One of the July 2011 major revisions for Program Requirements for GME in Ophthalmology states that "Residents must have documented didactic sessions in each of the following: advocacy...". I initiated this project to attempt to answer Janet Betchkal's (AAO Secretariat for State Affairs) questions "How are resident's educated about advocacy?" and "Do they know how critical this is to the future of our profession?" She posed these questions when she lectured at Grand Rounds at our program.

PURPOSE:

The goals of this project are to attempt to find out what other ophthalmology programs were currently doing to fulfill this advocacy requirement; what resources could be utilized to make this education more effective and to find out how other program directors, teaching faculty and residents viewed the need for/importance of advocacy in our profession.

METHODS:

Volunteer survey sent out via eyepdnet listserv in June 2012 to all program directors with the request for them to forward the survey to their teaching faculty, residents and fellows.

CONCLUSIONS:

143 people responded to the survey (39 Program Directors, 34 Faculty, and 70 Residents/Fellows). Responses varied but most programs are doing something to meet the requirement, most programs showed interest in expanding what they are doing (possibly with some guidelines from larger organizations), and most individuals do recognize this is an important topic for our profession.

Introducing a Mental Skills Curriculum into an Ophthalmology Residency: A Pilot Program

TRAVIS FRAZIER, MD

BACKGROUND:

Several studies have published results on the use of mental imagery in a surgical or simulator context and shown the efficacy of simulation and mental rehearsal to be equivalent to physical practice. Elite athletes, soldiers and surgeons have different missions but share a high demand for performance and resiliency. Ophthalmic surgical training is a practice domain that is nascent in the application of mental skills for performance enhancement.

PURPOSE:

Introduce an innovative mental skills curriculum based on the skills and techniques of attention control, mental imagery, goal setting, confidence and energy management. Evaluate the program over 18 months using structured and semi-structured feedback from all participating residents to assess the relevance and application of mental skills during surgery and in reduction of resident stress and burnout.

METHODS:

The Attentional and Interpersonal Style (TAIS) inventory was completed by all participating residents and staff surgeons. The results were used for building self awareness and to provide baseline objective data for determining the most relevant mental skills for each individual. All residents participated in an introductory session on core mental skills and the model for developing a personalized performance plan. Six targeted workshops and two open discussion workshops were completed. Feedback was collected throughout the 18 months.

CONCLUSIONS:

Utilizing a mental skills curriculum in an ophthalmology residency increases awareness of physical and emotional responses to stress during surgery and appears to improve resiliency and decrease resident burnout.

INTRODUCING A MENTAL SKILLS CURRICULUM INTO AN OPHTHALMOLOGY RESIDENCY: A PILOT PROGRAM - TRAVIS FRAZIER, MD

INTRODUCTION OF A MENTAL SKILLS CURRICULUM INTO AN OPHTHALMOLOGY RESIDENCY: A PILOT PROGRAM



LTC Travis Frazier, MD
Program Director
Madigan Army Medical Center
Ft. Lewis Washington

DISCLOSURE INFORMATION

- I have no relevant financial relationships with the manufacturer(s) of any commercial product (s) and/or provider(s) of commercial services discussed in this CME activity
- I do not intend to discuss unapproved/ investigative use of a commercial product/ device in my presentation
- The views expressed are those of the author and do not reflect the official policy of the Department of the Army, the Department of Defense or the U.S. Government



PERFORMANCE PSYCHOLOGY



GOOD VS. GREAT

If training, physical abilities, and background are equal...

What separates a **good** surgeon from a **GREAT** surgeon?



MANAGING COMPLICATIONS



PREP HISTORY



1993 – Center for Enhanced Performance

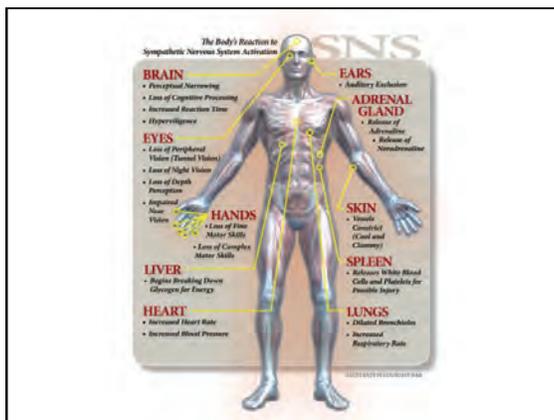
2004 – Army Center for Enhanced Performance (now CSF-PREP)



INTRODUCING A MENTAL SKILLS CURRICULUM INTO AN OPHTHALMOLOGY RESIDENCY: A PILOT PROGRAM - TRAVIS FRAZIER, MD

IMPACT OF STRESS

How does stress affect the body and mind?

WHY DO WE NEED MENTAL SKILLS TRAINING?

- Residency is stressful
- Residents learn on live patients
- Physicians deal with stress and burnout throughout a career



IMPACT OF STRESS ON SURGICAL PERFORMANCE

Surgical stressors include: technical, patient, or equipment problems, teamwork issues, and interruptions
(Arora, et al., 2010)

Stress impaired judgment, decision making and communication
(Wetzel, et al., 2007)



STRESS MANAGEMENT TRAINING FOR SURGEONS

RANDOMIZED, CONTROLLED INTERVENTION STUDY

16 SURGEONS

AVG. 7 YEARS OF SURGICAL EXPERIENCE



STRESS MANAGEMENT TRAINING FOR SURGEONS (CONT.)

Subjective Success Markers

- > Increased Coping Strategy Usage
- > Improved Decision Making



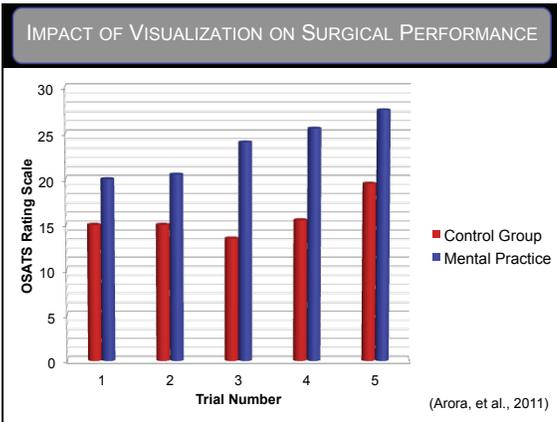
SUCCESS

Objective Success Markers

- > Higher Quality of Surgical End Product
- > Significantly Higher Scores on OSATS
- > Decreases in Physiological Indicators of Stress

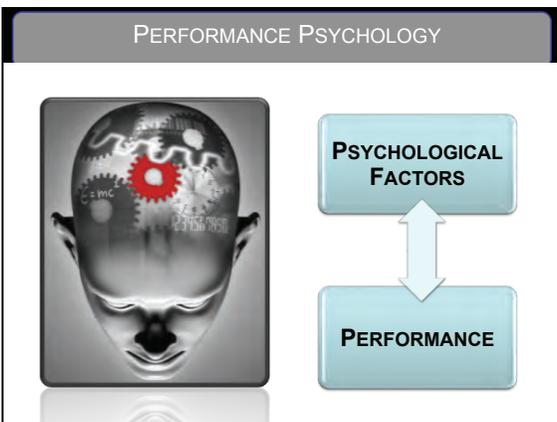
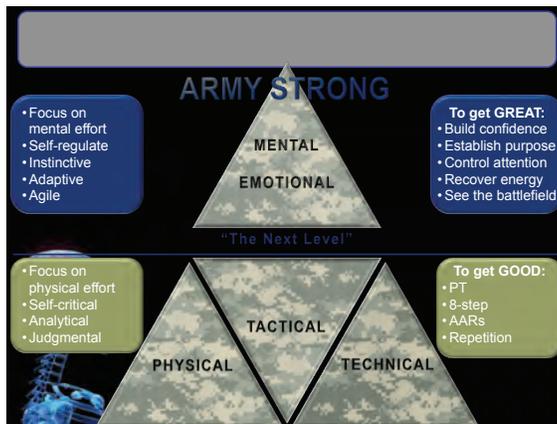
(Wetzel, et al., 2011)

INTRODUCING A MENTAL SKILLS CURRICULUM INTO AN OPHTHALMOLOGY RESIDENCY: A PILOT PROGRAM - TRAVIS FRAZIER, MD



SO WHAT'S THE POINT

Mental skills interventions focusing on **JUST ONE** skill at a time significantly improved performance of both Novice and Experienced Surgeons as compared to "the way it's always been done."



WHAT ARE YOUR "PERFORMANCES"?

Learn and Apply New Material

- Pass Board Exams
- Manages Cases
- Surgery
- Simulation Exercises
- Answer questions from Staff
- Provide Care
- Make Accurate Diagnoses
- Research
- Get Evaluated by Staff
- Attend Grand Rounds
- Rest and Recover
- APFT
- Manage Stress

INTRODUCING A MENTAL SKILLS CURRICULUM INTO AN OPHTHALMOLOGY RESIDENCY: A PILOT PROGRAM - TRAVIS FRAZIER, MD



WHY DO WE NEED MENTAL SKILLS?

