

# 2020 Rita M. Patel GME Leadership Conference



**1 HOURS**  
*Deliberate Practice for  
GME Excellence*

Sponsored by the University of Pittsburgh School of Medicine Center for Continuing Education in the Health Sciences and UPMC Medical Education

Thursday, February 20, 2020

University Club

123 University Place, Pittsburgh, PA 15260

## Schedule of Events

11:15AM-11:50AM	Registration & Lunch	Ballroom A (1 <sup>st</sup> Floor)
12:00PM-12:10PM	Opening Remarks Speaker: Gregory Bump, MD	Ballroom A (1 <sup>st</sup> Floor)
12:10PM-12:50PM	Oral Abstract Presentations	Ballroom A (1 <sup>st</sup> Floor)
12:50PM-1:00PM	Break	
1:00PM-2:20PM	Concurrent Workshop I Getting it Right: Teaching Medical Error Disclosure	Conference Room A (3 <sup>rd</sup> Floor)
2:20PM-2:30PM	Break	
2:30PM-3:50PM	Concurrent Workshop II The Future GME Workforce: Holistic Review of GME Applicants	Gold Room (2 <sup>nd</sup> Floor)
3:50PM-4:00PM	Break	
4:00PM-5:30PM	Poster Abstract Presentations & Anniversary Celebration Speaker: Gregory Bump, MD	Ballroom B (2 <sup>nd</sup> Floor)
4:30PM	Announcement of Frank J. Kroboth, MD Award Winner	Ballroom B (2 <sup>nd</sup> Floor)
5:30PM	Adjournment	

## **Table of Contents**

Objectives, Accreditation, and Disclaimer Statement.....	3
Faculty Disclosure Statements.....	4
General Conference Information.....	5/6
UPMC ME AIMS & Professional Development Subcommittee Mission Statement.....	7

## **Conference Learning Objectives**

- Educate UPMC ME program directors on holistic review of applications
- Teach medical error disclosure to GME learners
- Share local and regional GME research and educational resources through oral and poster abstract sessions

## **Target Audience**

This program is designed for Program Directors, Department Chairs, Chief Residents and GME Leaders

## **Accreditation**

In support of improving patient care, the University of Pittsburgh is jointly accredited by the Accreditation Council for Continuing Medical Education (ACCME), the Accreditation Council for Pharmacy Education (ACPE), and the American Nurses Credentialing Center (ANCC), to provide continuing education for the healthcare team.

### **Physician (CME)**

The University of Pittsburgh designates this live activity for a maximum of 5.0 *AMA PRA Category 1 Credits™*. Physicians should claim only the credit commensurate with the extent of their participation in the activity.

### **Other Healthcare Professionals:**

Other health care professionals will receive a certificate of attendance confirming the number of contact hours commensurate with the extent of participation in this activity.

## **Disclaimer Statement**

The information presented at this CME program represents the views and opinions of the individual presenters, and does not constitute the opinion or endorsement of, or promotion by, the UPMC Center for Continuing Education in the Health Sciences, UPMC / University of Pittsburgh Medical Center or Affiliates and University of Pittsburgh School of Medicine. Reasonable efforts have been taken intending for educational subject matter to be presented in a balanced, unbiased fashion and in compliance with regulatory requirements. However, each program attendee must always use his/her own personal and professional judgment when considering further application of this information, particularly as it may relate to patient diagnostic or treatment decisions including, without limitation, FDA-approved uses and any off-label uses.

## **Faculty Disclosures**

All individuals in a position to control the content of this education activity including members of the planning committee, speakers, presenters, authors, and/or content reviewers have disclosed all relevant financial relationships with any proprietary entity producing, marketing, re-selling, or distributing health care goods or services, used on, or consumed by, patients.

### **The following relevant relationships were disclosed:**

Robert M. Arnold, MD is a board member for VitalTalk and Editor

Alicia Au, MD is a grant recipient from National Institute for Neurological Disorders and Stroke

Antoine Douaihy, MD provides grant research support for Alkermes

Antoine Douaihy, MD receives royalties for academic books for Springer, OUP and Pesi Medial and Publishing

Donald Middleton, MD is a consultant for Pfizer, Sanofi Pasteur, Merck and GlaxoSmithKline

Donald Middleton, MD is a member of the CE Speakers' Bureau for Seqirus and Pfizer

Mary Patricia Nowalk, PhD, RD is a grant recipient from Merck & Co., Inc.

No other planners, members of the planning committee, speakers, presenters, authors, content reviewers and/or anyone else in a position to control the content of this education activity have relevant financial relationships to disclose.

## Course Planners

### **Julie B. McCausland, MD, MS**

Associate Professor of Emergency Medicine and Medicine  
University of Pittsburgh School of Medicine  
Co-Chair, Professional Development Subcommittee  
Program Director, UPMC Medical Education Transitional Year Residency

### **Melinda Hamilton, MD, MS**

Associate Professor of Critical Care Medicine and Pediatrics  
University of Pittsburgh School of Medicine  
Co-Chair, Professional Development Subcommittee  
Program Director, UPMC Medical Education Pediatric Critical Care Fellowship

## Abstract Sessions: Oral Plenary & Poster Session

### **Melinda Hamilton, MD, MS (Abstract Team Leader)**

Program Director, Pediatric Critical Care Fellowship  
Associate Professor of CCM and Pediatrics  
Co-Chair Professional Development Subcommittee

### **Miya Asato, MD**

Program Director, Neurodevelopmental Disabilities Residency  
Associate Program Director, Child Neurology  
Associate Professor of Pediatrics & Psychiatry

### **Giselle G. Hamad, MD**

Associate Program Director, General Surgery Residency  
Director of Surgical Education  
Professor, Department of Surgery

### **Vu T. Nguyen, MD**

Program Director, Plastic Surgery Residency  
Assistant Professor, Department of Plastic Surgery  
Carla Spagnoletti, MD, MS  
Director, Academic Clinician-Educator Scholars Fellowship  
Associate Professor, Department of Medicine

### **Michael Travis, MD**

Program Director, Psychiatry Residency  
Associate Professor, Department of Psychiatry

### **Evan "Jake" Waxman, MD, PhD**

Vice Chair, Medical and Resident Education  
Associate Professor of Ophthalmology

### **Jackie Weaver-Agostoni, DO, MPH**

Program Director, Shadyside Family Medicine Residency  
Clinical Assistant Professor, Department of Family Medicine

## Workshops

### **I: Getting it Right: Teaching Medical Error Disclosure**

#### **Amanda Brown, MD**

Assistant Professor of Pediatrics, Supportive Care Program, Children's Hospital of Pittsburgh

#### **Daniel E. Hall, MD, MDiv, MHSc, FACS**

Medical Director, High Risk Populations and Outcomes, Wolff Center at UPMC, Associate Professor of Surgery, Anesthesiology and Perioperative Medicine, University of Pittsburgh, Faculty, Center for Bioethics and Health Law, University of Pittsburgh

#### **Barbara Nightingale, MD**

Medical Director of Latterman Family Health Center, Associate Program Director for the UPMC McKeesport Family Medicine Residency Program, Associate Program Director for the UMC Psychiatry and Family Medicine Residency Program

### **II: The Future GME Workforce: Holistic Review of GME Applicants**

#### **Alda Maria Gonzaga, MD, MS**

Program Director, Combined Internal Medicine-Pediatrics Residency, Advisory Dean, University of Pittsburgh School of Medicine Office of Student Affairs, Associate Professor of Medicine and Pediatrics, Director, Progressive Evaluation and Referral Center (PERC)

#### **Naudia Jonassaint, MD, MHS**

Vice Chair of Medicine, Diversity and Inclusion

#### **Giselle Hamad, MD**

Professor of Surgery, Associate Residency Program Director, Director of Surgical Education

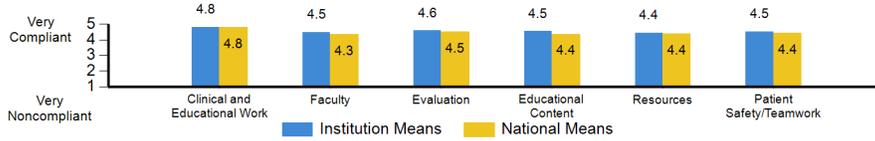
## **UPMC ME AIMS**

- Train excellent physicians from diverse backgrounds in a model of patient-centered care, which builds a foundation of high value care, desirable clinical outcomes, and scientific knowledge that improves health.
- Build a supportive working and learning environment that helps physicians grow as role models for professionalism, caring and compassion.
- Create a model of professional development for residents, fellow, and faculty in graduate medical education that emphasizes expertise, leadership skills, scholarly achievement, and career advancement.
- Foster a culture that centers on the well-being of the individuals in our clinical and academic community.
- Serve the health needs of the diverse communities.
- Transform the health care system of tomorrow through innovation.
- Harness our integrated capabilities to deliver outstanding patient safety, quality, and value through graduate medical education at UPMC.

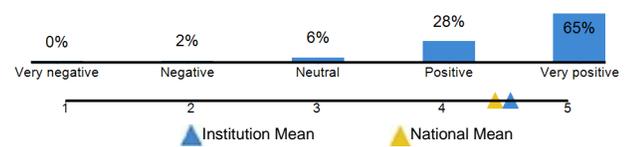
### **Mission Statement of the Professional Development Subcommittee of the UPMC ME Graduate Medical Education Committee**

To advance the Graduate Medical Education Community through research, education, and innovation.

**Institution Means at-a-glance**



**Residents' overall evaluation of the program**



**Clinical and Educational Work**



- 80 hours
- 1 day free in 7
- In-house call every 3rd night
- 14 hours free after 24 hours of in-house call
- 8 hours between clinical exp and ed work hours
- Continuous hours scheduled

	% Program Compliant	Program Mean	% National Compliant	National Mean
	95%	4.7	94%	4.7
	98%	4.8	97%	4.8
	100%	5.0	99%	5.0
	99%	4.9	99%	4.9
	99%	4.7	98%	4.7
	96%	4.7	96%	4.8

Reasons for exceeding clinical experience and education rules:

Patient needs	6%	Cover someone else's work	2%
Paperwork	8%	Night float	3%
Additional ed experience	2%	Schedule conflict	2%
		Other	2%

**Faculty**



- Sufficient supervision
- Appropriate level of supervision
- Sufficient instruction
- Faculty and staff interested in residency education
- Faculty and staff create environment of inquiry

	% Program Compliant	Program Mean	% National Compliant	National Mean
	96%	4.5	92%	4.4
	98%	4.7	96%	4.6
	92%	4.4	86%	4.2
	92%	4.4	86%	4.3
	88%	4.3	80%	4.2

**Evaluation**



- Able to access evaluations
- Opportunity to evaluate faculty members
- Satisfied that evaluations of faculty are confidential
- Opportunity to evaluate program
- Satisfied that evaluations of program are confidential
- Satisfied that program uses evaluations to improve
- Satisfied with feedback after assignments

	% Program Compliant	Program Mean	% National Compliant	National Mean
	99%	5.0	99%	5.0
	99%	5.0	99%	5.0
	90%	4.4	86%	4.3
	99%	4.9	98%	4.9
	91%	4.5	88%	4.4
	82%	4.2	76%	4.1
	81%	4.2	73%	4.0

**Educational Content**



- Provided goals and objectives for assignments
- Instructed how to manage fatigue
- Satisfied with opportunities for scholarly activities
- Appropriate balance between ed and other clinical demands
- Education (not) compromised by excessive reliance on non-physician obligations
- Supervisors delegate appropriately
- Provided data about practice habits
- See patients across variety of settings

	% Program Compliant	Program Mean	% National Compliant	National Mean
	97%	4.9	94%	4.8
	95%	4.8	91%	4.6
	87%	4.4	77%	4.1
	87%	4.4	81%	4.2
	83%	4.3	76%	4.0
	99%	4.7	99%	4.6
	78%	4.1	71%	3.9
	98%	4.9	96%	4.9

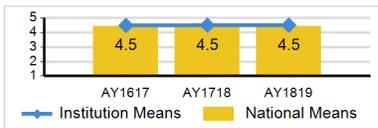
**Resources**



- Access to reference materials
- Use electronic medical records in hospital\*
- Use electronic medical records in ambulatory setting\*
- Electronic medical records integrated across settings\*
- Electronic medical records effective
- Provided a way to transition care when fatigued
- Satisfied with process to deal with problems and concerns
- Education (not) compromised by other trainees
- Residents can raise concerns without fear

	% Program Compliant / % Yes*	Program Mean	% National Compliant / % Yes*	National Mean
	99%	5.0	99%	5.0
	100%	5.0	100%	5.0
	99%	5.0	99%	5.0
	89%	4.6	87%	4.5
	97%	4.1	95%	4.2
	85%	4.4	82%	4.3
	87%	4.3	81%	4.2
	90%	4.4	90%	4.5
	87%	4.4	82%	4.3

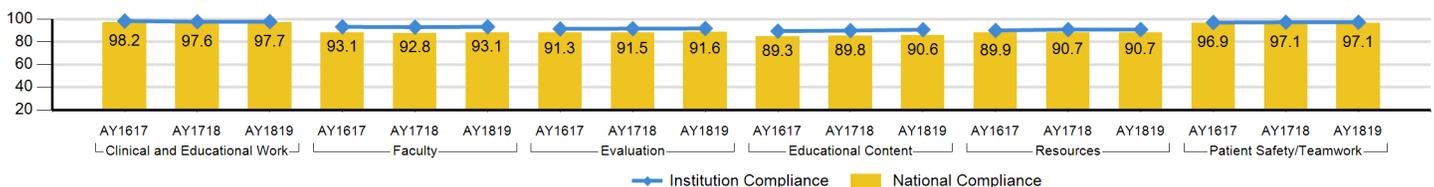
**Patient Safety/Teamwork**



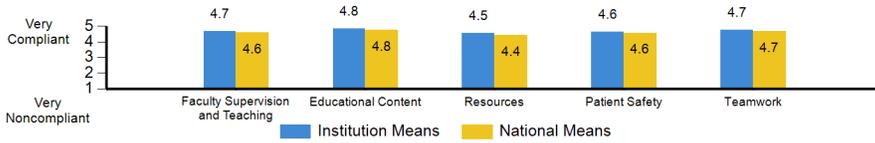
- Tell patients of respective roles of faculty and residents
- Culture reinforces patient safety responsibility
- Participated in quality improvement
- Information (not) lost during shift changes or patient transfers
- Work in interprofessional teams
- Effectively work in interprofessional teams

	% Program Compliant	Program Mean	% National Compliant	National Mean
	99%	4.6	99%	4.6
	99%	4.6	99%	4.5
	89%	4.6	87%	4.5
	97%	4.1	97%	4.0
	99%	4.8	99%	4.7
	99%	4.5	99%	4.4

**Total Percentage of Compliance by Category**



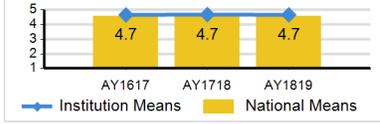
**Institution Means at-a-glance**



**Faculty's overall evaluation of the program**



**Faculty Supervision and Teaching**



Sufficient time to supervise residents/fellows  
 Residents/fellows seek supervisory guidance  
 Interest of faculty and Program Director in education  
 Rotation and educational assignment evaluation\*  
 Faculty performance evaluated\*  
 Faculty satisfied with personal performance feedback

% Program Compliant	Program Mean	% National Compliant	National Mean
96%	4.7	96%	4.7
95%	4.6	94%	4.6
97%	4.8	97%	4.7
98%		99%	
99%		99%	
92%	4.5	89%	4.4

**Educational Content**



Worked on scholarly project with residents/fellows\*  
 Residents/fellows see patients across a variety of settings\*  
 Residents/fellows receive education to manage fatigue\*  
 Effectiveness of graduating residents/fellows  
 Outcome achievement of graduating residents/fellows

% Program Compliant	Program Mean	% National Compliant	National Mean
77%		76%	
99%		99%	
100%		100%	
98%	4.8	98%	4.7
100%	4.9	99%	4.9

**Resources**



Program provides a way for residents/fellows to transition care when fatigued\*  
 Residents/fellows workload exceeds capacity to do the work  
 Satisfied with faculty development to supervise and educate residents/fellows  
 Satisfied with process to deal with residents/fellows' problems and concerns  
 Prevent excessive reliance on residents/fellows to fulfill non-physician obligations

% Program Compliant	Program Mean	% National Compliant	National Mean
100%		99%	
100%	4.4	100%	4.3
97%	4.4	96%	4.2
96%	4.7	94%	4.6
99%	4.7	99%	4.5

**Patient Safety**



Information not lost during shift changes or patient transfers  
 Tell patients of respective roles of faculty and residents/fellows  
 Culture reinforces patient safety responsibility  
 Residents/fellows participate in quality improvement or patient safety activities

% Program Compliant	Program Mean	% National Compliant	National Mean
94%	4.3	93%	4.2
94%	4.7	93%	4.6
97%	4.7	97%	4.7
96%	4.7	94%	4.7

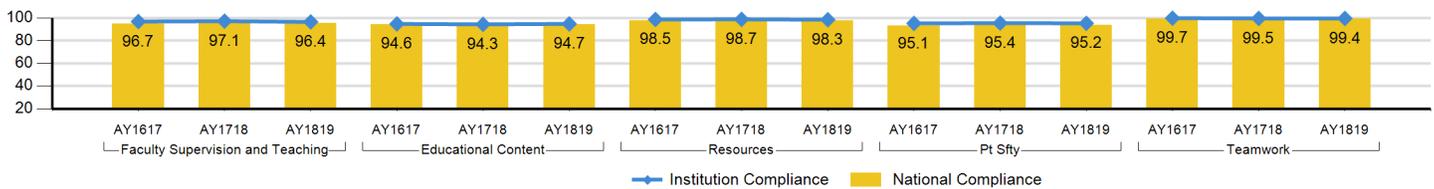
**Teamwork**



Residents/fellows communicate effectively when transferring clinical care  
 Residents/fellows effectively work in interprofessional teams  
 Program effective in teaching teamwork skills

% Program Compliant	Program Mean	% National Compliant	National Mean
99%	4.8	98%	4.8
100%	4.7	100%	4.7
100%	4.7	99%	4.6

**Total Percentage of Compliance by Category**



**Accreditation Council for  
Graduate Medical  
Education**

401 North Michigan Avenue  
Suite 2000  
Chicago, IL 60611

Phone 312.755.5000  
Fax 312.755.7498  
www.acgme.org

6/25/2019

Gregory M Bump, MD  
DIO; Associate Professor of Medicine  
3600 Forbes Avenue  
Forbes Tower - Plaza Level, Suite 140  
Pittsburgh, PA 15213



ACGME

Dear Dr. Bump,

The Institutional Review Committee (IRC), functioning in accordance with the policies and procedures of the Accreditation Council for Graduate Medical Education (ACGME), has reviewed the information submitted regarding the following institution:

UPMC Medical Education  
Pittsburgh, PA

Institution: 8004100393

Based on the information available at its recent meeting, the Review Committee accredited the institution as follows:

Status: Continued Accreditation  
Effective Date: 05/28/2019

**AREAS NOT IN COMPLIANCE (Citations)**

The Review Committee cited the following areas as not in substantial compliance with the ACGME's Institutional Requirements for Graduate Medical Education:

**NEW CITATIONS**

**GMEC | Since: 05/28/2019 | Status: New**

Structure for Educational Oversight, GMEC, Membership (Institutional Requirements I.B., I.B.1., I.B.1.a), I.B.1.a).(4)

A Sponsoring Institution with multiple ACGME-accredited programs must have a GMEC that includes at least the following voting members: a quality improvement or patient safety officer or designee. (Core)

The information provided to the Institutional Review Committee ("IRC") does not demonstrate substantial compliance with the requirements. It is not apparent that the Graduate Medical Education Committee ("GMEC") includes a quality improvement or patient safety officer or designee.

(Reviewer Materials ("RM"), Institutional Review Questionnaire ("IRQ"), Attachments—GMEC Membership List; GMEC Minutes)

**GMEC | Since: 05/28/2019 | Status: New**

Structure for Educational Oversight, GMEC, Meetings and Attendance (Institutional Requirement I.B.3.a))

Each meeting of the GMEC must include attendance by at least one resident/fellow member. (Core)

The information provided to the IRC does not demonstrate substantial compliance with the requirement. No voting resident/fellow member of the GMEC appears to have attended a GMEC meeting on May 9, 2018.

(RM, IRQ, Attachment—GMEC Minutes)

**Concerns and Feedback | Since: 05/28/2019 | Status: New**

The Learning and Working Environment (Institutional Requirement III.A)

The Sponsoring Institution and each of its ACGME-accredited programs must provide a learning and working environment in which residents/fellows have the opportunity to raise concerns and provide feedback without intimidation or retaliation, and in a confidential manner, as appropriate. (Core)

The information provided to the IRC does not demonstrate substantial compliance with the requirement. The site visitor reported that some Thoracic Surgery fellows consider institutional mechanisms to raise certain concerns to be ineffective because of the potential for retaliation in their program.

(Site Visit Report (“SVR”), pp. 17-19)

The ACGME must be notified of any major changes in the organization of the institution. When corresponding with the ACGME, please identify the institution by name and number as indicated above. Changes in participating sites and changes in leadership must be reported to the Review Committee using the ACGME Accreditation Data System (ADS).

Sincerely,

A handwritten signature in black ink that reads "Olivia Orndorff". The signature is written in a cursive, flowing style.

Olivia Orndorff, MSLIS  
Associate Executive Director  
Institutional Review Committee

oorndorff@acgme.org

Participating Site(s):

Pittsburgh Poison Center  
Shriners Hospitals for Children (Erie)  
St Vincent Health Center  
Susquehanna Health System  
UPMC Altoona  
UPMC Children's Hospital of Pittsburgh  
UPMC Hamot  
UPMC Horizon  
UPMC Jameson Health  
UPMC Magee - Womens Hospital  
UPMC McKeesport  
UPMC Mercy  
UPMC Passavant  
UPMC Presbyterian Shadyside  
UPMC St Margaret  
UPMC Western Psychiatric Institute and Clinic  
Veterans Affairs Medical Center (Pittsburgh)

# **Getting it Right: Teaching Medical Error Disclosure**

Presentation slides

**Getting it Right: Teaching Medical Error Disclosure  
Handouts**

**The Future GME Workforce: Holistic Review of GME Applicants  
Presentation Slides**

# **The Future GME Workforce: Holistic Review of GME Applicants Handouts**

**Thank You to our Facilitators and Course Planning Committee**

Julie B. McCausland, MD, MS (Co-Chair)

Melinda Hamilton, MD, MS (Co-Chair)

Miya Asato, MD

Gregory Bump, MD

Giselle G. Hamad, MD

Frank Kroboth, MD

Vu T. Nguyen, MD

Michael Travis, MD

Evan Waxman, MD, PhD

Jacqueline Weaver-Agostoni, DO, MPH

Course Coordinators

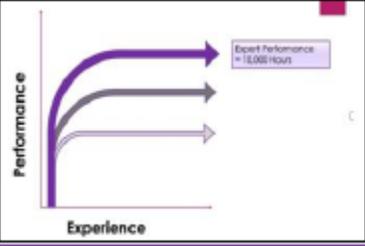
Brittany Rosser

Melissa Hildebrand

**Please be sure to complete the conference survey via the link below:**

<https://www.surveymonkey.com/r/8MJPVPB>

# 2020 Rita M. Patel GME Leadership Conference



**1**  **HOURS**  
*Deliberate Practice for  
GME Excellence*

Thursday, February 20, 2020  
University Club  
123 University Place, Pittsburgh, PA 15260

# ABSTRACT BOOK

**Rita M. Patel GME Leadership Conference  
“10,000 Hours Deliberate Practice for GME Excellence”  
February 20, 2020**

**We would like to recognize and thank the following abstract committee members and judges and the University of Pittsburgh Academy of Master Educators**

**Robert Arnold, MD  
Miya Asato, MD  
Debra Bogen, MD  
Gregory Bump, MD  
Marie DeFrances, MD, PhD  
Nicole Donnellan, MD  
Erika Friehling, MD  
Kevin Garrett, MD  
Giselle Hamad, MD  
Melinda Hamilton, MD, MSc  
Frank Kroboth, MD  
Joseph Losee, MD  
Julie B. McCausland, MD, MS  
Michael Mangione, MD  
Vu T. Nguyen, MD  
Andrew Nowalk, MD, PhD  
Tetsuro Sakai, MD, PhD, MHA  
Carla Spagnoletti, MD, MS  
Sarah A. Tilstra, MD  
Michael Travis, MD  
Jake Waxman, MD  
Jackie Weaver-Agostoni, MD**

**...And a special thanks to Dr. Frank J. Kroboth for providing abstract session awards over the years which have been named in his honor**

**Frank J. Kroboth GME Leadership Conference  
Awards for Best Resident/Fellow  
Oral Abstract Presentation**

**Poster Abstract Awards will be announced at a later date**

**Rita M. Patel GME Leadership Conference**  
**10,000 Hours Deliberate Practice for GME Excellence**  
**February 20, 2020**

**Oral Abstract Presentations**

#	Abstract title	Main Author (s)
O1	A Report of gender bias and sexual harassment in current plastic surgery training: a national survey	Chen, W
O2	Back to the Future: Evolution & Impact of Nocturnal Educational Opportunities for Pediatric Residents	Sharp, E.
O3	Delivering Serious News in Pediatric Emergency Medicine (PEM): A Formal Communication Course for Physicians	Zuckerbraun, N.

**Poster Abstract Presentations**

#	Abstract title	Main Author (s)
P1	The Required Ophthalmology Clinical Rotation Provides UPSOM Students with a Foundation in Eye Related Diagnosis and Management	Bowers, E.
P2	A Game-Show Based Curriculum for Teaching Principles of Reproductive Infectious Disease	Butler, S.
P3	Coalition of Residents and Fellows of Color (C-ROC)	Carroll, P.
P4	Clinical Supervisor: A Supervisory Rotation in Ambulatory Med-Peds	Dakroub, A.
P5	The Value of a Social Wellness Committee in Plastic Surgery Residency	David, J.
P6	Case Based Questions for Teaching ED Pharmacotherapy	Eichenberger, D.
P7	3AM Ortho: The Asynchronous Curriculum	Ferderber, J
P8	Teaching the Screening, Brief Intervention, and Referral to Treatment (SBIRT) Approach for Substance Use Disorders on the Consultation-Liaison Psychiatry Service	Fishman, D.
P9	A Nurse-Resident Shadowing Project to Improve Interprofessional Care	Georgeson, A.
P10	The treatment of Chronic HCV in an outpatient, Primary care setting	Krueger, J.
P11	Increasing Knowledge and Comfort in Intimate Partner Violence Screening among Internal Medicine Interns	Kyle, J.
P12	Gender Bias in Letters of Recommendations in Obstetrics and Gynecology	Lang, S.
P13	Clinic First: Resident, Faculty and Staff Perspectives on Transforming a Family Medicine Residency Model of Care	Lin, L.
P14	Psych E-Consult: a novel method for timely electronic psychiatric evaluation	Lu, J.
P15	Admission Medication Reconciliation Improvement Project	Lubin, F.
P16	Fellow Dinners: An approach to Mentoring and Wellness	Lunoe, MM.
P17	Improving Human Papilloma Virus Vaccination Rates by Entire Primary Care Medical Home Involvement	McGaffey, A.
P18	Application of a Custom 3D Vaginal Model for Sacrocolpopexy Mesh Fixation	Melnyk, A.
P19	The Ophthalmology Mini-Elective Gives Vision to Pre-Clinical Medical Students	Mortensen, P.