- Residency is stressful
 - Sleep dysfunction, substance abuse, relationship problems, Suicide
- Residents learn on live patients
 - Novice surgeons are more likely to have complicated surgery than experienced surgeons
 - Increasing the rate of skill acquisition may improve outcomes
- Physicians deal with stress and burnout throughout a career
 - Teach coping skills early
 - Increase resiliency
 - Military ophthalmologist will work in austere and stressful environments after residency

OBJECTIVE: TRAIN WORLD CLASS RESIDENTS

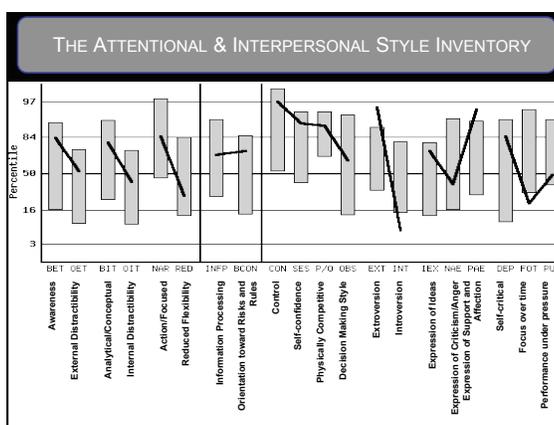
- Intentionally teach residents and staff how to manage stressors to increase surgical performance
- Teach mental skills to address confidence, burnout, and increase resiliency
- Increase awareness of concentration styles, stressors, and mental skill usage to increase performance

RESEARCH OBJECTIVE

- Assess the efficacy of an innovative mental skills curriculum
- Assess the programs ability to
 - Increase self awareness of stressors and unique obstacles to performance
 - Improve the rate and efficiency of learning
 - Teach mental skills for residents use in surgery
 - Increase resident resiliency, address fatigue issues, burnout and poorly managed stress

CURRICULUM DESIGN

1. Residents complete TAIS (The Attentional & Interpersonal Style Inventory)
2. A 4-hour workshop at beginning of academic year
3. Eight 1 hour targeted workshops
4. One-on-One sessions as requested for personalization of skills and/or review TAIS results



INTRODUCING A MENTAL SKILLS CURRICULUM INTO AN OPHTHALMOLOGY RESIDENCY: A PILOT PROGRAM - TRAVIS FRAZIER, MD

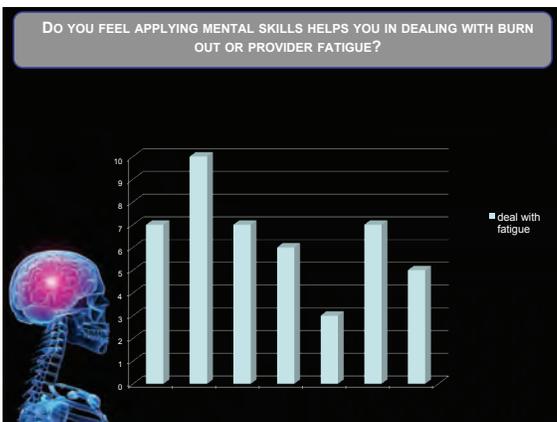
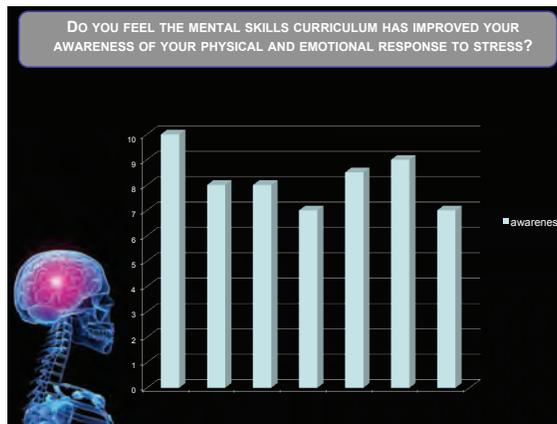
CURRICULUM DESIGN

- TAIS
- **Overview Class – introduce APP**
– 4 hour class
- Group Classes-Workshops
- Personalization and one-sessions as requested




DATA COLLECTION

- Open-ended questionnaire at conclusion of training
- 8 – question feedback likert style survey
- Interviews with residents
- After action review notes from each monthly workshop
- All feedback and after action comments were collected anonymously

RESULTS

- Residents rated attention control as the most useful skill, followed by energy management
- All residents reported an increased awareness of and reported they used mental skills during surgery
- All residents agreed that mental skills training should continue



INTRODUCING A MENTAL SKILLS CURRICULUM INTO AN OPHTHALMOLOGY RESIDENCY: A PILOT PROGRAM - TRAVIS FRAZIER, MD

IMPACT ON SURGICAL PERFORMANCE AND CULTURE



Increased personal and professional awareness
Improved Judgement and Decision making

IMPACT ON SURGICAL PERFORMANCE AND CULTURE (CONT.)



Increase in mental game debriefs
Impact both professional and personal life
Improved ability to manage energy

WAY FORWARD



- Implement deliberate and systematic approach to mental skills training with outcome measures related to complication rates or patient safety
- Adoption of mental skills training amongst other surgical specialties

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REFERENCES

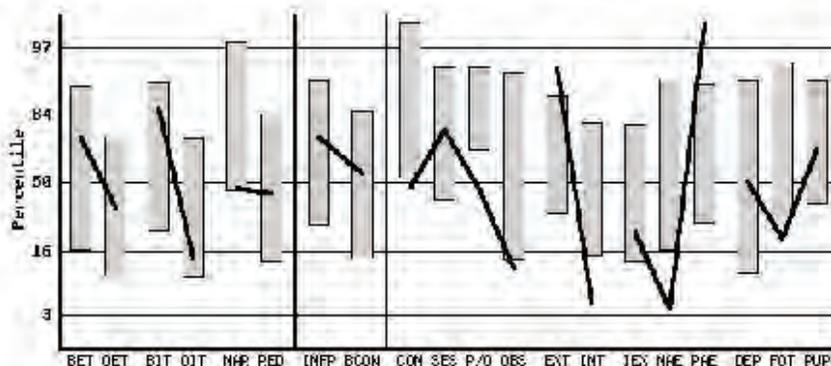
- Arora, S, Sevdalis, N. (2010) The Impact of Stress on Surgical Performance: A Systematic Review of the Literature. *Surgery*, 147, 318-330.
- Arora S, Sevdalis N, Woloshynowych M, Nestel D, Kneebone R (2009) Managing intra-operative stress: what do surgeons want from a crisis training programme? *Am J Surg* 197(4):537-543
- Arora, S, Hall, L. (2010) Factors Compromising Safety in Surgery: Stressful Events in the Operating Room. *The American Journal of Surgery* 199, 60-65.
- Driskell JE, Copper C, Moran A (1994) Does mental practice enhance performance? *J Appl Psychol* 79:481-492
- Gould, D., & Udry, E. (1994). Psychological skills for enhancing performance: Arousal regulation strategies. *Medicine and Science in Sport and Exercise*, 26, 475-478.
- Immerwirth, M, Burger, T. (2007). Mental Training in Surgical Education: A randomized control trial. *Annals of Surgery*, 245, 385-391.
- Locke, E. (1996). Motivation through conscious goal setting. *Applied and Preventative Psychology*, 5, 117-124.
- Nideffer, R. M. (1989). Psychological services for the U.S. track and field team. *The Sport Psychologist*, 3, 350-357.
- Rogers RG (2006) Mental practice and acquisition of motor skills: examples from sports training and surgical education. *Obstet Gynecol Clin North Am* 33:297-304
- Sanders CW, Sadoski M, van Walstum K, Bramson R, Wijnrud R.
- Fossum TW (2008) Learning basic surgical skills with mental imagery: using the simulation centre in the mind. *Med Educ* 42:607-612
- Wetzel, C, Kneebone, R (2006) The Effects of Stress on Surgical Performance. *The American Journal of Surgery*, 191:5-10.
- Zimser, N., Bunker, L., & Williams, J. M. (2001). Cognitive techniques for building confidence and enhancing performance. In J. M. Williams (Ed.) *Applied Sport Psychology: Personal Growth for Peak Performance* (4th ed.) (pp. 294-311). Mountain View, CA: Mayfield.

Mental Skills Training for Ophthalmology Residency Programs

The Attentional and Interpersonal Style (TAIS) Inventory

- TAIS is used around the world for training of high-level performers in sport, business, and the military.
- TAIS measures the specific concentration, and interpersonal skills necessary for effective decision-making, and for the coordination of mental and physical processes in high-pressure situations.
- TAIS results allow the performer and the consultant to build awareness toward the specific environmental conditions likely to facilitate and/or interfere with an individual's ability to perform at the upper limits of their potential.
- TAIS results also allow us to identify the specific mental skills and techniques that can enhance performance.

The TAIS inventory is an online 144 item self-report questionnaire that measures twenty different concentration skills, personal and interpersonal attributes.



The visual graph (above) displays the attentional styles (left), intrapersonal (center), and the interpersonal styles (right) that the Performance Consultant analyzes to customize feedback.

We use the TAIS attentional scales to identify a surgeon's concentration strengths and relative weaknesses. The evaluation of the TAIS scales allows us to anticipate the types of performance situations which are likely to interfere with a surgeon's ability to control emotional arousal. These two pieces of information, combined with an understanding of the concentration skills and interpersonal characteristics required by the performance situation, helps us determine the specific mental skills and techniques that will be most helpful in bringing out strengths and overcoming any identified challenge or problem.

Enhance performance, resiliency and training efficiency

INTRODUCING A MENTAL SKILLS CURRICULUM INTO AN OPHTHALMOLOGY RESIDENCY: A PILOT PROGRAM - TRAVIS FRAZIER, MD

1. Do you feel the mental skills curriculum has improved your awareness of your physical and emotional response to stress?

strongly disagree somewhat agree strongly agree
 0-----1-----2-----3-----4-----5-----6-----7-----8-----9-----10

2. Have you applied mental skills during surgery?

Never sometimes every case
 0-----1-----2-----3-----4-----5-----6-----7-----8-----9-----10

3. Which of the 5 components of the APP have you used to most? Please rank 1 to 5

 1 __ Attention control (includes Refocusing)

 4 __ Goal Setting

 3 __ Mental imagery

 5 __ Recovery

 2 __ Energy Management

4. Do you feel that mental skills use during a surgery has improved your patient outcomes?

strongly disagree somewhat agree strongly agree
 0-----1-----2-----3-----4-----5-----6-----7-----8-----9-----10

5. Do you feel mental skills training enhances your residency experience or satisfaction?

strongly disagree somewhat agree strongly agree
 0-----1-----2-----3-----4-----5-----6-----7-----8-----9-----10

6. Do you feel applying mental skills helps you in dealing with burn out or provider fatigue?

strongly disagree somewhat agree strongly agree
 0-----1-----2-----3-----4-----5-----6-----7-----8-----9-----10

7. Do you use mental imagery to practice for surgery?

Never sometimes every case
 0-----1-----2-----3-----4-----5-----6-----7-----8-----9-----10

8. Do you think we should continue mental skills as part of our training curriculum?

 Yes

 No

Education and Training of Referring Physicians Decreases At-home Call Demand

LÉON-PAUL NOËL, MD AND ABHISHEK NEMANI, MD

BACKGROUND:

Excessive, sometimes unnecessary consultation challenges the ophthalmology resident's ability to obtain adequate rest and personal time while taking at-home call. Basic training of non-ophthalmologists in the assessment and treatment of commonly encountered ophthalmic conditions offers a potential solution to this problem by providing primary caregivers the knowledgebase, tools, and confidence to manage such conditions independently. This study measured ophthalmic consultation requests at a large teaching institution and the impact of an educational intervention on the number and type of requests.

PURPOSE:

This study was conducted to determine if a simple educational intervention could impact the number and type of on-call ophthalmologic consults, with a focus on reducing the ophthalmologic resident at-home call burden and subsequent post-call fatigue.

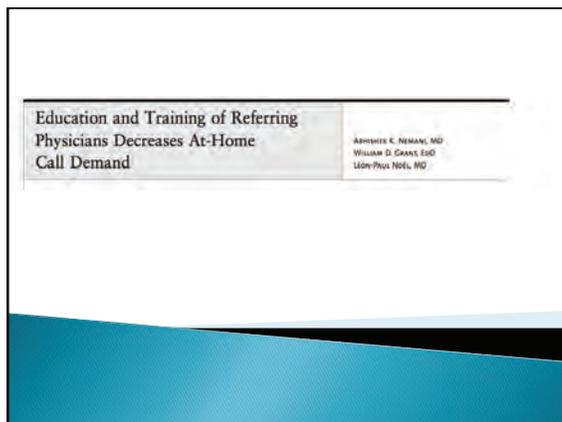
METHODS:

During a 31 day period in 2009 all requests for urgent ophthalmic consultation were logged and characterized by reason for consult, urgency of call, and source of consult. A 3 part educational intervention was targeted to residents and attendings in the departments of emergency medicine (half-day lecture and practice with ophthalmologic techniques), anesthesiology (Grand Rounds lecture), and otolaryngology (guidelines for traumatic orbital fractures). Six months later during the same academic year, a second call-log was conducted over 26 days to evaluate the impact of the intervention.

CONCLUSIONS:

Basic education of non-ophthalmologists in ophthalmic diagnostic and treatment concepts, through relatively brief educational interventions, was associated with a decrease in total consult requests and more appropriate consults in this pilot study at a single institution.

EDUCATION AND TRAINING DECREASES AT-HOME CALL DEMAND - LÉON-PAUL NOËL, MD AND ABHISHEK NEMANI, MD



Emergency Department Visits

- ▶ **2.32 million**
National Hospital Ambulatory Medical Care Survey estimate of ocular-related ED visits in 1993
With 90.3 million ED visits in 1993, this represents **2.57%** of total
- ▶ **136.1 million**
Number of emergency department visits in 2011 (CDC FastStats)
- ▶ **3.50 million**
Estimated number of present ocular-related ED visits/year (applying 1993 data)

ACGME Resident Duty Hours

- ▶ **Maximum Duty Period Length**
 - Residents must not be assigned additional clinical responsibilities after 24 hours of continuous **in-house duty**
- ▶ **Minimum Time Off between Scheduled Duty Periods**
 - Residents should have 10 hours free of duty, and must have eight hours between **scheduled** duty periods
 - They must have at least 14 hours free of duty after 24 hours of **in-house duty**

At-home call

- ▶ Time spent in the hospital by residents on at-home call must count towards the 80-hour maximum weekly hour limit
- ▶ Must not be so frequent or taxing as to preclude rest or reasonable personal time for each resident
- ▶ Residents are permitted to return to the hospital while on at-home call to care for new or established patients

Balancing the Equation

- ▶ **Training nonophthalmologists**
 - Common conditions
 - Assessment of visual acuity and physical examination
 - Minimize unnecessary ophthalmic consultation
- ▶ **More efficient use of specialist resources**
- ▶ **Less demand on on-call ophthalmology residents training in era of increasing duty hour limits**
- ▶ **Study designed to test this hypothesis**
 - Impact of simple educational interventions on number and type of on-call consultations
 - Aimed at reducing resident at-home call burden and postcall fatigue

Methods

- ▶ Identified major sources of after-hours consultation requests
 - Emergency Medicine
 - Anesthesia
 - Otolaryngology
- ▶ Three separate educational interventions
- ▶ Repeated call-log six months later
- ▶ Compared the 2 data sets

One-month call-log	
Time of request	
Physician requesting consultation	
Suspected diagnosis	
Duration of consultation	
Sense of urgency	
Final diagnosis	
Treatment provided	

EDUCATION AND TRAINING DECREASES AT-HOME CALL DEMAND - LÉON-PAUL NOËL, MD AND ABHISHEK NEMANI, MD

Educational Interventions

- Emergency Medicine
 - 2 half-day training sessions
- Ophthalmology residents discussed evaluation, diagnosis, and management of commonly encountered ocular emergencies with EM residents and attendings
- Hands-on tutorial demonstrating correct use of ophthalmic slit-lamp



Educational Interventions

- Anesthesia
 - Grand rounds presentation focusing on perioperative ophthalmic care and treatment of common anesthesia-related ocular complications




Educational Interventions

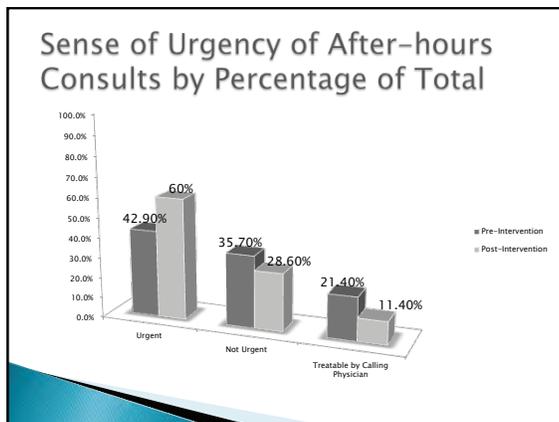
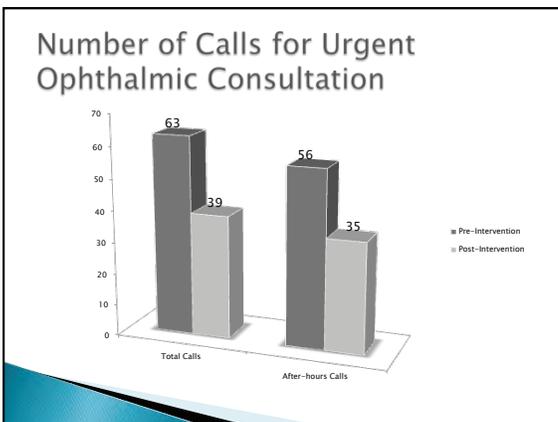
- Otolaryngology
 - Guidelines addressing management of traumatic orbital fractures not needing immediate surgical attention

Urgent ophthalmic consultation recommended if any one of the following are present on examination:
1. Visual acuity less than 20/80
2. Obvious globe penetration or eyelid laceration
3. Pupil irregularity
4. 360° of subconjunctival hemorrhage
5. Orbital emphysema resulting in marked proptosis
6. CT scan evidence of globe deformity and/or bony impingement of the optic nerve

Abbreviation: CT, computed tomography.