P20	Use of Chart-Stimulated Recall as an Educational Tool to Explore Uncertainty in Medical Decision Making Among Senior Internal Medicine Residents	Mutter, M.
P21	Exploration of Uncertainty in Medical Decision-Making and the Growth Mindset Among Senior Internal Medicine Residents	Mutter, M.
P22	The Development of Novel Low-Cost, High Impact Models: Can Simulation Survive in Plastic Surgery Education	Ng-Glazier, J.
P23	Effect of an online critical care curriculum on critical care knowledge across medical specialties	Nobile, J.
P24	Neuroradiology Fellow Remediation: A National Survey	Ouyang, T.
P25	Development of a Mobile Application to Optimize Parenteral Nutrition in Pediatric Patients	Rakkar, J.
P26	First Job and Promotion: Is there an Internal Bias in Academic Plastic Surgery Employment	Roy, E.
P27	Research Productivity During Residency and its Influence on a Career in Academic Plastic Surgery	Roy, E.
P28	Increasing Resident Screening for Food Insecurity	Srinivasan, S.
P29	Increasing Resident Awareness of the 4th Trimester	Srinivasan, S.
P30	Implementation of a Text-Messaged-Based End-of-Shift Evaluation Tool in Emergency Medicine Residency	Tobias, A
P31	Characteristics and Academic Productivity Among Pediatric Plastic Surgeons in the United States	Williams, A
P32	A Glimpse into the Eye - Introducing Ophthalmology to Preclinical Medical Students through a Lunch Talk Series at UPSOM	Yadav, S.

# **Oral Abstract Presentations**

**Title:** A REPORT OF GENDER BIAS AND SEXUAL HARASSMENT IN CURRENT PLASTIC SURGERY TRAINING: A NATIONAL SURVEY

**Authors:** Wendy Chen, MD, MS<sup>1</sup> and Benjamin K. Schilling, MS<sup>2</sup>; Debra A. Bourne, MD<sup>1</sup>; Sara Myers, MD, MS<sup>3</sup>; Carolyn Delacruz, MD<sup>1</sup>

**Affiliations:** 1. Department of Plastic Surgery, School of Medicine University of Pittsburgh, Pittsburgh, PA, USA  
2. Department of Bioengineering, School of Engineering University of Pittsburgh, Pittsburgh, PA, USA  
3. Department of Surgery, School of Medicine University of Pittsburgh, Pittsburgh, PA, USA

**Introduction:** “Gender bias...remains the...greatest deterrent to women achieving their full potential in...the medical profession and is a barrier throughout professional life ...-- Council on GME.” Sexual misconduct in medicine persists. Maintaining professionalism in training is essential to prevent negative impacts of bias and misconduct.

**Hypothesis:** We hypothesize gender bias and sexual misconduct disproportionately affect female trainees in negative ways, including career goals.

**Methods:** A national survey of current plastic surgery trainees (2018-2019) was conducted using previously validated sexual harassment surveys (Veterans Affairs, 1998; Cook 1996) and adapted for relevance to plastic surgery. Respondents were queried about their experiences with workplace sexual bias, discrimination, harassment, assault, and coercion; personal impact; and reporting practices. Analyses included Chi-squared, logistic regression, and ANOVA. Significance accepted at  $p < 0.05$ .

**Results:** A total of 211 responses were analyzed (115 female, 88 male, 8 deferred). Average age was 30.7 years. Races included Caucasian (n=114), Asian/Pacific Islander (n=34), Other (n=26), and deferred (n=11). Respondents included interns (n=30), residents (n=123), chief residents (n=23), fellows (n=24), and unknown (n=11).

The feeling of hindrance to career advancement based on gender was significant, females responding in the affirmative by 10-fold relative to men ( $p < 0.00$ ). This significance increased with age for women ( $p = 0.00$ ). Women feel significantly less comfortable challenging gender inequality ( $p < 0.00$ ). There is no significance across the training levels ( $p = 0.30$ ) or race ( $p = 0.67$ ). Gender bias/inequality has disproportionately diminishing effect with respect to women’s career goals/ambition ( $p < 0.00$ ).

Women experienced harassment as jokes ( $p = 0.00$ ) and comments about their body/sexuality ( $p = 0.01$ ). Perpetrators included attending physicians (30%), other trainees (37%), nurses/ancillary staff (21%), patients/families (11%), and medical students (3%). Most common reasons to not report included futility (38%) and fear/distrust (20%). 47% of respondents reported  $\geq 2$  symptoms of depression/anxiety, with women experiencing at least three, significantly higher than men ( $p = 0.01$ ).

**Conclusions:** Gender bias and sexual misconduct negatively affects female trainees’ attitudes towards their career. Women experience sexual harassment from various members of the hospital community, especially from physicians. Trainees report a culture non-conducive to reporting. Female trainees experience negative mental health consequences as a result of this environment.

**Significance:** Awareness of these findings is highly relevant to training programs, for guiding changes and discussions surrounding workplace culture.

**Grant Support:** none

## BACK TO THE FUTURE: EVOLUTION & IMPACT OF NOTURNAL EDUCATIONAL OPPORTUNITIES FOR PEDIATRIC RESIDENTS

Sharp E<sup>1</sup>, Guillen D<sup>1</sup>, Garrison J<sup>2</sup>, Polak C<sup>2</sup>

<sup>1</sup>Department of Pediatrics, UPMC Children's Hospital of Pittsburgh

<sup>2</sup>Division of Pediatric Hospital Medicine, UPMC Children's Hospital of Pittsburgh

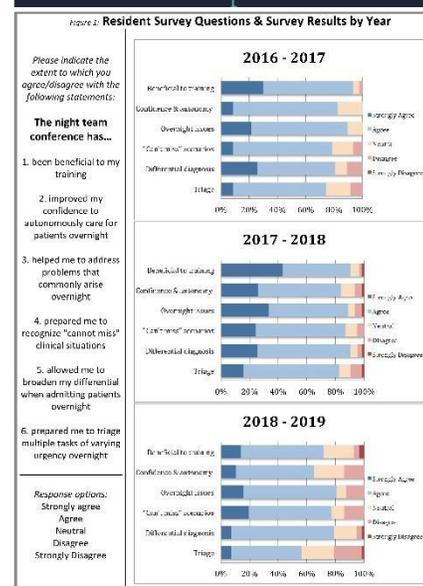
**Needs & Objectives:** Many residency programs transitioned to a night float model in response to the duty hour restrictions adopted by the ACGME in 2003. After noting decreased resident attendance at didactics with this system, our institution established nocturnal educational opportunities. These teaching initiatives have evolved significantly over time; however, resident perception of their impact has not been evaluated. Our primary objective was to evaluate resident perception of an evening curriculum focused on acute management of common overnight issues. Our secondary objective was to determine how nocturnal education has evolved and to elucidate factors contributing to highest educational impact.

**Description (including settings and participants):** We interviewed 15 former pediatric chief residents on their recollection of formal and/or informal teaching overnight from 2000–2019 to create a timeline. We surveyed pediatric residents on their perception of the evening conference for three consecutive academic years. Surveys were composed of Likert-style questions (fig 1). Statistical tests of significance were performed using chi-squared test of independence.

**Evaluation:** 15 chief residents contributed to the timeline (fig 2). 169 out of 346 residents (49%) responded during the survey period (2016–2019) (table 1). Our residency transitioned to night float in 2003. The evening conference was created in 2012 but was cancelled in 2015 due to negative resident feedback. In 2016, the conference was redesigned with a focus on the management of clinical scenarios residents are likely to encounter overnight. Feedback one year after this change was exceedingly positive; 93% of residents felt that the evening conference was beneficial to their training (fig 1). The most preferred conference format was case discussion facilitated by a hospitalist (fig 3). There was no significant difference in preferred format across years ( $p = .796$ ).

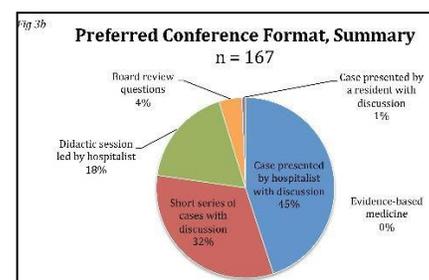
**Discussion:** The evening conference has evolved in response to duty-hour regulations, resident feedback, and changes in the residency program itself. Our data shows that an evening curriculum focused on acute

management of overnight issues is perceived as a positive learning experience by residents. Sessions orchestrated by hospitalist attendings were preferred. This may represent an opportunity for junior faculty to hone their teaching and embrace an educational role in academic environments. Further studies are needed to determine the optimal format of this conference and whether the content translates into lasting knowledge.



**Table 1: Resident Survey Responses by Year and Post-Graduate Year**

	2016-2017			2017-2018			2018-2019			Total		
	Responses	# Residents	Response Rate	Responses	# Residents	Response Rate	Responses	# Residents	Response Rate	Responses	# Residents	Response Rate
PGY-1	23	38	61%	27	41	66%	25	39	64%	75	118	64%
PGY-2	11	33	33%	20	40	50%	17	38	45%	48	111	43%
PGY-3	14	35	40%	17	28	61%	14	36	39%	45	99	45%
PGY-4	0	6	0%	0	6	0%	1	6	17%	1	18	6%
<b>Total</b>	<b>48</b>	<b>112</b>	<b>43%</b>	<b>64</b>	<b>115</b>	<b>56%</b>	<b>57</b>	<b>119</b>	<b>48%</b>	<b>169</b>	<b>346</b>	<b>49%</b>



## **Delivering Serious News in Pediatric Emergency Medicine (PEM): A Formal Communication Course for Physicians**

Authors: Zuckerbraun NS<sup>1</sup>, Lunoe MM<sup>1</sup>, Hamilton M<sup>1,2</sup>, Maurer SH<sup>1</sup>, Choi S<sup>1</sup>, Brown AW<sup>1</sup>, Arnold RM<sup>3</sup> and Emlet LL<sup>2,4</sup>

Affiliations: Department of Pediatrics<sup>1</sup>, Department of Critical Care Medicine<sup>2</sup>, Department of Medicine<sup>3</sup>, Department of Emergency Medicine,<sup>4</sup> University of Pittsburgh School of Medicine

Introduction: Formal training for PEM physicians in delivering serious news (DSN) is limited. Skillful delivery of serious news is essential for patients and families, and lack of these skills can be a source of significant physician stress. The study objective is to assess the efficacy of a formal DSN communication course for PEM physicians.

Hypothesis: A formal communication course will improve PEM physicians' perceived preparedness, skills and stress in DSN.

Methods: A 4-hour simulation course was designed for PEM physicians using an evidence-based structured method to teach DSN. Three cases were developed to address common, challenging PEM scenarios (new cancer diagnosis, child abuse evaluation and life-threatening injury). Simulated actors were trained to portray parents. The course, held annually since 2018, consisted of short lectures on specific skills, skill demonstrations and small group, real-time feedback by trained faculty facilitators during interaction with parent-actors. A standardized pre and post-course survey was developed and administered to first time participants to assess previous experience, perceived ability and stress with DSN. Demographics and training level were collected. Paired pre and post-course survey responses were compared with McNemar's test.

Results: 23 physicians participated (12 fellows, 11 faculty); 57% female. The pre and post-survey response rate was 23/23 (100%). Participants report DSN two times per month (median=2.0, IQR 2-5) and delivering news of patient death one time in the past 12 months (median =1, IQR 0-2). Pre-course, 61% of participants report previous formal training and 17% report using a structured plan for DSN. The proportion of participants that felt prepared to DSN increased from 35% to 96% ( $p<0.001$ ). The proportion of participants that felt good or very good about their ability to deal with family emotions after DSN increased from 44% to 96% ( $p<0.001$ ). The proportion of participants that felt highly stressed about DSN in the future decreased from 48% to 13% ( $p<0.01$ ).

Conclusions: PEM fellow and faculty physicians reported infrequent prior formal training or use of a structured method for DSN. A formal, simulated case-based course with introduction of a structured method with real-time feedback from trained faculty facilitators improved PEM physicians' perceived ability and anticipated stress to DSN.

Significance: Teaching DSN skills to PEM physicians has the potential to improve patient care and physician wellness. Future investigation will assess skill retention and physician satisfaction.

Support: Department of Pediatrics, Office of Faculty Development Education Innovation Grant (PI Zuckerbraun); Division of Pediatric Emergency Medicine

# **Poster Abstract Presentations**

**Title: The Required Ophthalmology Clinical Rotation Provides UPSOM Students with a Foundation in Eye Related Diagnosis and Management**

Authors: Bowers E<sup>1</sup>, Enzor R<sup>2</sup>, Yadav S<sup>1</sup>, Waxman E<sup>2</sup>

Affiliations: <sup>1</sup>University of Pittsburgh School of Medicine, <sup>2</sup>University of Pittsburgh Medical Center Department of Ophthalmology

**Need and Objectives:** Medical school clerkship requirements vary significantly between institutions. Ophthalmology is not a mandatory rotation at many medical schools across the country making exposure difficult for many students. The University of Pittsburgh School of Medicine (UPSOM) demonstrates a commitment to training students in the basics of ophthalmology through a required week-long rotation during the one-month Specialty Care Clerkship.

This rotation trains students in ophthalmic terminology, common diseases, pathophysiology, treatment, and physical exam techniques. The goal is to provide students with the skills and confidence to perform rudimentary eye examinations as non-ophthalmologic providers.

**Setting and participants:** UPSOM students spend five days seeing patients in clinic, on call, and in the operating room at Mercy Hospital, the Veterans Affairs Hospital, and/or UPMC Presbyterian.

**Description:** Students become familiar with ophthalmic equipment, terminology, clinical diagnosis, and management by shadowing a resident in clinic. Students advance their skills by gathering histories, practicing with the slit lamp, and presenting patients. Students take one night-call with an ophthalmology resident and spend one half-day in the operating room. Additionally, students attend lectures covering a variety of common eye diseases. Lectures are not required, but highly encouraged, as is reading *Basic Ophthalmology: Essentials for Medical Students*. Students are evaluated through the Specialty Care Clerkship in-house exam which includes ENT, Emergency Medicine and Ophthalmology material. They are also graded clinically on a 5-point scale by their resident.