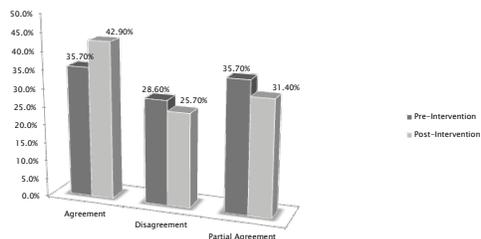
Results

Urgent	Not Urgent	Treatable by Calling Physician
eyelid laceration	Nontraumatic cataract	Chemical exposure
hyphema	Dry eye	Conjunctivitis
iritis	Monocular diplopia	Corneal abrasion
retinal vascular occlusion	Refractive error	External foreign body
Ruptured globe	Visually asymptomatic orbital fracture	Subconjunctival hemorrhage



EDUCATION AND TRAINING DECREASES AT-HOME CALL DEMAND - LÉON-PAUL NOËL, MD AND ABHISHEK NEMANI, MD

Comparison of Initial and Final Diagnoses for After-hours consults by percentage of total



Discussion

- ▶ Comparison of preintervention and postintervention data
 - Objective decrease in number of total and after-hours calls received
 - Improvement in appropriateness of consults requested
- ▶ Limitations
 - Preintervention data collected early in academic year
 - No power calculation
 - Educational intervention may have been too weak (i.e. small effect size)
 - Small sample size
- ▶ No clinically adverse visual outcomes or events occurred for any patients seen in follow-up
 - All patients referred for next-day follow-up were treated appropriately
- ▶ Interventions appeared to be well received and have been continued since with few resources as part of the usual resident teaching time

Conclusions

- ▶ Basic education of nonophthalmologists in ophthalmic diagnostic and treatment concepts through 3 brief cross-discipline educational interventions associated with
 - Decrease in total consultation requests
 - Increase in preconsultation and postconsultation agreement on diagnosis

References

1. Ezra DG, Mellington F, Cugnani H, Westcott M. Reliability of ophthalmic accident and emergency referrals: a new role for the emergency nurse practitioner? *Emergency Medicine Journal*. 2005; 22(10): 696-699.
2. Flitcroft DJ, Westcott M, Wormald R, Touquet R. Who should see eye casualties?: a comparison of eye care in an accident and emergency department with a dedicated eye casualty. *Journal of Accident and Emergency Medicine*. 1995; 12(1): 23-27.
3. Joshi RS. Study of referral pattern to ophthalmology outpatient department from various departments in the medical college. *Journal of the Indian Medical Association*. 2011; 109(2): 72-81, 82.
4. Schachat AP, McDonnell PJ, Petty BG, Jampel HD, Patel A, Wittpenn JR, Rapoza PA. Ophthalmology consultations at a large teaching hospital. *Metabolic, Pediatric, and Systemic Ophthalmology*. 1989; 12(4): 105-109.
5. Tan MMS, Driscoll PA, Marsden JE. Management of eye emergencies in the accident and emergency department by senior house officers: a national survey. *Journal of Accident and Emergency Medicine*. 1997; 14: 157-158.
6. Accreditation Council for Graduate Medical Education. Common Program Requirements. Available at: <http://www.acgme.org>. Accessed July 1, 2011.

Transforming Existing Resident Performance Data into Actionable EPAs

JONATHAN M SKARIE, MD, PHD

BACKGROUND:

The Next Accreditation System (NAS) from ACGME shifts from teaching to performance milestones. Systematically identifying milestone performance gaps is essential and challenging given limited curriculum time and breadth of our specialty. Reconsidering performance gaps as entrusted professional activities (EPA's), provides a framework for systematic needs assessment.

PURPOSE:

To use a systematic approach to identify performance gaps and reframe as EPAs within ophthalmology residency programs using geriatrics as an exemplar area.

METHODS:

Data sets available to every residency program (e.g., OKAP key word and performance metrics, faculty assessments) were coded using ophthalmology geriatrics focused content drawn from literature and textbooks, and gaps were identified. These gaps were then transformed into an observable performance activity consistent with what a faculty would "entrust" a resident to perform. Using surveys, faculty rated the supervision level needed for graduating residents and residents rated current ability to perform each activity.

CONCLUSIONS:

Fourteen geriatrics EPAs were formulated from data sets. Resident/faculty ratings resulted in specific targeted needs (e.g., systemic and glaucoma medications) for instruction and follow-up assessment. Use of EPA-based needs assessment was an intuitive, efficient and generalizable strategy to coalesce multiple data sets into an actionable strategy to improve resident education.

Incorporating Kitaro in the Wet Lab Curriculum

YOUSUF M. KHALIFA, MD

BACKGROUND:

Simulation in ophthalmology surgical training gravitates to porcine eyes, which serve as a good medium for teaching wound construction and wound closure but is poor in teaching intraocular techniques. The Kitaro Wet Lab is a recent addition in wet lab simulation, and its incorporation in the wet lab curriculum may mitigate some of the limitations of porcine eye simulation.

PURPOSE:

To better teach capsulorrhexis and phacoemulsification to residents in a wet lab setting using the Kitaro system.

METHODS:

A six week curriculum was developed with weekly didactic and live demonstrations in the wet lab using the Kitaro system in a step-wise progression through cataract surgery. Residents were assigned a task to complete under video recording and submitted their videos for grading. An adaptation of the Subjective Phacoemulsification Skills Assessment grading system was utilized and weekly evaluations were provided to the residents and faculty.

CONCLUSIONS:

Kitaro Wet lab can be easily incorporated into the surgical training curriculum where its main advantage is simulation of capsulorrhexis and phacoemulsification. Video recorded assignments promote focused resident training and allow for more useful feedback.

A Residency Program with Online Teaching: An Exercise in Social Entrepreneurship

RAMESH AYYALA, MD, FRCS

BACKGROUND:

Of the 285 million visually impaired worldwide, the majority live in developing countries with scant resources. I propose to tackle this problem by supplementing local resources and training using online teaching.

PURPOSE:

The specific aims of this project are: 1. Identify communities that lack trained doctors; 2. Use local resources to provide the patient base for teaching; and 3. Establish a structured curriculum to train residents.

METHODS:

India is home to 24 million blind people, with significant reversible causes such as cataracts, glaucoma and diabetes. India needs an additional 300 residents to meet increasing population demands. Hyderabad in central south India with 10 million population served by 3 medical schools has been identified as the location to establish a hospital system dedicated to resident training. A core team with experience in building hospital systems and establishing training programs was assembled. Anand Eye Institute (AEI), a modern tertiary care hospital, has been built and opened to the public on July 29th, 2012. The online curriculum is being developed and resident enrollment will commence July 2014.

CONCLUSIONS:

AEI, a tertiary care eye center, is successfully established in Hyderabad, India, with the intention of supplementing resident training using an online residency program.

Outcomes of Cataract Extraction in Eyes with 20/400 or Worse Cataracts Stratified by Level of Training

SANDRA M. JOHNSON, MD AND ERIC AREITER

BACKGROUND:

Our department cares for approximately 100 legally blind eyes associated with advanced cataract each year. Our residents acquire the requisite number of primary cataract surgeries while on their Veteran's Administration (VA) Hospital rotation and we would like to assess whether outcomes for these surgeries differ before or after this rotation. It may be that the advanced nature of the cataract is associated with complications that are not related to the surgeon's level of training. We hope to determine if these cases need to be assigned based on level of training.

PURPOSE:

This project is to determine visual outcomes, vitreous loss and posterior capsule tear related to surgery for advanced cataract based on level of the surgeon. It will also identify co-morbidities and demographics associated with this population.

METHODS:

This is a retrospective chart review of eyes that underwent cataract extraction at the University of Virginia identified by reviewing surgical logs from April 2008 up to October 2012. Inclusion criteria are 20/400 or worse pre-operative vision with a cataract consistent with the vision. Demographic information are collected. Ocular history of co-morbidities are recorded and operative notes are reviewed. We are consulting with our bio-statistics department for analysis.

CONCLUSIONS:

To date, data has been collected on 333 surgeries. There is improved vision in 89 percent, and there is an overall 4.8% rate of vitreous loss for these advanced cases with not much difference between the surgeon groups. Complete data will be presented. Further analysis is being done regarding patients who lost vision and eyes which had no IOL placed.

OUTCOMES OF CATARACT EXTRACTION - SANDRA M. JOHNSON, MD AND ERIC AREITER

Residency and Mature Cataracts



Sandra M. Johnson, MD
Associate Professor
Program Director
University of Virginia

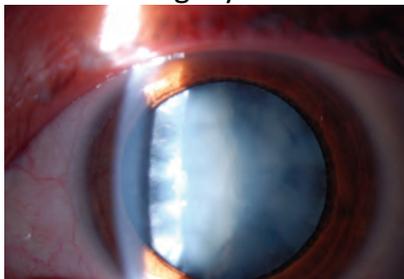
CE/IOL in Perspective

- The highest number of this procedure required in training
- The backbone of general ophthalmology and resident surgical experience
- Not all cataracts are equal



<http://www.dambrosio-eye-care-boston.com/cataract-surgery-lens-implants.html>

Legally Blind



Mature Cataracts

- These cataracts are not that uncommon in populations cared for by my residents who delay surgery for cataracts
- Indigent Patients who delay
- Unilateral Traumatic or Amblyopic Cats
- Immigrant Populations
- Institutionalized Patients



Mature Cats

- Where do they fit into residency?
- Should we use them to teach ECCE?
- How much more morbidity for these pts?
- Are they generally happy even there are complications? Hard to be much worse than they are pre-op

Scarce Literature

- A body of literature exists on resident CE/IOL
- Most literature on mature cats is from developing nations where they are common
- Not much mainstream interest as likely a small portion of a general eye practice – even referred purposely to residencies due to the extra time required

OUTCOMES OF CATARACT EXTRACTION - SANDRA M. JOHNSON, MD AND ERIC AREITER

Likely More Risks

- Very dense NS = more phaco time and corneal edema
- Little cortex and epinucleus leaves PC vulnerable
- Mature lenses may have weak zonules or hx of trauma with weak zonules
- Mature lenses may have intralenticular pressure and despite vision blue, rhexis can be difficult – tendency to radialize
- The lost art of ECCE with better phaco

UVA Mature Cat Experience

- We have about 100 per year in the dept.
- We are attempting to evaluate the outcomes with supervised residents completing the cases vs attendings- review of about 350 cases
- We are looking at pre and post VA experience; where residents complete their required number of bread and butter and Flomax cases
- Outcomes include improvement in vision and types of complications vs what is reported for CE/IOL in the literature

General Res Cat References

- Englesbe MJ, Pelletier SJ, Magee JC, Gauger P, Schiffner T, Henderson WG, Khuri SF, Campbell DA. Seasonal variation in surgical outcomes as measured by the American College of Surgeons-National Surgical Quality Improvement Program (ACS-NSQIP). *Ann Surg*. 2007 Sep;246(3):456-62; discussion 463-5.
- Hoxler MB, Scott BJ, Kunselman AB, Wolford KB, Oltra EZ, Murray WB. Impact of resident participation in cataract surgery on operative time and cost. *Ophthalmology*. 2012 Jan;119(1):95-8.
- Bhagat N, Nissirios N, Botdevin L, Chung J, Lama P, Zorbin MA, Fechner B, Guo S, Chiu D, Langer P. Complications in resident-performed phacoemulsification cataract surgery at New Jersey Medical School. *Br J Ophthalmol*. 2007 Oct;91(10):1315-7.
- Blomquist PH, Nugwan RM. Visual outcomes after vitreous loss during cataract surgery performed by residents. *J Cataract Refract Surg*. 2002 May;28(5):847-52.
- Rogers GM, Dietling TA, Lee AG, Grignon C, Greenlee E, Johnson AT, Beaver HA, Carter K. Impact of a structured surgical curriculum on ophthalmic resident cataract surgery complication rates. *J Cataract Refract Surg*. 2009 Nov;35(11):1956-60.
- Paul D, O'Brien, FRCS, Patricia Fitzpatrick, FFPHM, Dara J. Kilmartin, FRCOphth, Stephen Beatty, MD. Risk factors for endothelial cell loss after phacoemulsification surgery by a junior resident. *J Cataract Refract Surg*. 2004; 30:839-843
- David A. Quillen, MD, and Stephen J. Phipps, MD. Visual Outcomes and Incidence of Vitreous Loss for Residents Performing Phacoemulsification Without Prior Planned Extracapsular Cataract Extraction Experience. *Am J Ophthalmol* 2009;135: 732-3.

REFS Related to MATURE CAT

- Hüseyin Bayramlar, MD; Ibrahim F. Hepsen, MD; Harun Yilmaz, MD. Mature cataracts increase risk of capsular complications in manual small-incision cataract surgery of pseudoexfoliative eyes. *Can J Ophthalmol* 2007;42:46-50
- Suzann Pershinga and Abha Kumarb. Phacoemulsification versus extracapsular cataract extraction: where do we stand? *Current Opinion in Ophthalmology* 2011, 22:37-42
- PP Syam, H Eleftheriadis, AG Casswell, GP Brittain, BK McLeod and CSC Liu. Clinical outcome following cataract surgery in very elderly patients. *Eye* (2004) 18, 59-62.
- Stuart A Osborne, Phillip Severn, Catey V Bunce and Scott G Fraser. The use of a pre-operative scoring system for the prediction of phacoemulsification case difficulty and the selection of appropriate cases to be performed by trainees. *BMC Ophthalmology* 2006, 6:38 doi:10.1186/1471-2415-6-38.
- Francis Char DeCroos, Jessica H. Chow, Prashant Garg, Ratnesh Sharma, Neha Bharti, Christopher S. Boehlke. Analysis of resident-performed manual small incision cataract surgery (MSICS): an efficacious approach to mature cataracts. *Int Ophthalmol* July 13, 2012 on line.
- Preston H. Blomquist, MD, Marlene E. Morales, MD, Liyue Tong, MS, Chul Ahn, PhD. Risk factors for vitreous complications in resident-performed phacoemulsification surgery. *J Cataract Refract Surg* 2012; 38:208-214

NOTES

Resident Conformance with the AAO PPP for Primary Open Angle Glaucoma

PRATAP CHALLA, MD

PURPOSE:

To examine resident adherence to preferred practice pattern (PPP) guidelines set up by the American Academy of Ophthalmology (AAO) for follow up care of primary open angle glaucoma (POAG) patients.

DESIGN:

Retrospective chart review

PARTICIPANTS:

103 charts were selected for analysis from all patients with an ICD-9 classification of open angle glaucoma (OAG) or its related entities who underwent a follow-up evaluation between July 2, 2003 to December 15, 2004 at the resident ophthalmology clinic in the Durham Veteran Affairs Medical Center (VAMC).

METHODS:

Follow up visits of POAG patients were evaluated for documentation of 19 elements in accordance to PPP guidelines.

MAIN OUTCOME MEASURES:

Compliance rates for the 19 elements of practice guidelines were first averaged in all charts, and then averaged per resident and compared among 8 residents between their first and second years of residency.

RESULTS:

The overall mean compliance rate for all 19 elements was 82.6% for all charts (n=103), 78.8% for first year residents (n=8) and 81.7% for second year residents (n=8). The increase from first to second year of residency is not significant (P>0.05). Documentation rates were high (>90%) for 14 elements, including all components of the physical exam and follow up as well as most components of the exam history and management plan. Residents documented adjusting target intraocular pressure (IOP) downward, local or systemic problems with medications, and impact of visual function on daily living approximately 50% to 80% of the time. Documentation rates for components of patient education were the lowest, between 5% and 16% in all charts.

CONCLUSIONS:

Residents' compliance with PPP guidelines for a POAG follow up visit was satisfactory for the majority of elements but documentation rates for components of patient education can be improved substantially. Adherence rates to PPP guidelines can be used as a tool to evaluate and improve resident performance during training. More research is required to study if adherence to compliance guidelines impacts patient outcomes.

Residents as Educators - A Novel Approach

MICHELLE DIAZ, MD AND SANDEEP GROVER, MD

BACKGROUND:

Ophthalmology residents in the majority of the programs teach medical students and other specialty residents. However, there is no curriculum for residents teaching ophthalmic technicians.

PURPOSE:

This study was conducted to assess the feasibility and effectiveness of first year ophthalmology residents formally teaching the ophthalmic technicians of the department on a regular basis throughout the year.

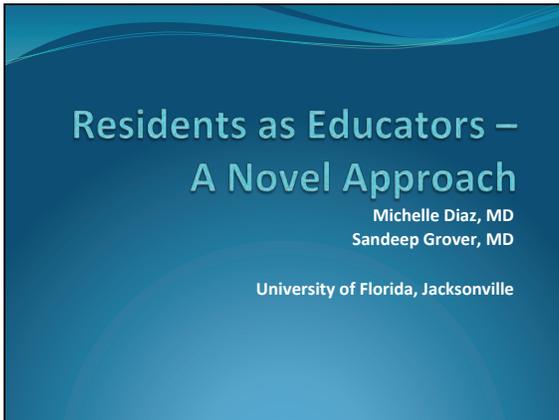
METHODS:

A curriculum was developed and the first year residents, by rotation, delivered weekly 30-minute lectures and/or hands-on demonstration of ophthalmic examination techniques and instrumentation to all the ophthalmic technicians. The whole curriculum was completed over a period of one year. Constructive feedback was given to the presenting resident after each session by other residents and faculty. The technicians evaluated the residents as part of the 360 evaluations. The technicians were formally tested every 3 months to evaluate their medical knowledge.

CONCLUSIONS:

The "residents as educators" program enhanced the medical knowledge, interpersonal communication skills and professionalism in the residents. This provides an opportunity for the residents to develop active learning, teaching and leadership skills. This program has been in place for 4 years and based on positive feedback from technicians and residents, has become an integral part of resident education.