**Evaluation:** Student feedback was collected at the end of the clerkship. Using a 5-point Likert scale, 100% of students rated the quality of lectures “outstanding” or “very good,” and 83% of students strongly agreed or agreed with the statement “overall teaching in clinical setting was good quality” (n = 64). The average clinical score for ophthalmology and total clerkship exam score over the past 6 months was 4.5/5 with a SD of 0.5 and 78.1% with a SD of 8.1% (N = 64), respectively.

**Discussion/reflection/lessons learned:** A basic understanding and evaluation of the eye is useful for all future physicians. The required ophthalmology rotation aims to position students to address patients’ basic ophthalmic complaints as non-ophthalmologic providers. From positive student feedback as well as generally high clinical and exam scores, the UPSOM ophthalmology clerkship appears to be an effective course. In the future, it would be interesting to see if completing the encouraged reading and attending the lectures significantly affects the ophthalmology portion of the final exam or final ophthalmology clinical grade.

**Title: A Game-Show Based Curriculum for Teaching Principles of Reproductive Infectious Disease (GBS PRIDE Trial)**

**Authors:** Butler S,<sup>1</sup> Runge M,<sup>2</sup> Milad M2

**Affiliations:** <sup>1</sup> Department of Obstetrics and Gynecology, University of Pittsburgh, <sup>2</sup> Department of Obstetrics and Gynecology, Northwestern University

**Introduction:** Reproductive infectious disease (RID) is a burgeoning area and responses to disease outbreaks that portend obstetric and/or gynecologic morbidity require responses from obstetrician/gynecologists (OBGYN) with sound RID training. Though RID is a fundamental component of OBGYN, limited formal curriculum exists in residency programs and current literature suggests that OBGYN residents have a low awareness and familiarity with basic RID principles. Game-show based teaching interventions have been shown to lead to better long-term retention and improved ability to transfer knowledge through combining incentive elements of game design with effective learning strategies. The objective of this study is to evaluate whether a Jeopardy game-show based curriculum improves OBGYN residents' confidence in and understanding of RID, clinical sequelae of sexually transmitted diseases (STDs), and management of their long-term consequences.

**Hypothesis:** The Jeopardy curriculum group will have higher post-test scores when compared to the traditional curriculum group.

**Methods:** OBGYN residents were randomized to either a Jeopardy educational intervention plus a traditional didactic-based curriculum or traditional didactic-based curriculum alone. All participants completed confidence and knowledge-based pre- and post-tests. A retrospective power calculation was conducted using G\*Power 3.1. The Shapiro-Wilk test was applied to assess data normality. For nonparametric data, the Mann-Whitney U test and Wilcoxon matched-pairs signed-rank test were utilized. All data was analyzed using STATA 15.1.

**Results:** 38 residents were randomized to a Jeopardy game show-based educational intervention (n=19) or to traditional didactic-based curriculum (n=19). Pre-test median scores were similar between both groups (48.5 vs 51.4, p=0.091). The Jeopardy group's median post-test scores improved (48.5 vs 62.8, <p=0.001). The traditional group saw a minimal increase in their median post-test scores (51.4 vs 54.2, p=0.773). The Jeopardy group had significantly higher post-test median scores and confidence scores than the traditional group (62.8 vs 54.2, p=0.002).

**Conclusions:** A game-show based curriculum improves OBGYN residents' confidence and retention of knowledge regarding RID, clinical sequelae of STDs, and management of their long-term consequences.

**Significance:** Gamification of clinical topics is an effective tool in resident teaching.

**Support:** Educational grant from Northwestern University.

**Title: Coalition of Residents and Fellows of Color (C-ROC)**

**Authors:** Carroll P<sup>1</sup>, Salahuddin D<sup>1,2</sup>, Ufomata E<sup>3</sup>

**Affiliations:** <sup>1</sup>Department of Psychiatry, University of Pittsburgh, <sup>2</sup>Department of Family Medicine, McKeesport, University of Pittsburgh, <sup>3</sup>Department of Internal Medicine, University of Pittsburgh

**Needs and objectives:** Significant disparities persist in society, whereby historically marginalized minorities often endure worse health outcomes than their White counterparts. These disparities are exemplified through a recent report released by the City of Pittsburgh's Gender Equity Commission which showed Black residents in Pittsburgh suffer from comparatively worse outcomes in health, income, employment, and education than Black residents in similar cities. It is well documented that a diverse healthcare workforce reflective of the racial diversity of the population it serves results in improved patient outcomes and decreased mistrust between patient and provider. Thus, one way to address the aforementioned disparities in Pittsburgh is by increasing the number of underrepresented minority (URM) physicians. Historically, physicians who identify as URMs (Black, Latinx, and Native American) have been hesitant to remain at UPMC following their training. Additionally, URM medical students selecting residency programs have expressed reluctance to training in Pittsburgh. We sought to collaborate with the UPMC Center for Engagement and Inclusion to build an internal support system for URM residents and fellows. We hypothesize that such supports would promote a more inclusive training environment, and ultimately increase the sense of community among URM residents/fellows to support UPMC's efforts to recruit and retain the best talent while simultaneously better meeting the needs of the community.

**Setting and participants:** Initiated throughout the UPMC system, across departments. Participants include any resident/fellow self-identifying as URM choosing to participate.

**Description:** The Coalition of Residents and Fellows of Color (C-ROC) is an employee resource group founded in the fall of 2018 to serve URM residents/fellows at UPMC. This program was developed by and for URM residents/fellows with the mission to positively influence the UPMC training environment. Emphasis was made on four areas of focus: networking, mentorship, community service, and fostering social connections.

**Evaluation:** Surveys and bi-annual meetings with C-ROC members to evaluate satisfaction with efforts made and to determine future directions for the program.

**Discussion:** We intend to collect data on how the implementation of this group has affected URM residents/fellows in both their careers and social encounters and to assess if the presence of this program increases retention of URM physicians. We also intend to evaluate URM medical student attitudes towards UPMC residency programs following the implementation of C-ROC and to assess if the program increases recruitment of URMs.

**Support:** UPMC Center for Engagement and Inclusion

**Title:** *Clinic Supervisor: A Supervisory Rotation in Ambulatory Med-Peds.*

**Authors:** Dakroub A, Gonzaga A, Mieczkowski A  
Departments of Internal Medicine and Pediatrics, University of Pittsburgh

**Needs/Objective:**

Supervisory experiences for residents in the outpatient setting are limited. Our objective was to design, implement, and evaluate a supervisory ambulatory rotation for Med-Peds residents.

**Setting/Participants:**

The Med-Peds Clinic Supervisor Rotation was designed as a mandatory outpatient rotation for all 3<sup>rd</sup> and 4<sup>th</sup> year Med Peds residents, to be based out of the Turtle Creek UPMC Primary Care Clinic, our continuity clinical site.

**Description:**

Our novel clinic supervisory rotation was developed and is currently piloted as an one-month required ambulatory experience comprising direct care continuity clinic experience, direct care outpatient “selective” experiences selected by the resident, and majority of time served as the clinic supervisor during resident clinic

Tasks as clinic supervisor include: pre-clinic huddle with clinic staff, the option to lead pre-clinic conference, coordinating and facilitating medical student education, helping precept interns in the clinic, managing clinic flow, responding to acute tasks/patient needs, helping with paperwork, and developing an individual QI project.

Two half days per week are spent in direct-care continuity clinic where residents will see their own panel of patients in parallel to a core faculty preceptor who is also having their own clinic.

Prior to the rotation starting, the resident will submit educational/development goals that will serve as a focus for the resident during the rotation. These will also serve as the substance for a one-hour exit-interview upon completion.

**Evaluation**

We hope that this rotation improves resident self-efficacy, efficiency, and ability to effectively work within the constructs of primary care. We additionally hope that this rotation helps residents further develop their leadership skills as an educator and supervisor. We also intend for this rotation to improve resident agency and ownership regarding their primary care experience within the constructs of the Med-Peds continuity clinic at Turtle Creek.

**Discussion**

We are in the pilot phase. We are planning a full analysis after one year of academic implementation, in 2021. Thus far we have identified enthusiasm from residents and clinic staff.

**Title: The Value of a Social Wellness Committee in Plastic Surgery Residency**

**Authors:** David J, Farber S, Joseph W, Moroni E, Ng-glazier J, Losee J, Nguyen V

**Affiliation:** Department of Plastic Surgery, University of Pittsburgh Medical Center

**Introduction** - Residency training requires a significant investment of physical and emotional resources, and mounting evidence suggests a link to the constellation of symptoms including chronic stress, fatigue, and lack of interest or personal investment in work, collectively referred to as 'burnout.' Resident burnout rates as high as 78% have been reported, and contribute to medical errors, impaired quality of care, depression, and even suicide<sup>1-6</sup>. However, despite increased awareness and the implementation of broad policies by governing bodies such as the ACGME, there remains room for improvement at the level of individual programs to encourage and create quality initiatives and research in this area<sup>7,8</sup>. Trainees overwhelmingly feel that wellness should be a priority for residency programs, and this consistently ranks as one of the most important factors considered by applicants during the Match process<sup>9,10</sup>. We now know that strong associations exist between resident burnout and social-relatedness. However, interventions aimed at encouraging physical health and coping skills are both lacking and notoriously difficult to assess. Here, we outline the design and preliminary findings of a longitudinal study for assessing the efficacy of a structured wellness initiative for alleviating burnout in our plastic surgery residency program.

**Hypothesis** – The integration of our Social Wellness Committee (SWC) will improve resident social capital scores and subjective well-being.

**Methods** – A 40-item survey was administered to residents in our program (n=20) prior to SWC implementation, consisting of 1) a recently described, resident-specific assessment tool of social capital developed and validated by a multi-center cohort of training programs<sup>11</sup>, and 2) a survey assessing perspectives on a number of factors related to resident wellness and social support initiatives in plastic surgery training. The survey will be repeated at the end of the year.

**Results** –25% of residents reported having experienced high levels of burn-out during residency, with junior residents (PGY1-3) reporting significantly decreased levels of burnout (p<0.03) and higher psychological/social well-being (p<0.05) than seniors (PGY4-6). The majority (75%) of residents favor the implementation of a SWC.

**Conclusions** – Current patterns of resident burnout in our program are consistent with those in the literature<sup>12</sup>. Residents believe that wellness support by their training program is important, and feel that a structured SWC could improve symptoms of burn-out.

**Significance** – This study will serve as a novel framework for developing, integrating, and studying the impact and efficacy of social wellness initiatives aimed at alleviating burnout during residency training.

**Research/Grant Support** – None

**Title: Case Based Questions For Teaching ED Pharmacotherapy**

**Authors:** Eichenberger D<sup>1</sup>, Pollock, G<sup>1</sup>

**Affiliation:** <sup>1</sup>Department of Emergency Medicine, University of Pittsburgh Medical Center

**Needs and objectives** - Pharmacotherapy is integral to the practice of Emergency Medicine (EM). In our program, pharmacotherapy was primarily taught informally and via experiential learning. We aimed to introduce a formal pharmacotherapy curriculum as part of our didactic time using a series of case-based question sets that mirrored our educational blocks. In addition to the education component, this intervention provided our administration a means to assess the specific EM ACGME pharmacology milestone that is otherwise difficult to assess based on currently available clinical and knowledge based assessments.

**Setting and participants** - Our innovation was applied across our 48 resident 3 year EM residency program; the 32 1st and 2nd year residents were assessed for outcomes. Our goals were to provide residents with effective education without increasing the burden of time required, and yield information for tracking the pharmacology ACGME milestone. We scheduled our concise intervention within the regular agenda of educational conference using downtime.

**Description** - We implemented a series of quizzes containing approximately ten multiple choice questions each, illustrated through clinical vignettes. Questions were written using the ABEM model of practice topics and were reviewed by faculty physicians and an ED pharmacist. Quizzes were administered monthly in conjunction with each educational block followed by a period of review and discussion for further teaching.

**Evaluation** - We conducted resident pre and post intervention surveys of knowledge and satisfaction; 30 of 32 residents completed both. The survey instrument was a seven point Likert scale (see table). Our primary outcome was response to “I am confident in my overall knowledge of ED pharmacotherapy”. This received a pre-intervention score of 3.7 and a post score of 2.6. Self-assessed knowledge improvement scored a 2.2 on post intervention analysis. Resident satisfaction in curriculum improved from 3.8 prior to intervention to 3.1.

Table 1

Likert Scale Score	Corresponding assessment of statement
1	Strongly Agree
2	Agree
3	Slightly Agree
4	Neither Agree nor Disagree
5	Slightly Disagree
6	Disagree
7	Strongly Disagree

**Discussion / reflection / lessons learned** -As discussed above, we had improvement in our primary outcome of self-assessed resident learning. This intervention was an easy to implement curriculum that would be generalizable across EM programs looking at options for teaching pharmacotherapy, or improve resident pharmacology knowledge assessment. Based on resident feedback we plan to add expanded explanations with references for enhanced teaching. This was a pilot study; we would like to see if the effects become more pronounced after completing a full curriculum cycle. We would also like to study what effect our innovation has on resident performance on the in-service exam.

**Title:** 3AM Ortho: The Asynchronous Curriculum

**Authors:** Ferderber JS<sup>1</sup>, Dorfsman ML<sup>2</sup>, Brown EL<sup>3</sup>

**Affiliation(s):** <sup>1</sup>Department of Emergency Medicine, UPMC  
<sup>2</sup>Professor of Emergency Medicine, UPMC, Presbyterian Hospital; Program Director, University of Pittsburgh Residency in Emergency Medicine  
<sup>3</sup>Clinical Assistant Professor of Emergency Medicine, UPMC, Mercy Hospital and St. Clair Hospital

**Needs and objectives** – Medical education is constantly evolving and adapting to better serve the needs of learners. Recently the Emergency Medicine (EM) residency at the University of Pittsburgh Medical Center (UPMC) decided to remove a two-hour conference held once monthly in response to resident feedback. In lieu of this, we attempted to provide residents with a monthly high-yield learning tool for which they could complete in an asynchronous fashion in return for conference credit.