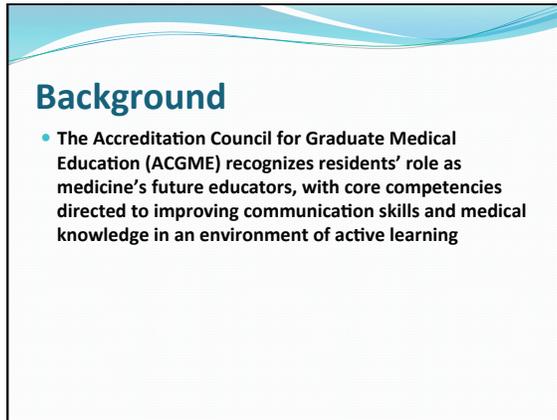
RESIDENTS AS EDUCATORS - A NOVEL APPROACH - MICHELLE DIAZ, MD AND SANDEEP GROVER, MD



**Residents as Educators –
A Novel Approach**

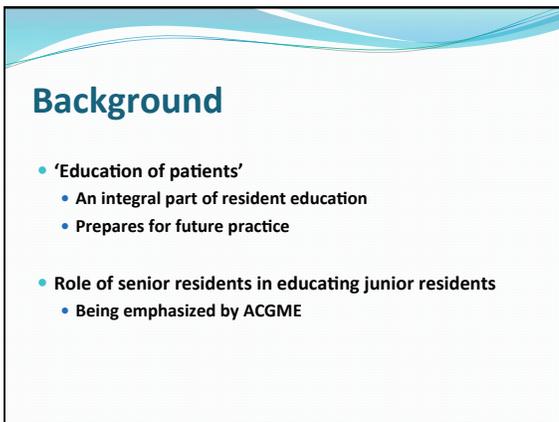
Michelle Diaz, MD
Sandeep Grover, MD

University of Florida, Jacksonville



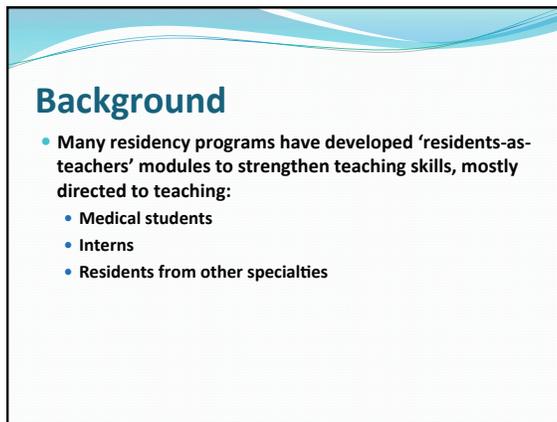
Background

- The Accreditation Council for Graduate Medical Education (ACGME) recognizes residents’ role as medicine’s future educators, with core competencies directed to improving communication skills and medical knowledge in an environment of active learning



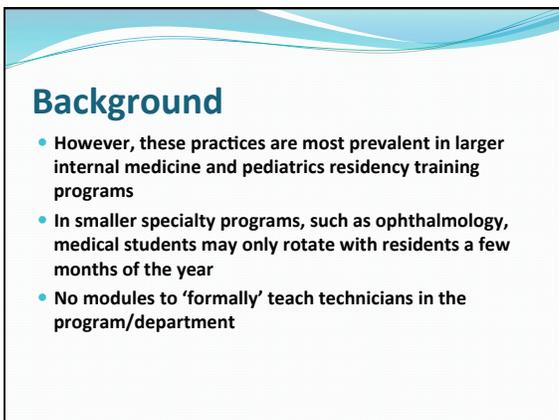
Background

- ‘Education of patients’
 - An integral part of resident education
 - Prepares for future practice
- Role of senior residents in educating junior residents
 - Being emphasized by ACGME



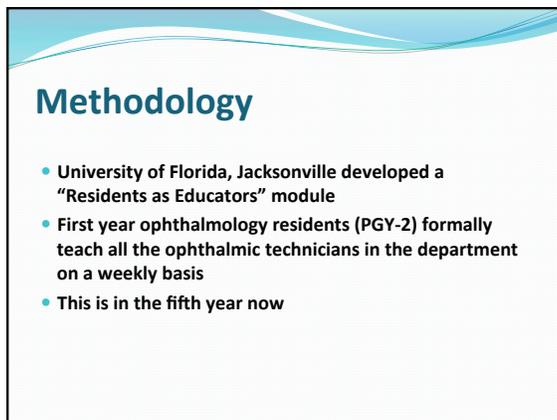
Background

- Many residency programs have developed ‘residents-as-teachers’ modules to strengthen teaching skills, mostly directed to teaching:
 - Medical students
 - Interns
 - Residents from other specialties



Background

- However, these practices are most prevalent in larger internal medicine and pediatrics residency training programs
- In smaller specialty programs, such as ophthalmology, medical students may only rotate with residents a few months of the year
- No modules to ‘formally’ teach technicians in the program/department



Methodology

- University of Florida, Jacksonville developed a “Residents as Educators” module
- First year ophthalmology residents (PGY-2) formally teach all the ophthalmic technicians in the department on a weekly basis
- This is in the fifth year now

RESIDENTS AS EDUCATORS - A NOVEL APPROACH - MICHELLE DIAZ, MD AND SANDEEP GROVER, MD

Methodology

- Based on a curriculum developed according to the requirements for Joint Commission on Allied Health Personnel in Ophthalmology (JCAHPO) Certified Ophthalmic Technician (COT) exam
- The curriculum is completed in a one year cycle
- 30-minutes lecture/hands-on/demo once a week
- Improvement of curriculum based on input from the techs

Methodology

- **Topics:**
 - Ocular anatomy
 - History-taking
 - Ophthalmic examination techniques
 - Clinical optics
 - Ophthalmic testing and use of equipment
 - Ophthalmic diseases
 - Ocular pharmacology

Methodology

- Teaching by first year residents
- All other residents in the room:
 - For helping out, if necessary
 - For feedback to the presenter

Methodology

- All residents and a supervising faculty member are always present in the classroom
- Positive feedback and subjective evaluation are provided after each lecture by the faculty member and senior residents
- The technicians evaluate the residents as part of the 360 evaluation twice a year
- The technicians are tested every 3 months for their medical knowledge

Advantages - Residents

- **Medical Knowledge**
 - 'Active learning through teaching' – as first year resident
 - Develop confidence in answering questions
- **Interpersonal Skills**
 - Development of interpersonal relationships between residents and technicians
- **Communication Skills**
 - Improves teaching skills
 - Enhances resident presentation techniques
 - Prepares residents for public education experience
- **Professionalism**
 - Prepares the resident as a role model for the technicians

Advantages - Technicians

- Enhances medical knowledge
- Enhances interpersonal relationship between the residents and techs
- Techs play a role in development of the curriculum depending on the 'mix'
- Evaluation on a regular basis (tests)
- Test scores are linked to their salary structure
- Improvement of clinical skills – improves quality of patient care!

RESIDENTS AS EDUCATORS - A NOVEL APPROACH - MICHELLE DIAZ, MD AND SANDEEP GROVER, MD

Conclusion

- **Excellent and successful model where both the 'teacher' and the 'taught' benefit**
- **Has been accepted very well by the residents and the techs**

Thanks!

- K.V.Chalam, MD PhD
- Amy Kelmenson, MD
- Dan Hwang, MD
- Carolee Cutler-Peck, MD
- Jayson Edwards, MD
- Don Davis, MD
- Wassia Khaja, MD
- Ravi K. Murthy, MD
- Chad Hummel, MD
- Chad Kaplan, MD
- Kathryn MacKenzie

Effects of an Intensive Review Course on Residents and Fellows

MARK LELLI

BACKGROUND:

To pursue the possibility of using an intensive review course to establish a baseline of knowledge for students from all institutions and year of study.

PURPOSE:

To analyze the effects of an intensive review course on the standardized test scores and performance of residents and fellows from different institutions

METHODS:

Residents and fellows from multiple institutions were subjected to a 3 day intensive review course. Performance was measured via pre and post-test results. Results were also correlated to USMLE and OKAP performance. Results were analyzed with statistical analysis based on comparing means and correlational studies.

CONCLUSIONS:

The program had the desired effect of bringing students from different academic institutions and levels of study to the same level. Participants of the course from different institutions and year of study differed significantly from each other at the beginning of the course ($p < 0.05$ for most comparisons). After the course, residents of all years and institutions did not have any significant differences in mean scores ($p > 0.05$). Higher scores also are very close to being correlated to higher OKAP scores ($p = 0.083$). This study indicates that intensive review courses are beneficial both to short-term and long-term success.

EFFECTS OF AN INTENSIVE REVIEW COURSE ON RESIDENTS AND FELLOWS - MARK LELLI

Effects of an Intensive Review Course on Residents and Fellows

Researcher: Shahzad Mian
Presenter: Mark Lelli



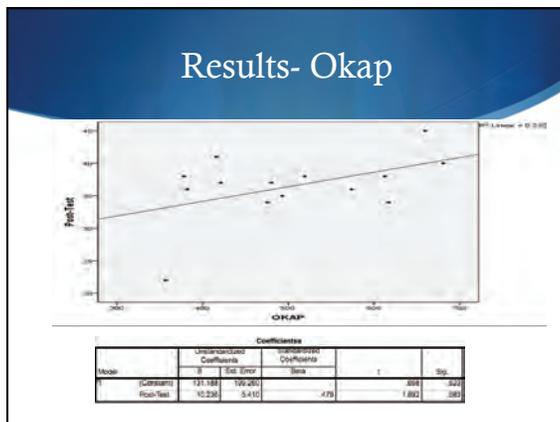
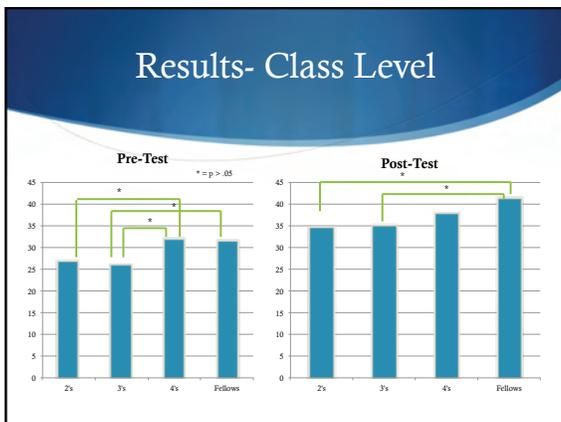
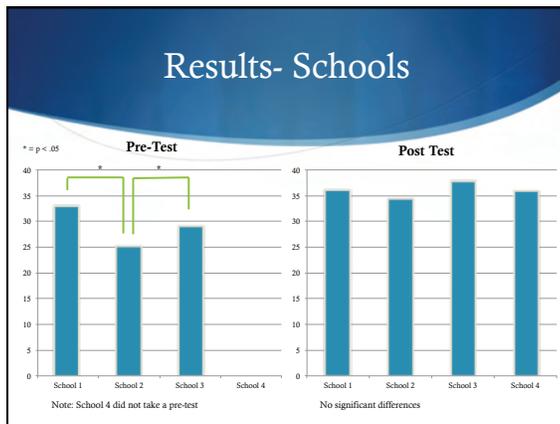
Background: Intensive Review Courses