**Setting and participants** – The asynchronous curriculum was administered to PGY-2 and PGY-3 EM residents at UPMC. This was administered to augment the current educational curriculum.

**Description** – A survey was done during the prior academic year to establish the topic that residents believe would be most useful to their learning and future clinical practice. An orthopedic curriculum was then drafted and approved by the residency leadership. It was divided into a total of 12 units that were to be covered throughout the year. Each topic was distributed in a PowerPoint format in order to highlight the visual nature of this particular topic. Assessment forms were then completed by the residents each month corresponding to a particular unit. The asynchronous nature of the curriculum allowed residents' flexibility to learn at their own pace and complete the assessments at their convenience.

**Evaluation** – Participating residents provided feedback via anonymous survey after completion of 6 months of the curriculum (20 respondents). On a five-point scale, the residents' comfort level with orthopedics pre- and mid-curriculum was 2.6 and 4.2, respectively. Overall, positive feedback was received regarding the PowerPoint format (4.7/5), with 100% of residents recommending continuation of this curriculum in future academic years.

**Discussion** – Based on this experience, we believe we created a high-yield educational tool that can be utilized by residents during their training and post-training careers. Additional high-yield topics can be constructed in future years to further augment residents' learning. It should be noted that this curriculum was tailored to emergency medicine providers and thus might not be as beneficial to learners from other clinical specialties. Continued development in asynchronous content can contribute to resident education and wellness for future generations.

**Title: Teaching the Screening, Brief Intervention, and Referral to Treatment (SBIRT) Approach for Substance Use Disorders on the Consultation-Liaison Psychiatry Service**

**Authors:** Fishman DO<sup>1</sup>, Peterson R<sup>1</sup>, Faeder, M<sup>1</sup>, Douaihy A<sup>1</sup>, Landolina M<sup>2</sup>, Nowalk A<sup>2</sup>, Gopalan P<sup>1</sup>,

**Affiliations:** <sup>1</sup>Department of Psychiatry, University of Pittsburgh, <sup>2</sup>School of Pharmacy, University of Pittsburgh

**Needs and Objectives:** Patients with substance use disorders are frequently encountered on the Consultation-Liaison (CL) Psychiatry Service, yet remain among trainees' most complex and challenging encounters. A learning initiative was incorporated to supplement substance use disorder education received on other services. Screening, Brief Intervention, and Referral to Treatment (SBIRT) is a validated approach to address these patients' substance use in an effective and efficient manner. Extremely relevant to a busy clinical service, SBIRT emphasizes screening for substance use without stigma, briefly utilizing motivational interviewing and other skills to build towards behavior change, and connecting patients with appropriate aftercare.

**Settings and Participants:** Participants were five blocks of second-year residents (n=15) on their CL Psychiatry rotation, trained from September 2018 through September 2019.

**Description:** Using online modules, in-person didactics, and peer role-playing exercises, trainees on the CL Psychiatry Service were trained in the psychotherapeutic, pharmacologic, and other patient-centered considerations of promoting recovery from substance use while on a busy inpatient service. The Effective Brief Intervention Virtual Training Program encompassing the online portion included modules composed of skill development exercises with standardized patients interwoven throughout lectures. Following the electronic segment, residents practiced clinically relevant skills by role-playing vignettes specifically adjusted to simulate inpatient consultation-liaison and integrated care patient encounters. Throughout their CL rotation, residents have opportunities to observe and perform SBIRT with previously SBIRT-trained attending psychiatrists.

**Discussion:** Pretest and posttest data compiled from the residents were compared via Likert scales assessing knowledge, competence, and attitude. Substance use screening and intervention knowledge increased across all four core knowledge domains. Perceived competence in working with patients using substances increased in all 13 measured areas. Attitudes and perceptions on working with patients using substances improved in 11 of 13 areas. The vast majority (93%) of residents found the training to be relevant to their careers and for substance use treatment. The majority (60%) of residents were very satisfied or satisfied with the training experience.

**Support:** Grant from the Substance Abuse and Mental Health Services Administration

**Title: A Nurse-Resident Shadowing Project to Improve Interprofessional Care**

**Authors:** Georgeson A<sup>1</sup>, Nowalk A<sup>1</sup>, Szymusiak J<sup>1,2</sup>

**Affiliations:** 1. Department of Pediatrics, 2. Department of Internal Medicine

**Background:** Research has shown that nurses and residents often do not understand each other's roles. Some residents believe that nurses' roles are to just follow physician's orders. This mindset affects interprofessional collaboration and can potentially put patient safety at risk due to poor communication.

**Objective:** A nurse-resident shadowing program was created to 1) improve collaboration, 2) improve understanding between the two professions, and 3) improve communication.

**Methods:** Pediatric interns during their orientation of the 2018-2019 and 2019-2020 academic years participated in the shadowing experience. Interns shadowed nurses on the medical floors of the Children's Hospital of Pittsburgh. The shadowing experience occurred during a two-hour period and was followed by a one-hour facilitated debriefing session afterwards for all the interns and several participating nurses. Two validated interprofessional scales were used as a pre- and post-shadowing survey on the day of the event

**Results:** 54 pediatric interns participated in the study over the two year period. Of the 20 likert questions included on the survey, 11 showed statistical significance. These 11 questions included questions related to respect for the nursing profession, understanding various nursing abilities, and understanding nursing day-to-day workflow. Qualitative questions were also asked on the survey and responses included the themes listed above, but participants also described learning ways to improve their communication with nurses and their efficiency of care.

**Discussion**

This study demonstrated that this shadowing experience can be an effective way to teach new interns basic principles of interdisciplinary care. Performing this intervention during intern's orientation represents an ideal time to learn these concepts prior to beginning patient care and was more feasible to implement at this time. This intervention is an easily applicable project for residents in other departments, specialties, and institutions.

**Title:** The treatment of chronic HCV in an outpatient, primary care setting

**Author(s):** Krueger J<sup>1</sup>, Taylor A<sup>2</sup>

**Affiliation(s):**

<sup>1</sup>University of Pittsburgh Medical Center (UPMC) – St. Margaret Family Medicine Residency Program

<sup>2</sup>University of Pittsburgh School of Pharmacy

**Background:** There are an estimated 3.5 million people living with hepatitis C infection in the United States. Although curable with medication, chronic hepatitis C virus (HCV) remains the primary cause of cirrhosis, hepatocellular carcinoma, and liver transplantation in the United States.

Over the last few years, the management of chronic HCV has changed dramatically. Medication regimens are simpler, easier to tolerate, and associated with less adverse side effects. Primary care physicians, rather than liver specialists, are capable and particularly suited to manage and treat this curable disease.

The University of Pittsburgh Medical Center (UPMC) - St. Margaret is a hub for medical trainees, with both Family Medicine and Pharmacy residency training programs.

Over the past two years, we have developed a collaborative, resident-driven model for the treatment of chronic HCV for use within our outpatient primary care clinics. Our model identifies patients who are candidates for treatment within primary care and screens out patients who are either poor candidates or who will require a higher level of care/referral (e.g. decompensated cirrhosis). Treatment algorithms are based on published recommendations from AASLD/IDSA.

**Purpose:** Using our standardized model, we hope to show that the management and treatment of chronic HCV in primary care is faster, safe, and as efficacious as a subspecialty referral.

**Methods:** Over two years, we identified 146 clinic patients with chronic HCV: 59 were treated by a primary care resident provider, 18 were referred/treated by Hepatology, and 45 patients were evaluated for treatment, but ineligible. Although there were 24 patients still awaiting evaluation for treatment, only the 122 patients who were evaluated (1/2017-12/2019) were included in our study.

As part of the study, we abstracted variables of interest from each patient's Electronic Medical Record (EMR), including but not limited to: patient demographics, means of acquisition, and self-reported readiness for treatment, as well as hepatic function, treatment course, and viral load response.

Our primary outcome is cure rate; secondary outcomes include: time to treatment, patient-reported side effects, and the occurrence of serious adverse events. Basic parametric and nonparametric statistical tests will be performed, including frequency distributions, cross-contingency tables, and percentile estimations.

**Results/Conclusions:** To be determined. We expect to have our project complete in mid-January

**Title: Increasing Knowledge and Comfort in Intimate Partner Violence Screening among Internal Medicine Interns**

**Authors:** Kyle JR, Buranosky R, McNeil MA

**Affiliation:** Department of Medicine, Division of General Internal Medicine

**Introduction:**

Intimate Partner Violence (IPV) is underrecognized in primary care despite guidelines recommendations to screen all female patients. Failure to screen is often due to surmountable barriers including personal discomfort, knowledge deficits, or resource unawareness. The objective of our study was to increase intern knowledge, comfort, and screening rates through a combined didactic and communication skills curriculum.

**Hypothesis:**

We hypothesized that a combined didactic-skill development curriculum would increase intern knowledge, comfort, and IPV screening rates.

**Methods:**

The curriculum was presented to internal medicine interns. Participants completed a pre-survey of comfort, opinion, knowledge, and demographic questions. Curriculum didactic explored definitions, power-control dynamics, screening guidelines, health impacts, and documentation. During skill development, interns brainstormed word choice for screening and response with facilitator feedback. Two simulated patient cases were completed with supportive coaching and performance feedback. Residents were invited to complete a post-survey four weeks post-curriculum. Comfort and opinion questions were measured on a seven-point Likert scale and analyzed using Wilcoxon signed-rank test. Knowledge-based questions were true-false and multiple choice and analyzed using McNemar's test.

**Results:**

Forty interns completed the curriculum January-October 2019. Twenty-nine interns completed both pre- and post-surveys (72%). Interns demonstrated statistically significant increases on all measures of self-perceived knowledge and comfort. Important areas of improvement included increases in self-reported compliance with guideline-based screening recommendations (mean 2.8 to 4.24), ability to identify patients eligible for screening (mean 3.52 to 5.69), comfort discussing IPV with patients (mean 3.52 to 5.3), and ability to make referrals within the community (mean 3.05 to 4.86) ( $p < 0.01$ ). Interns demonstrated statistically significant improvement in recognizing IPV perpetrator characteristics and understanding high danger situations ( $p < 0.05$ ).

**Conclusions:**

A combined didactic-communication skills curriculum significantly improved intern IPV-specific comfort and self-reported screening practices. Improvement in knowledge was also demonstrated, but likely limited by high intern knowledge pre-curriculum and question wording that suggested a most appropriate answer. Further analysis will reveal if screening and documentation increased through chart review of eligible patients.

**Significance:**

This curriculum is feasible and easily transferrable to other programs interested in increasing resident comfort with IPV screening through skill development.

**Research/Grant Support:**

Thomas H Nimick, Jr. Competitive Research Fund

University of Pittsburgh Division of General Internal Medicine

**Title: Gender Bias in Letters of Recommendation in Obstetrics & Gynecology**

Authors: Lang S, Brucha D, Parviainen K

Affiliation: University of Pittsburgh Medical Center Magee-Women's Hospital, Department of Obstetrics, Gynecology & Reproductive Sciences. Pittsburgh, PA, USA

**Background:** Recruitment of males and underrepresented minorities is critically important for diversity. LoR was identified in the 2018 NRMP Program Director Survey as the 2nd most important factor. The presence of gender bias in LoR could impact resident selection.

**Methods:** Applications to the UPMC ObGyn residency were reviewed and demographics recorded in a de-identified manner for applicants and writers. LoRs were de-identified and de-gendered. The letters were blindly read, and term frequency of an established dictionary of adjectives (agentic, communal, ability, standout, grindstone, etc.) was collected.

**Results:** 76 applicants (53 female, 23 male) were included, totaling 251 letters. No differences in average Step 1 score existed, but females scored higher Step 2 score ( $P < 0.01$ ). Males had shorter LoRs than female applicants ( $P < 0.005$ ). Female LoRs were more likely to contain grindstone adjectives ( $P < 0.05$ ) and reference AOA status ( $P = 0.001$ ), but no other significant gender based differences in adjectives were identified. Males were more likely to have LoRs with male authors (64% vs 36%). Males were more likely to have letters written by Full Professors (25% vs 15%); but females were more likely to have letters written by Division chiefs (8% vs 2%) or Chairs (25% vs 21%).

**Discussion:** LoRs for male applicants were shorter, contain less grindstone adjectives and less likely be written by Division Chiefs or Chairs than females suggesting a possible component of underlying gender bias warranting further investigation.

**Title: Clinic First: Resident, Faculty, and Staff Perspectives on Transforming a Family Medicine Residency Model of Care**

**Authors:** Lin LY<sup>1,2</sup>, Nightingale BS<sup>1,2</sup>, Conti TD<sup>1</sup>

**Affiliations:** 1. Department of Family Medicine 2. Department of Psychiatry

**Needs and Objectives:** Primary care residency programs face barriers to continuity of care and team-based care due to challenges in balancing residency scheduling with the demands of a busy ambulatory clinic. Clinic First (CF) is a model created by the University of California, San Francisco Center for Excellence in Primary Care that focuses on improving primary care ambulatory training and building high-performing residency clinics. This study examines how implementing two key CF principles (increasing continuity of care and building stable teams) impacts resident, faculty, and staff experience in an urban underserved family medicine (FM) residency program.

**Setting and Participants:** CF initiatives were initiated at Latterman Family Health Center (LFHC) in July 2018. 21 FM PGY1-3 residents and 5 FM-psychiatry PGY 1-5 residents, 14 faculty members, 18 LFHC office staff participated in an anonymous survey in December 2019.

**Description:** CF initiatives included assigning residents to a set 3-year rotation schedule, 1 of 4 colored teams, and set continuity clinic days for each colored team. Additionally, several nurse and medical assistant roles, such as reconciling medications and pending health maintenance tasks, were optimized. We assessed perception of continuity of care, scheduling, and team-based care.

**Evaluation:** 81% of residents (n=21), 86% faculty members (n=12), and 67% staff members (n=12) completed the survey. For the faculty and staff members who were present at LFHC since implementation of CF, the majority agreed that the CF model has been a positive change at LFHC. The majority of residents reported liking having set yearly rotation schedule and full days in clinic. 76% of residents agreed that they have continuity of care with their panel of patients. Residents, faculty, and staff overwhelmingly preferred team-based care. Interestingly, despite having set yearly schedules and continuity clinic days, only 57% residents reported that clinic schedule was predictable.

**Discussion:** CF provided a platform for initiating changes at LFHC by restructuring resident scheduling and shifting to team-based care. This initial evaluation from residents, faculty, staff at LFHC showed positive improvement in continuity of care, resident scheduling, and team-based care. We plan to design further quality improvement initiatives based on CF principles to enhance resident learning and clinic functioning at LFHC.

**Support:** American Board of Family Medicine- Clinic First Collaborative

**Title: Psych E-consult: a novel method for timely electronic psychiatric evaluation**

**Authors:** Lu J, Hassan S, Hedayati D, McGuire P

**Affiliations:** Family Medicine and Psychiatry departments, Department of Family Medicine

**Needs and objectives:**

A shortage of mental health providers and an increasing need for psychiatric services has led to significant access issues. During one 12-month survey, only 41% of adults with acute mental illness received mental health treatment; 22.8% were treated by a general medical provider. Education for primary care physicians (PCPs) in diagnosis and management of psychiatric care is variable. Due to the need for more psychiatric education and access, family medicine/psychiatry dual track residents piloted “Psychiatric E-consultation” in 2017 to provide timely psychiatric consultation to family medicine residents and faculty.

**Setting and participants:**

Participants were residents and faculty of UPMC St. Margaret family medicine department from July 2017-present.

**Description:**

Residents and faculty could trigger a Psych E-consult by opening a telephone encounter within EPIC. The body of the telephone encounter contained the clinical question. The encounter was routed to the Psych E-consult pool, which included the family medicine/psych residents (PGY3-PGY5) and the integrated attending psychiatrist. Pool members took turns covering consults, with usual consultation response within 24 hours. Completing these consults required reviewing prior notes, problem lists, scanned documents and medication history. Consultants replied to the PCP by restating the clinical question, citing issues that may need further clarification or work-up, and providing brief summaries of evidence based on the specific clinical topics. The consultant made recommendations to the PCP for further assessment, appropriate treatment modalities and level of care, and medication options.

**Evaluation:**

To date, 191 consults have been sent to Psych E-consult. 85% have been answered within 24 hours, with 24% answered in 6 hours. Most common questions were regarding medication management (79%) and diagnostic issues (44%). Consults involved a wide range of diagnoses, including depressive disorders (58%), bipolar disorder (28%), ADHD (23%), and substance use (17%). Most frequently, recommendations to the PCP involved adding (37%) or changing a medication (17%), referring for a full evaluation with the behavioral health team (44%). For each consult, the provider requesting the consult was sent a follow-up survey. Of 77 responses, 92% agreed or strongly agreed that e-consult had improved the care plan of their patient. Further, 96% of survey responders agreed or strongly agreed that their knowledge of behavioral health issues had increased due to the consult.

**Title: Admission Medication Reconciliation Improvement Project**

**Authors:** Lubin, FJ<sup>1</sup>, Morcheid, R<sup>2</sup>, Uprety, S<sup>1</sup>, Pan, J<sup>1</sup>, Kashiwagi, T<sup>1</sup>, Akunne, U<sup>1</sup>, Bai, K<sup>1</sup>

**Affiliations:** <sup>1</sup> Department of Medicine, Division of General Internal Medicine, University of Pittsburgh Medical Center McKeesport

<sup>2</sup> Department of Pharmacy, University of Pittsburgh Medical Center McKeesport

**Background:** Each year, adverse drug events (ADE) account for nearly 700,000 emergency department visits and 100,000 hospitalizations. Nearly 5% of hospitalized patients experience an ADE, making them one of the most common types of inpatient errors. Transition of care is a well-documented source of preventable medication errors.

**Methods:** This was a single center prospective observational study performed at a community teaching hospital. After institutional approval, patients admitted through the Emergency Department to general medicine floors from June to November 2019 were randomly selected within 24 hours of admission. Admission information was collected to identify correlation of errors with origin prior to admission, healthcare worker completing the admission medication list (AML), or the admission service. Each patient was interviewed, and medication history was obtained from patient, electronic medical record (EMR), family members/care taker to obtain the Final Medication List (FML). This FML was compared to the last documented AML in the EMR prior to medication reconciliation. Discrepancies between FML and AML were evaluated. The number of errors were analyzed by type of error (omission, commission, or composite of wrong dose, frequency, or brand) and severity of errors (insignificant, significant, serious or life-threatening) as an estimation of risk of injury due to medication errors.

**Results:** We interviewed 127 patients. The majority were admitted from home (92%). The AML was accurate 35.4% of the time with 91 significant errors and 76 serious errors. Out of the 127 patients interviewed 34% had significant or serious medication errors. There was no clear correlation between the medical service caring for the patient or the healthcare worker that obtained the AML and the significant or serious errors. However, there was a statistical significant difference between the patients admitted from home and long term acute care and the number of significant or serious errors (81 vs 9 respectively).

**Conclusion:** Our study confirms that most of hospital admission medication reconciliation is not performed appropriately. In the current electronic medical records, the admission medication list is used as the template to complete the medication list at hospital discharge. It is not unusual to see event reports of the wrong medication being given or prescribed at hospital discharge. This has been proven time and time again to lead to an increase number of medication errors and hospital readmissions. Despite this clear evidence, it is our belief that not enough importance and resources are directed to improve the system.

### **Fellow Dinners: An Approach to Mentoring and Wellness**

Authors: Lunoe MM, Zuckerbraun NS

Affiliations: Department of Pediatrics, University of Pittsburgh School of Medicine

**Needs and Objectives:** Informal mentoring is an important part of development for physicians in their final years of training. While formal didactics focus on clinical practice, important career topics such as finding a first job and coping with poor patient outcomes are not typically covered. The Fellow Dinner program aimed to promote faculty-fellow relationships and mentoring while covering topics not addressed in formal curriculum by hosting fellows at faculty homes.

**Setting and Participants:** Participants were Pediatric Emergency Medicine Fellows at Children's hospital of Pittsburgh. The fellowship accepts 3 fellows annually in to a 3-year program. Since program implementation, the division has had a total of 9 fellows yearly and 27 faculty members.

**Description:** Faculty and fellows met semi-annually at a faculty member's home to share a meal and conversation. Topics for a 3-year curriculum, held during the 2016-2019 academic years, included: Coping with Death and Dying, Tips on Testifying, Work-Life Balance/Integration, Finding and Starting your First Attending Job, Delivering Difficult Feedback and Identifying and Mitigating Burnout. Faculty provided an introduction to the topic and facilitated an open discussion. Fellows were encouraged to explore issues they had experienced as fellows or anticipated as faculty. Faculty shared evidence-based approaches as well as their own experiences.

**Evaluation:** Fellows (n=18) were surveyed via an anonymous electronic survey through Qualtrics. The response rate was 72% (13/18), with 42% current fellows and 58% recent graduates. Fellows rated sessions and educational goals on a 4-point Likert Scale. The majority of fellows found each session to have Moderate to High Value. For educational goals, 100% of fellows found that Fellow Dinners provided High Value for Fellow/Faculty interaction, while the majority also found the sessions provided Moderate or High Value in Filling Gaps in Education (90%), Engaging Faculty in Fellow Education (89%) and Covering Wellness Topics (78%).

The majority of fellows (69%) rated the frequency of Fellow Dinners as "Just Right" with the remaining participants (31%) ranking "Not Enough", requesting 4 dinners per year.

**Discussion:** The Fellow Dinner program in Pediatric Emergency Medicine effectively increased Fellow and Faculty interaction and covered topics not adequately covered in formal didactics. Fellow participants found value in these sessions. Future plans include guest speakers and continuing to modify curriculum to fit the needs of current fellows and faculty.

**Title: Improving Human Papilloma Virus Vaccination Rates by Entire Primary Care Medical Home Involvement**

**Authors:** Castelli G<sup>1</sup>, McGaffey A<sup>1</sup>, Lin CJ<sup>2</sup>, Nowalk MP<sup>2</sup>, Middleton DB<sup>1,2</sup>

**Affiliations:** <sup>1</sup>University of Pittsburgh Medical Center St Margaret Family Medicine Residency, <sup>2</sup>Department of Family Medicine, University of Pittsburgh School of Medicine

**Introduction:** To realize cancer prevention potential, we pursued a quality improvement project to improve human papillomavirus (HPV) vaccinations for 9-26 year-old patients during calendar year 2018. Our clinic's rates were compared with 2017 National Immunization Survey-Teen (NIS-Teen) 13-17-year-old HPV vaccination rates.

**Hypothesis:** Protection from HPV infection would increase with multi-strategy interventions to improve HPV vaccination uptake.

**Setting/participants:** Family medicine residency office located in a lower income neighborhood with 12 family medicine and 2 PharmD residents, 1 fellow, 6 faculty, and clinical staff. All HPV vaccination-eligible patients aged 9-26 years, with  $\geq 1$  practice visit in 2018 were included.

**Design:** Pre-post study

**Methods:** We used multiple clinician-driven provider-, patient-, and system-oriented strategies. Provider strategies included a presumptive recommendation, "You are due for HPV vaccine today," and vaccination review following notification of a Children's Hospital of Pittsburgh emergency department visit. Patient strategies: health literate patient education materials; rotating creative seasonal/monthly HPV posters; PharmD phone-, text-, and post card outreach to eligible patients; immediate sensory incentives – hitting a large gong and small prizes (fidget spinners, bling rings, play putty, etc.) for any HPV vaccination; contact information for a return vaccination visit which qualified a vaccinated patient for a biweekly \$50 retail gift card lottery. Office systems: standing order protocol and daily review of scheduled patients' vaccination status.

**Results:** 2018 ages 11-26 years: 795 patients (67% female, 74% African American, 67.8% Medicaid)

Age group	HPV initiation			HPV completion (2 or 3 dose)		
	Total N=633	Females N=445	Males N=188	Total N=497	Females N=365	Males N=132
11-26 yrs.	79.6%	83.5%	71.8%	62.5%	68.5%	50.4%
11-12 yrs.	81.2%	82.9%	79.6%	29.4%	35.6%	22.7%
13-17 yrs.	92.5%	91.0%	94.1%	76.9%	78.7%	75.0%
National 13-17 yrs.	65.5%	68.6%	62.6%	48.6%	53.1%	44.3%
18-26 yrs.	75.2%	81.9%	55.2%	63.1%	69.5%	44.0%

**Conclusions:** Favorable age-eligible and 13-17 year-old HPV vaccine uptake compared to national rates occurred with entire health center clinician involvement and multi-component strategies.

**Significance:** HPV vaccination and cancer prevention campaigns could benefit from multiple strategies for patients and learner/providers.

**Research/grant support:** Fine Award, Jewish Healthcare Foundation

**Title: Application of a Custom 3D Vaginal Model for Sacrocolpopexy Mesh Fixation**

**Authors:** Melnyk A<sup>1</sup>, Sassani J<sup>1</sup>, Moalli P<sup>1</sup>, Sinex D<sup>2</sup>, Bonidie M<sup>1</sup>

**Affiliations:** 1. Division of Urogynecology and Reconstructive Pelvic Surgery, Magee Women's Hospital of the University of Pittsburgh; 2. Swanson School of Engineering, University of Pittsburgh

**Needs and objectives** – Surgical trainees and experts learning new surgical platforms need access to high fidelity surgical simulation. Simulation that utilizes real surgical equipment and replicates tissue dynamic and material properties is the gold standard. To improve our own simulation, we developed a 3D vaginal model to use with our available OR tools including Senhance robotics and the ALLY uterine positioning system (ALLY).

**Setting and participants** – Urogynecology fellows and attendings were included to practice sacrocolpopexy mesh fixation using this new model at UPMC.

**Description** – Axial pelvic MRI scans were used with 3D software to obtain real-time vaginal geometries, which were used to create a 3D printed vaginal mold made of polylactic acid filament. A solution made of polyvinyl alcohol (PVA) and deionized water was transferred to the mold and processed to a texture that simulated vaginal material properties. PVA gel vaginal models were maintained in a moist environment to preserve mechanical integrity. Vaginal models were then attached to the ALLY. Once OR setup was complete, mesh was introduced and the surgeon practiced sacrocolpopexy mesh fixation to the model. By repositioning the ALLY, the vagina was manipulated to any angle without additional assistance. Almost all aspects of the procedure were replicated in this model except for tissue dissection.

**Evaluation** – Both trainees and experts benefited from this high fidelity simulator. Fellows practiced their technique sewing and positioning the mesh in both laparoscopy and robotics. Surgical experts were able to practice using new Senhance robotic technology. As this was a pilot study of feasibility for a new model, formal evaluation is ongoing.

**Discussion / reflection / lessons learned** – This model requires access to 3D printing and the preliminary materials, but once made, this model can be reused numerous times. This simulation also requires access to mesh, a surgical system, and the ALLY, though it also works with a physical assistant if the ALLY is not available. Its reusability with multiple learners at various levels makes it an ideal high fidelity model.

**Online resource URL (optional):** 6 minute video will be available

**Support** – NIH/NICHD R01 HD083383 Grant Funding

**Title: The Ophthalmology Mini-Elective Gives Vision to Pre-Clinical Medical Students**

**Authors:** Mortensen P<sup>1</sup>, Enzor R<sup>1</sup>, Keppel K<sup>2</sup>, Williamson R<sup>1</sup>, Waxman E<sup>1</sup>

**Affiliations:** <sup>1</sup>Department of Ophthalmology, University of Pittsburgh, <sup>2</sup>Transitional Year, University of Pittsburgh

**Needs and Objectives:** Ophthalmology education during the preclinical years of medical school is limited. The University of Pittsburgh School of Medicine offers “mini-elective” courses to preclinical medical students in various disciplines. Given the need for increased exposure to ophthalmology during the preclinical years, we have developed such a course to provide instruction to interested preclinical medical students in the basics of clinical ophthalmology.