- ◆ Intensive Review Courses tend to have a strong effect in improving overall scores for students
- ◆ Intensive review courses tend to be very successful for establishing a baseline in current students
- ◆ Review courses can be effective even for medical residents

Methods



- ◆ Residents and fellows from 4 different Midwestern institutions participated in an intensive 3 day ophthalmological review course.
- ◆ Performance was measured via a pre-test and post-test to determine a baseline and improvement
- ◆ Results were analyzed by both institution and year of study
- ◆ The results were analyzed statistically using t-test and correlation data to USMLE and OKAP scores



EFFECTS OF AN INTENSIVE REVIEW COURSE ON RESIDENTS AND FELLOWS - MARK LELLI

Discussion

- ◆ Overall, resident scores were vastly different from pre to post-test with an average change of 8.26 points.
- ◆ Before the course, residents differed significantly between schools and level of study
- ◆ After the course, residents had no significant differences based on school and few differences based on level of schooling
- ◆ Fellows differed significantly from first and second year residents and showed a much greater increase in score

Discussion

- ◆ With a relatively low sample size a significant improvement in overall scores and elimination of differences was achieved
- ◆ The fellows higher overall increase could signal that they merely used the course as a refresher while the residents gained new information
- ◆ The fellows also scored lower than the residents during the pre-test so it is possible the fellows merely underperformed during the pre-test
- ◆ OKAP scores suggested a correlation with post test scores but did not reach the threshold of significance
- ◆ Correlation between Pretest and Posttest scores for USMLE scores did not reveal any significant data
- ◆ Sample sizes were also much smaller for USMLE scores as there was limited data available

Future Directions and Limitations

- ◆ Over the next future years, future directions will include following the current students to determine if there is a lasting affect of the program
- ◆ Also, the program will continue in future years in order to gather more data and possibly discover more findings
- ◆ One limitation of the study are obviously very small sample size of about 60 students overall in a two-year span
- ◆ Another limitation is cultural factors as all of the students are taken from 4 Midwestern medical schools
- ◆ There may also be a ceiling affect as, being medical students, all of the test takers are of high intelligence to begin

References

Developing a Resident Research Handbook

RACHELLE REBONG, MD, ANNE FUNG, MD AND SUSAN DAY, MD

BACKGROUND:

The pursuit of research activities is an important part of ophthalmology residency and is in fact required by current ACGME guidelines. However, teaching on research skills is largely variable and often times unavailable.

PURPOSE:

To create a reference guide and handbook outlining the key steps in carrying out an independent research project.

METHODS:

Based on information from current literature as well as our experiences guiding residents through research activities in our home program, we compiled information on the key steps in carrying out an independent research project. The handbook walks residents through the process of developing an idea, generating a hypothesis, designing the study, getting IRB approval, collecting and analyzing data, and presenting the results. We include practical tips, provide explanations of important terms and suggest references for further reading where appropriate.

CONCLUSIONS:

The pursuit of research activities is an integral part of residency training, both to prepare residents to carry out future research projects and to teach residents to become critical readers of medical literature. Our research handbook serves as a guide and reference for residents carrying out independent research projects.

DEVELOPING A RESIDENT RESEARCH HANDBOOK - RACHELLE REBONG, MD, ANNE FUNG, MD AND SUSAN DAY, MD**Resident Research Handbook Table of Contents**

I. Introduction

II. Developing an idea

- A. Observe, question, and listen
- B. Finding a mentor
- C. Generating a hypothesis

III. Designing the study

- A. Is this idea feasible?
 - 1. Pre-writing exercise
 - 2. A word on funding
- B. Clinical research study design

IV. Statistical considerations

V. Institutional Review Board regulations

- A. What is the IRB?
- B. Human Subjects Protection training

VI. Conducting research

- A. Data collection sheets
- B. Final vs. interval visual acuity
- C. Snellen vs. ETDRS vs. logmar vision

VII. Presenting data

- A. Writing an abstract
- B. Preparing a poster
- C. Preparing a presentation
- D. Writing a manuscript

BUILDING A MENTORING RELATIONSHIP THAT MATTERS: TOOLS FOR SUCCESS - LUANNE THORNDYKE, MD

Mentoring : a Tool for your Professional Development Toolbox
Office of Faculty Affairs, University of Massachusetts Medical School

Association of University Professors of Ophthalmology
 Annual Meeting

Mentoring: a Tool for your Professional Development Toolbox

Luanne E. Thorndyke, MD, FACP
*Office of Faculty Affairs
 University of Massachusetts Medical School*



Workshop Agenda



- I. Perspectives on Mentoring (30 min)
 - Panel Presentations with Audience Discussion
- II. Overview of Mentoring (40 min)
 - Personal: *Obtaining mentoring*
 - Programmatic: *Example of a formal program and Lessons Learned*
- III. How do we know Mentoring is Good? (10 min)
- IV. Summary and Questions (10 min)

The goals of this session are both personal and professional/administrative:

1. Provide **faculty participants** with the insight and tools to enable them to realize their potential through **mentoring**:
 - how to identify an appropriate mentor
 - how to manage a mentoring relationship
2. Illustrate elements of **structured mentoring programs** that will enhance success for participants and organizations:
 - models for mentoring programs
 - elements of effective mentoring programs

Panel Discussion: Perspectives on Mentoring

- **Laura L. Wayman, M.D.**
 Comprehensive Ophthalmology
 Director of Resident Education
 Vice Chair for Education
 Vanderbilt Eye Institute
- **Laura K. Green, M.D.**
 Residency Program Director
 Cornea, Cataract and Refractive Surgery
 Krieger Eye Institute
 Sinai Hospital of Baltimore
- **R. Michael Siatkowski, MD**
 James P. Luton Professor of Ophthalmology
 Vice Chair for Academic Affairs
 Residency Program Director

**Gaining clarity on goals and expectations:
 What is mentoring?**

“Mentoring is a dynamic, reciprocal relationship in a work environment between an advanced career incumbent and a beginner aimed at *promoting the development of both.*”
Healy, Educ Res 1990, 19 17-21

The mentor will... “assist and *facilitate the realization of the dream.*”
Levinson DJ *The Seasons of a Man’s Life* 1978

How do these definitions resonate with your own concept (and expectations) of mentoring?

Mentoring is BOTH process and relationship




<p>Teaching-learning <i>process</i></p> <ul style="list-style-type: none"> • Convey knowledge • Develop skills • Coaching: Instruction • Assessment and feedback 	<p>Supportive <i>relationship</i></p> <ul style="list-style-type: none"> • Built upon Trust • Friendship • Counseling • Sponsorship
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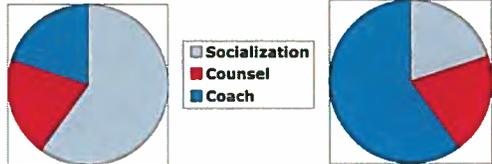
Mentoring : a Tool for your Professional Development Toolbox

Office of Faculty Affairs, University of Massachusetts Medical School

Mentor responsibilities fall into 3 categories* socialization, coaching/education, counseling. The effort distribution varies, depending on need.

Clarifying Mentor roles and responsibilities:

'On-boarding mentor' vs. 'Research mentor'



*Sambunjak et al. JAMA 2006

A Mentor is someone with more experience, who can provide advice and guidance

Learn the system, politics, culture (socialization) 

Identify resources, people (socialization)

Provide introductions and invitations (socialization)

Provide instruction and feedback (coaching)

Challenge to "be all that you can be" (coaching)

Provide perspective on work-life integration (counseling)

Provide support during challenges & failures (counseling)

The Traditional Model of Mentoring is a dyadic pair: one mentor, one mentee

Mentor selects protégé (mentee)

Mentee is provided with a single source of guidance and support

Relationship encompasses all aspects of mentoring (socialization, coaching, counsel)

Success dependent on the "chemistry" of the relationship



Telemachus and Mentor
Pablo Fabisch

Yet, mentoring occurs in many different forms and multiple models of mentoring are "successful"



Think about a *positive* mentoring experience that you have had in your professional life...