**Setting and Participants:** Participants included first and second year medical students from the University of Pittsburgh School of Medicine who electively enrolled in our course from 2015 to 2019. 28 pre-elective surveys and 21 post-elective surveys were received. 14 knowledge-based pre-tests and post-tests were received during the 2019 mini-elective.

**Description:** We created a mini-elective course consisting of four 2-hour sessions held weekly for four consecutive weeks followed by a one-on-one experience with an ophthalmologist in the operating room. The first three sessions began with 30-60 minutes of lecture, with the remainder of the session devoted to hands-on learning in small groups, during which medical students learned the ophthalmologic physical examination. The fourth session instead concluded with a wet lab surgical experience. Surveys were distributed at the beginning and end of the course to assess participants’ goals for the course and monitor course feedback. In 2019, knowledge-based pre-tests and post-tests were also administered to assess participant learning.

**Evaluation:** Based on our surveys, participants reported feeling more comfortable with the ophthalmologic history and physical examination and felt that their knowledge of ophthalmology had significantly improved. In post-survey feedback, learners consistently mentioned the hands-on experiences, including small groups focused on exam skills and the wet lab, as positive elements of our course. In 2019, our pre-tests and post-tests showed a dramatic improvement in learners’ ophthalmology knowledge.

**Discussion/Reflection/Lessons Learned:** We believe that the Ophthalmology Mini-Elective accomplishes its stated goals given participants’ reports of increased comfort with the ophthalmology history and physical examination as well as pre- and post-tests demonstrating a significantly increased knowledge base in ophthalmology. A benefit of our Ophthalmology Mini-Elective is the generalizability for other medical schools, since required resources include a limited number of volunteers, a small lecture space with PowerPoint capabilities, and an ophthalmology clinic with several clinic rooms for small group sessions.

**Title: Use of Chart-Stimulated Recall as an Educational Tool to Explore Uncertainty in Medical Decision Making Among Senior Internal Medicine Residents**

**Authors:** Mutter, M<sup>1</sup>, Yecies, E<sup>1,2</sup> and DiNardo, D<sup>1,2</sup>

**Affiliations:** <sup>1</sup>University of Pittsburgh School of Medicine, <sup>2</sup>VA Pittsburgh Healthcare System

**Needs and objectives:** Errors in medical decision making have been linked to adverse events and patient harm, particularly when diagnostic or therapeutic uncertainty exists. Guided reflection has been identified as a promising tool for improving diagnostic decision making, including the approach to uncertainty. Therefore, we sought to determine whether reflection about a patient case with another physician through Chart-Stimulated Recall (CSR, a method that pairs patient chart review with an oral interview component) is a valuable educational tool to promote reflection about uncertainty in medical decision making.

**Setting and Participants:** We implemented a reflection exercise with all PGY-2 and PGY-3 internal medicine (IM) residents on a night float rotation at the University of Pittsburgh Medical Center (UPMC) over a 6-month period; each resident participated in one reflection exercise over the course of his or her night float rotation.

**Description:** Prior to initiation of the study, we developed a CSR interview guide and conducted pilot interviews with residents to further refine the interview guide and reflection questions. We then implemented the reflection exercise with eligible participants from February to September 2019. For the exercise, participants were instructed to select one new patient admission from the evening prior to the session in which there was uncertainty in their medical decision making. Faculty interviewers then guided each resident through a reflection exercise, using the interview guide and a printed history and physical exam, to explore the nature of, contributors to, and sequelae of the uncertainty in each case.

**Evaluation:** 91% of eligible residents participated in the study (41/45 residents). Participants completed a feedback survey 1-2 weeks after the exercise, which consisted of Likert scale and open-ended questions. 60% of residents agreed/strongly agreed that the opportunity to think aloud was valuable and 87% of residents felt comfortable discussing uncertainty. Narrative comments noted the value of reflection/retrospection. Suggestions for improvement included consideration of a change of time for the exercise, incorporation of more teaching, and provision of feedback.

**Discussion/Reflection/Lessons Learned:** Reflection is an important method to improve the decision-making process, which can ultimately lead to improved patient care. Our study on chart-stimulated recall as a means of reflection noted both benefits of and challenges to such an intervention. Implementation of such an exercise should consider the optimal timing of a reflection exercise, as well as the opportunity to provide residents with feedback on their decision-making process.

**Support:** The Competitive Research Fund of Shadyside Hospital, UPMC Clinical Center for Medical Decision-Making

**Title: Exploration of Uncertainty in Medical Decision-Making and the Growth Mindset Among Senior Internal Medicine Residents**

**Authors:** Mutter, M<sup>1</sup>, Yecies, E<sup>1,2</sup>, and DiNardo, D<sup>1,2</sup>

**Affiliations:** <sup>1</sup>University of Pittsburgh School of Medicine, <sup>2</sup>VA Pittsburgh Healthcare System

**Introduction:** Errors in medical decision making have been linked to adverse events and patient harm, particularly when diagnostic or therapeutic uncertainty exists. Prior research has attempted to categorize uncertainty and to associate physicians' tolerance of uncertainty with various factors such as patient-provider communication and diagnostic testing. In this study, we sought to determine senior internal medicine (IM) residents' reactions to uncertainty and the association of tolerance of uncertainty with the perceived ability to change one's own intelligence level, or the "growth mindset."

**Hypothesis:** Residents will have moderate comfort with uncertainty and have a growth mindset. Greater tolerance of uncertainty will be associated with a growth mindset.

**Methods:** We conducted a study to explore uncertainty in medical decision-making with senior IM residents at the University of Pittsburgh Medical Center in 2019. Participants completed a demographic survey, a Physicians' Reactions to Uncertainty (PRU) scale, and a Revised Implicit Theories of Intelligence or "growth mindset" scale. Spearman's rho was calculated as a measure of association between scores on the two scales and the Wilcoxon rank sum test was used to compare associations between demographic characteristics and scores on the PRU and "growth mindset" scales.

**Results:** Between February and September 2019, 41 out of 45 eligible residents participated in the study. Residents had a moderate overall "anxiety due to uncertainty" (average 18.4/27), though did demonstrate less "reluctance to disclose uncertainty to patients" (average 19.1/24) and more "reluctance to disclose mistakes to physicians" (average 4.73/10). Residents scored an average of 2.6 out of 6.0 on the "growth mindset" scale, with scores less than 3.3 suggestive of a growth mindset. No association was found between age, gender and level of training on tolerance of uncertainty or having a growth mindset and no association was found between greater tolerance of uncertainty and having a growth mindset

**Conclusions:** Our results demonstrate that residents had a moderate comfort level with uncertainty overall, though the ideal amount of uncertainty to provide optimal patient care is unknown. In addition, relatively lower scores on the "reluctance to disclose mistakes to physicians" sub-scale suggest a greater need for educational efforts in error disclosure in order to ultimately reduce adverse events.

**Significance:** Uncertainty in medicine is ubiquitous; our study adds to the growing body of literature on uncertainty in medical decision-making and suggest a continued need to optimize trainee comfort with uncertainty and ultimately patient care.

**Research / Grant Support:** The Competitive Research Fund of Shadyside Hospital, UPMC Clinical Center for Medical Decision-Making

**Title: The Development of Novel Low-Cost, High impact Models: Can Simulation Survive in Plastic Surgery Education?**

**Authors: Ng-Glazier J<sup>1</sup>, Gusenoff J<sup>1</sup>**

*Affiliations: <sup>1</sup>Department of Plastic Surgery, University of Pittsburgh Medical Center, Pittsburgh, PA*

**INTRODUCTION/HYPOTHESIS:** Studies suggest that integration of a formal simulation is beneficial to surgical trainees, but its role has not been well defined in plastic surgery. We hypothesized that a formal simulation curriculum to address areas of clinical deficiency would greatly enhance current plastic surgery resident education.

**METHODS:** Residents at a large ACGME-accredited plastic surgery program identified several topics of technical deficiency in their current educational structure. A multi-session curriculum spanning 6 months (July 2018-January 2019) was developed to address these topics, each supplemented by electronically accessible material. Using low cost materials, four models were created to target skills in breast surgery marking, ultrasound guided aspiration and injection, safe buttock augmentation, and pinning/drilling across hand and joint fractures. Improvement in knowledge, comfort of technical skill after each session, quality of models, supplemental materials, and overall resident satisfaction were measured immediately after each session and compared via paired t-test,  $\alpha=0.05$ .

**RESULTS:** 24 residents (100% participation) identified clinical deficiencies in the following: preoperative breast markings, use of ultrasound for bedside procedures, comfort with gluteal fat injection, and pinning fractures. Utilizing a scale of 1-10, average post-simulation knowledge and skill comfort doubled for all sessions, including breast markings (4.32  $\rightarrow$  7.00,  $p<0.01$ ), ultrasound-guided aspiration of abscess, seroma, upper extremity nerve blocks, gluteal fat injection (3.65  $\rightarrow$  7.25,  $p<0.01$ ), and drilling/pinning hand and joint fractures (3.15  $\rightarrow$  6.56,  $p<0.01$ ). Satisfaction ratings were 8.64, 9.13, and 9.25, respectively. Stratification by training year indicated greater impact in junior residents (R1-3) for drilling/pinning compared with senior residents (R4-6). Stratification between integrated and independent/traditional pathway residents indicated higher impact for traditional residents in all sessions except for ultrasound. 100% of residents desired continued skill simulation with the current models. A second breast marking session 12 months later indicated similar results, with more than 50% retention of skills and higher baseline comfort level for all trainees who participated the year prior.

**CONCLUSION:** Repetitive skill simulation using reusable low-cost, high impact models has the potential to supplement our current plastic surgery resident education; 12-month retention data is promising. Ongoing validation, and skill retention is necessary for formal integration.

**SIGNIFICANCE:** In the era of duty hour restrictions, clinical simulation can enhance a trainee's confidence and ability to perform vital procedures within the field. A formal curriculum can become an objective milestone in a competency-based curriculum, such as that being implemented by the American Board of Plastic Surgery.

**RESEARCH/GRANT SUPPORT:** None

**Title: Effect of an online critical care curriculum on critical care knowledge across medical specialties.**

**Authors:** Wunderle K<sup>1</sup>, Nobile J<sup>1</sup>, Moore J<sup>1</sup>

**Affiliations:** <sup>1</sup>Department of Critical Care Medicine, University of Pittsburgh Medical Center

**Introduction:** Online curricula avoid scheduling and geographic limitations inherent in traditional didactics. Studies show that online teaching is better than no formal teaching and non-inferior to in-person didactics on student learning. Few studies explored the effects of a single curriculum on multiple types of students or the durability of online learning. We developed an online curriculum for residents rotating through Intensive Care Units (ICUs) across UPMC to assess its effect on critical care knowledge over time and across training background.

**Hypothesis:** An online curriculum plus bedside teaching will improve critical care knowledge compared to bedside teaching alone. These findings will be consistent across medical specialties and will persist over time.

**Methods:** We are performing an IRB-approved experimental, randomized, unblinded trial of the efficacy of an online critical care curriculum. Subjects include residents rotating through the ICUs from multiple specialties. Randomization is by convenience block schedule based on when the learner's rotation occurs. Subjects complete a quiz of board-style questions pre, post, and six weeks after their rotation. Intervention subjects receive access to the curriculum throughout their rotation. Control subjects receive access after the 6-week quiz. We will compare the change in exam scores from baseline to the end of rotation and post-rotation across groups.

**Results:** We are currently enrolling. Among 53 residents invited to join the control arm, 28 (52.8%) enrolled, encompassing 10 distinct specialties. Of those 28 participants, 15 (53.6%) have completed the quizzes, with a mean pre-rotation score of 72.3% (95% CI 65.9%–78.7%) and a mean end of rotation score of 62.5% (95% CI 52.0%-72.7%). 100% of respondents indicated they received daily or near-daily bedside teaching. We do not have enough participants to calculate a post-rotation score, and we have not started enrolling in our intervention arm.

**Conclusions:** Residents rotating through the ICUs do not show improved scores on a test of core critical care knowledge topics with bedside teaching alone. This conclusion is limited by incomplete data collection, lack of resident engagement, and quiz focus and difficulty.

**Significance:** Despite limited data, we feel our curriculum will improve critical care knowledge for a multidisciplinary group of residents. Next steps include enrolling in the intervention group, continued data collection, and comparing performance across medical specialties.

**Title: Neuroradiology Fellow Remediation: a National Survey**

**Authors: Ouyang T<sup>1</sup>, Agarwal V<sup>2</sup>, Mullins M<sup>3</sup>, Policeni B<sup>4</sup>.**

**Affiliations:** <sup>1</sup>Department of Radiology, Penn State College of Medicine, <sup>2</sup>Department of Radiology, University of Pittsburgh School of Medicine, <sup>3</sup>Department of Radiology, Emory University, <sup>4</sup>Department of Radiology, University of Iowa.

**Introduction:** It is estimated that approximate 7-10% of trainees across all medical specialties fall into category of “under-performing” or “problematic” trainee. The identification and remediation of under-performing fellows in one year radiology subspecialty fellowships (which most are) is particularly difficult and urgent because of the short duration of training. The purpose of our study was to identify the scope of the problem in one year neuroradiology fellowships and gather information on evaluation and remediation strategies as well as barriers to remediation.

**Methods:** Program directors of 91 ACGME accredited neuroradiology fellowship programs were sent an electronic survey. We collected information on demographics of the program, identification of problematic fellows, and decision making regarding remediation and remediation strategies/outcomes.