- What were the benefits of the experience?
- What were the outcomes of the experience?
- Why did it work?



How does one find a mentor?

Clarify your needs—what guidance are you seeking?

Who has the expertise to provide that guidance?

Identify and seek out potential mentors

Look for exceptional role models

Guidance on grant writing	→	Successful externally-funded senior faculty
Advice on work-life integration/balance	→	Faculty member who mirrors your work-life
Career counseling	→	A role model you emulate

A single mentor may not meet all your needs!

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To obtain effective mentoring, YOU need to navigate and manage the Mentoring Relationship

- Ask for help with specific requests
- Establish expectations for both mentor & mentee (a mentoring contract may be useful)
- Schedule and keep appointments to meet
- Prepare for meetings with your mentor
- Listen** to advice and feedback



You must be PROACTIVE in the PROCESS!

Use some tools to obtain effective mentoring

- Goal setting worksheet
- Individual Development Plan
- Meeting agenda worksheet
- Descriptive documents
 - CV
 - Annual performance review
 - Teaching evaluations
 - Grant proposals/reviews



“Managing Up” is a strategy to get the most from your mentor

- Expressing one’s needs directly
- Taking responsibility for a setting expectations
- Being available and flexible
- Communicating straightforwardly
- Managing information flow
- Asking questions; clarifying ideas
- LISTENING

Managing Up means taking ownership of the relationship.

Making the Most of Mentors: A Guide for Mentees; Zerzan, et al., Academic Medicine; Jan 2008

ACTIVE LISTENING EXERCISE

- Talking Over
- **Active listening**
 - involves forgoing all other activities for the time being
 - giving your full attention to **the act of listening**
 - to ensure that you understand the speaker’s intent
 - as well as the feelings behind the speaker’s words.
- What’s bugging you?



Mentoring does not always go well. Reasons for ‘failed’ mentor-mentee relationships:

- Dyad Mismatch
 - Values, work style, personality
- Lack of mentor expertise
 - Technical and/or interpersonal deficits
- General dysfunctionality
 - Personal problems; psychological problems
- Distancing behavior
 - Neglect (most common)
- Manipulative behavior
 - Inappropriate delegation; credit taking
- Mentor role conflicts
 - Direct supervisor role demands may conflict with role of mentor



Eby, 2000

Mentoring does not always go well... your experiences

Think about a negative mentoring experience that you have had in your professional life.

- What was the source of the problem?
- What was the outcome?
- In retrospect, what did you learn?



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How to say GOODBYE...
Tips for having the *Difficult Conversation*

- Be proactive: this is about your career
- Be realistic: your time is valuable (so is theirs)
- Be true to yourself: honesty and authenticity
- Be respectful: acknowledge their effort/intent
- Bring closure to the partnership/relationship
- Express gratitude
- Move on!

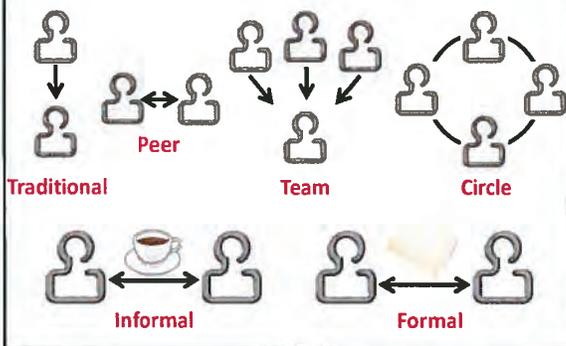


Mentoring is KEY to individual success and organizational vitality

- | | |
|-----------------------------------|---|
| Individual | Organizational |
| — increased research productivity | — improved organizational performance |
| — increased scholarly activity | — improved satisfaction and retention |
| — career advancement | — mechanism for orientation and succession planning |
| — improved satisfaction | |

Mentoring is not just for the 'young'
Leaders have mentors too!

Mentoring programs occur in many different forms



The Junior Faculty Development Program (JFDP) is an example of a formal mentoring program

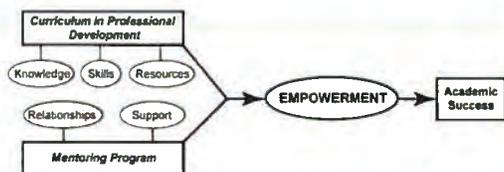
Goals of the JFDP:

- To promote the **development** and **advancement** of junior faculty through a program tailored to their needs
- To nurture and cultivate junior faculty to become the next generation of **academic leaders**
- To support the **retention** of native faculty talent through opportunities to continuously build and expand professional skills



Mentoring is a key element of the JFDP

The **curriculum** provides practical resources



The mentored **project** provides a learning experience under the guidance of senior faculty

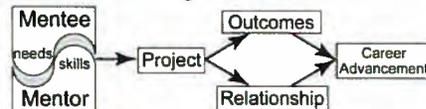
Thorndyke, Gusic, Quillen, George & Milner *Acad. Med.* 81: 668-673 (2006)

Functional Mentoring:
matching needs of mentee with expertise of mentor

"Traditional" Mentoring



Functional Mentoring



Thorndyke, Gusic & Milner *J. Cont. Educ. Health Prof.* 28: 157-64 (2008).

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Mentors are selected based on the mentee's needs for their project — *functional mentoring*

We typically select mentors who are:

- from a different department than the mentee
- a new mentor for the mentee

We expect mentors to:

- guide mentee on project through regular interactions during the program
- review mentee's plans for scholarship & help prepare final project presentation

Commitment from the Mentor is specific & time-limited

The Project provides the focus for mentoring

The Project results in a **tangible product** that

- benefits the junior faculty participant
- is an opportunity for **scholarship**
- contributes to the faculty's **academic dossier**
- benefits the department and institution
- is a **return on investment** for protected time



Evaluation of JFDP: Effective mentoring enhances individuals and organizations

Mentors had a significant impact on projects:
the success of the project reflected the effectiveness of the mentoring relationship

- Projects impacted individual careers
- Mentoring led to skill development
- 50% of mentoring relationships continued
- Ability to make new relationships
- Enhanced organizational vitality
- High satisfaction



Thorndyke et al, *Acad Med* 81: 668 (2006)
 Thorndyke et al, *JCEHP* 28: 157 (2008)
 Gusic et al, *Acad. Med.* 85: 1484 (2010)

How do we know mentoring is good?

"Mentoring is perceived as an important part of academic medicine, but the evidence to support this perception is not strong."

"Systematic reviews on the effects of mentoring in other fields...also show a lack of valid evidence for the effectiveness of mentoring, indicating a general need for clarification of theoretical and conceptual perspectives..."



Sambunjak et al. JAMA 2006

How do we know that mentoring is effective?

"A majority of...programmes lack a concrete structure as well as a short- and long-term evaluation....No publication contains statements on the effectiveness or efficiency of the programme."

*Buddeberg-Fischer & Herta
 Medical Teacher 2006*



Measuring outcomes demonstrates the impact of mentoring programs

Consider the following:

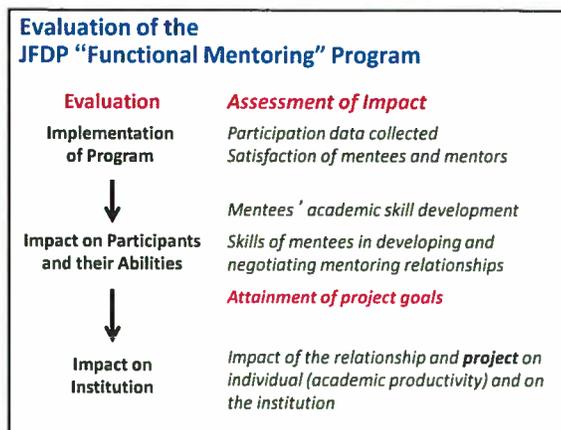
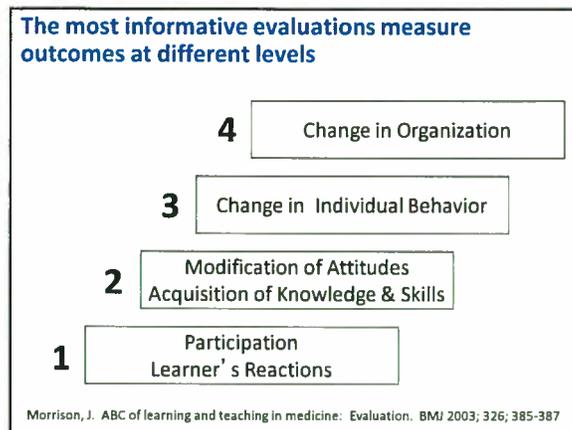
- Who are the stakeholders?
- What kinds of data need to be collected:
 - to demonstrate that the program is effective?
 - to demonstrate a return on investment?
- How will you collect that data?



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- Concluding thoughts — the pre-requisites for successful mentoring programs include:**
- Structure and flexibility
 - Defined expectations
 - Tacit & explicit institutional/departmental support
 - Administrative commitment and support
 - Tangible outcomes that demonstrate impact
 - Standards consistent with departmental and institutional criteria for judging excellence
 - Reward & recognition
 - Process for ongoing assessment and revision
-

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Questions and Discussion

Luanne E. Thorndyke, MD, FACP
Office of Faculty Affairs
University of Massachusetts Medical School