**Results:** The response rate was 30% (27 of 91). 30% (8 of 27) fellowship programs has had to remediate in the last 10 years. The most frequently reported deficiencies of under-performing fellows were: insufficient medical knowledge (71%), poor clinical judgment (46%), unsatisfactory behavior with faculty/staff (33%), and poor interventional skills (25%). Approximately half (48%) of programs reported having a structured remediation program in practice. Remediation included: frequent feedback sessions (82%), general counseling (55%), targeted mentorship (36%), remedial didactic and educational activity (27%), and psychiatric/psychological counseling (18%). 18% of fellows were placed on probation. Remediation failed to improve 9% (1 of 11) of fellows who did not graduate.

Interestingly, 35% (8 of 23) responders had under-performing trainees who were *not* remediated (approximately 12 in past 10 years). Reasons listed for not remediating included delay in recognizing need for remediation, insufficient time to remediate, and possible stigma for trainee future employment chances.

**Conclusion:** Despite the relatively low response rate, 30% of neuroradiology fellowship programs have had to remediate in the last 10 years and another 35% of respondents had under-performing fellows who were not officially remediated.

**Significance:** Our data indicate that under-performance is not an uncommon problem in one year neuroradiology fellowships, and while deficiencies may exist in multiple domains requiring individualized learning plans, remediation is possible and usually successful.

**TITLE: Development of a Mobile Application to Optimize Parenteral Nutrition in Pediatric Patients**

**AUTHORS:** Jaskaran Rakkar<sup>1</sup>, Eleanor Sharp<sup>2</sup>, Alicia Au<sup>1</sup>, Rajesh Aneja<sup>1</sup>

**AFFILIATIONS:** 1. Department of Critical Care Medicine, UPMC Children's Hospital of Pittsburgh, University of Pittsburgh Medical Center, Pittsburgh, PA. 2. Department of Pediatrics, UPMC Children's Hospital of Pittsburgh, University of Pittsburgh Medical Center, Pittsburgh, PA.

**BACKGROUND:** The complex formulation of macro- and micronutrients for ordering TPN in children is associated with a high incidence of ordering errors (15.6/1000 PN orders) and the American Society for Parenteral and Enteral Nutrition advocates for standardized processes for TPN delivery. Furthermore, the ability to accurately assess a patient's nutritional status and order TPN is necessary, yet, many trainees do not feel prepared for these tasks. Limitations of currently available resources are lack of age and weight-based recommendations, automation and seamless integration in an evidence-based, single-modality platform that can be easily accessed. Therefore, we sought to develop a mobile application (app) to address these concerns with the aims to both improve and optimize nutrition in hospitalized pediatric patients.

**METHODS:** We reviewed current learner practices for ordering pediatric TPN and titrating nutrition via a survey. Currently utilized resources were reviewed and to address the need for a comprehensive tool, we developed a mobile app for use by learners of all different levels of medical training. Recommendations for both macro- and micro-nutrients are included, as well as the daily caloric support from major macronutrients, and hourly fluid requirements. The app also summarizes daily contribution of each method of nutritional support, whether parenteral or enteral, to patient's overall daily nutrition.

**RESULTS:** 91 medical trainees completed the survey. 57 of 91 (63%) trainees feel uncomfortable with ordering TPN, and 58 of 91 (64%) are uncomfortable with performing a nutritional needs assessment. Currently, learners utilize various different tools to help with ordering and titrating TPN. 88 of 91 (97%) respondents reported they would likely use a TPN app. Our pediatric-specific mobile app accounts for the dynamic nutritional needs of pediatric patients based on age and weight, and provides guidance for initiating nutrition. Our app allows for simultaneous titration of TPN components while viewing how these changes will impact patient's daily nutritional support in a single-page view. Once installed onto a compatible Apple iOS phone or tablet, the app can be used remotely anywhere.

**CONCLUSION:** Our pediatric-specific TPN app is critical for advancing learner education and for optimizing nutrition and improving patient care in hospitalized children. Future studies will be directed at assessing its safety and efficacy in clinical practice, and will include a post-implementation survey to develop the app further. Patient safety will be assessed based on pre- and post-implementation incidence of TPN ordering errors. Disease specific nutritional considerations will need to be further addressed.

## First Job and Promotion: Is There An Internal Bias in Academic Plastic Surgery Employment?

Francesco M. Egro, MBChB MSc MRCS<sup>1</sup>, Justin Beiriger, BSE<sup>1</sup>; Eva Roy, BS<sup>1</sup>, Vu. T. Nguyen, MD<sup>1</sup>.

1. Department of Plastic Surgery, University of Pittsburgh Medical Center, 3550 Terrace Street, 6B Scaife Hall, Pittsburgh, PA 15261.

### Abstract

**Background:** Following completion of training, a physician's training institution has a lasting and meaningful impact on career trajectory. Training program influence on first job placement and academic promotions remain uncertain in academic plastic surgery. The aim of this study is to determine the impact of training and internal bias in academic plastic surgery employment and promotion.

**Methods:** Academic plastic surgery faculty were identified through an internet search of all ACGME-accredited residency training programs. Online faculty profiles, Doximity, LinkedIn, private-practice, and public websites were used to gather faculty demographics, training background, employment and leadership status. The analysis examined the impact of internal recruitment bias on first job employment, the impact of training history on institutional leadership promotion (chief, residency director, or fellowship director), and the impact of alumni effect on academic employment.

**Results:** A total of 931 academic plastic surgeons were identified. For assistant professors that graduated in the past 3 years, 38.6% are practicing at the same institution as where they received residency or fellowship training. Of the 229 institutional leaders, 31.5% of Chairs, 39.6% of Residency Directors, and 37.5% of Fellowship Directors were internal hires. Overall, 34% of plastic surgery faculty in the US share a common training program with at least one colleague. The top 5 programs that have the most faculty who trained at their hiring institution are Harvard (30 faculty), University of Southern California (15 faculty), University of California Los Angeles (12 faculty), University of Michigan (12 faculty) and Albert Einstein (12 faculty). Overall, 54% of plastic surgery departments employ 2 or more faculty who share a common external training program. The top 5 programs that have the most faculty who share an external training program are (1) Methodist Houston, 8 faculty who trained at Baylor; (2) Hofstra, 7 faculty who trained at NYU; (3) Stanford, 6 faculty who trained at UCLA; (4) Wisconsin, 5 faculty who trained at UPMC; (5) USC, 4 faculty who trained at NYU.

**Conclusion:** The study highlights that a limited internal bias exists in the recruitment for first jobs and leadership promotions. However, a clear bias of internal hiring exists at several institutions. In addition, an alumni effect was identified, where some programs have a bias of hiring faculty who trained at the same external institution.

## Research Productivity During Residency and its Influence on a Career in Academic Plastic Surgery

**Authors:** Eva Roy, BS; Francesco M. Egro, MBChB MSc MRCS; Adrian Zalewski, BS; Brandon T. Smith, MS; Joseph E. Losee, MD; Vu T. Nguyen, M

**Affiliation:** Department of Plastic Surgery, University of Pittsburgh Medical Center, 3550 Terrace Street, 6B Scaife Hall, Pittsburgh, PA 15261, USA

### Abstract

**Background:** Medical students interested in a career in academic plastic surgery are uncertain on the type of residency program that would facilitate their academic career goals. Therefore, the aim of the study was to identify programs that yielded high resident research productivity in order to guide and prepare medical students interested in academic plastic surgery career.

**Methods:** Academic plastic surgery faculty that graduated in the past ten years were identified through an internet search of all ACGME accredited residency and fellowship training programs. Research productivity was compared based on h-index, number and quality of peer reviewed articles published during residency.

**Results:** A total of 375 academic plastic surgeons were identified who produced 2487 publications during residency. The top 10 programs that led to the most productive residents were Johns Hopkins, Georgetown, University of Michigan, Stanford, University of California Los Angeles, Northwestern, Harvard, New York University, University of Pennsylvania, and Baylor. Academic productivity was higher among integrated residents (integrated = 8.68 publications, independent = 5.49 publications;  $p < 0.0001$ ). The number of publications was positively correlated to the faculty size ( $r = 0.167$ ,  $p = 0.0013$ ), NIH funding ( $r = 0.249$ ,  $p < 0.0001$ ), and residency graduation year ( $r = 0.211$ ,  $p < 0.0001$ ), and was negatively correlated with Doximity ranking ( $r = -0.294$ ,  $p < 0.0001$ ). H-index was positively correlated with faculty size ( $r = 0.295$ ,  $p < 0.0001$ ) and NIH funding ( $r = 0.256$ ,  $p < 0.0001$ ) and negatively correlated with Doximity ranking ( $r = -0.405$ ,  $p < 0.0001$ ) and residency graduation year ( $r = -0.163$ ,  $p < 0.0017$ ).

**Conclusion:** Our study has found that there is an elite cohort of programs that promote high resident research productivity. Productivity is higher amongst integrated residents, recent graduates, and programs that are larger in size, with a higher Doximity ranking and NIH funding. This study guides medical students applying for integrated plastic surgery residency, residents applying for plastic surgery fellowship, and future applicants who are interested in a career in academic plastic surgery in the selection of their ideal residency programs that match their career aspirations.

**Title: Increasing Resident Screening for Food Insecurity**

Authors: Goldstein H, Holland S, Conti T

Affiliation: UPMC McKeesport Family Medicine Residency Program

Needs and Objectives: Food insecurity (FI), defined as “access to food being limited by financial or other resources”, affects 14% of US households and 21% of US children. FI is associated with multiple negative health outcomes including metabolic syndrome, disordered eating patterns, behavioral problems, and mood disorders. Screening for FI can be performed with two validated questions:

•“Within the past year, we worried that our food would run out before we got money to buy more.”  
(Yes/No)

•“Within the past 12 mo, the food we bought just didn’t last and we didn’t have money to get more.”  
(Yes/No)

Yes to either question constitutes a positive screen.

Setting and Participants: The population of interest for this study was residents at the UPMC McKeesport Family Medicine Program. The program is based at Latterman Family Health Center, where 80% of patients receive insurance through medical assistance.

Description: A survey was given to residents to elicit their understanding of food insecurity and self-reported screening rates. A presentation was then given discussing the negative health associations of food insecurity, food insecurity rates in Allegheny County, and resources to recommend in the event of positive screens. Resources for positive screens include SNAP and WIC referral, and lists of local food banks and free food initiatives.

Evaluation: 100% of residents surveyed (N=20) endorsed “FI is a problem that affects my patients”. However, prior to educational intervention 85% of residents reported screening zero patients in the past month for FI.

Analysis is in process examining rates of screening for FI by residents during the eight weeks following the educational intervention compared to those during the eight weeks prior. Screening rates are determined by EHR review. Parameters to be reported include:

- Total number of screens performed at well-child and prenatal visits before and after the educational intervention
- Total number of positive screens during the same periods
- For positive screens: Whether or not an intervention was performed, and which type (social work referral, resources provided, or other).

Discussion: The survey suggests that residents recognize FI as an important social determinant of health that affects our patients, but are not routinely screening for FI. The effect of education on screening rates as determined by EHR review will be used internally to promote more systematic screening and intervention for social determinants of health in our clinic.

**Title: Increasing Resident Awareness of the 4<sup>th</sup> Trimester**

Authors: Srinivasan, S

Affiliation: UPMC McKeesport Family Medicine Residency Program

Needs and Objectives: Each year in the United States more than 600 women die from pregnancy-related causes. Even with reductions in mortality from postpartum hemorrhage and infection, maternal mortality (MM) and severe maternal morbidity (SMM) from cardiovascular conditions and other chronic health problems continue to increase. Furthermore, stark racial disparities exist in outcomes with black women experiencing 3.5 times higher pregnancy related mortality rates than their white counterparts. In May 2018, the American College of Obstetricians and Gynecologists (ACOG) called for a new paradigm to address these critical gaps. This Committee Opinion, based on a fundamental recognition that the postpartum period is an ongoing period (fourth trimester) beyond the traditional one-time visit, tasks maternity care providers to change the timing and content of postpartum care to include repeated medical, psychological and social assessments and services from a team of caregivers. Although ACOG has called for a new paradigm for postpartum care, little is known how these new guidelines will be implemented in family medicine residency training sites, where many high risk women receive their maternity care.

Setting and Participants: The population of interest for this study was residents at the UPMC McKeesport Family Medicine Program. The program is based at Latterman Family Health Center where full spectrum family medicine including Obstetrics and postpartum care is delivered.

Description: Multiple presentations regarding the updated guidelines as well personalized chart review feedback and implementation of EHR tools will be delivered to learners.

Evaluation: Not yet complete as study is being reviewed by UPMC QRC for approval to incorporate a pre and post surveys of resident knowledge and attitudes.

Discussion: This new emphasis on adequate postpartum care proposes shifting the current medical approach of treating mothers and infants as separate individuals to considering the health of the maternal-child dyad or whole family unit, a concept already embedded in family medicine. Teaching residents to deliver tailored, individualized assessment through this study. during the postpartum can improve patient outcomes, close gaps in care, enhance continuity and help the most vulnerable patients during this critical transition.

## **Implementation of a Text-Messaged-Based End-of-Shift Evaluation Tool in Emergency Medicine Residency**

Adam Tobias<sup>1</sup>, MD, MPH, Ankur Doshi<sup>1</sup>, MD, Robert Sobehart<sup>2</sup>, MD, and Brian Suffoletto<sup>1</sup>, MD, MS

**Needs/Objectives:** The Accreditation Council for Graduate Medical Education requires programs to provide trainees with faculty performance evaluation during educational assignments and emphasizes the use of specialty-specific milestones. Research has not supported the use of the milestones as a stand-alone end-of-shift evaluation (ESEs) tool. End-of-rotation faculty surveys often provide limited and delayed information. ESEs allow for more real-time and accurate assessment. To overcome the limitations of paper ESEs, we sought to create an emergency medicine-specific electronic ESE for obtaining data for feedback and assessment.

**Setting/Participants:** Emergency medicine residents rotating at four core academic emergency departments.

**Description:** We created a text-message-based system to electronically match residents with faculty and which randomly assigns a specific milestone-based area of evaluation for each shift. At the start of the shift, text messages are sent to the resident and faculty to identify the assigned content area. At the end of the shift, the faculty member receives a message that 1) prompts them to provide face-to-face feedback, and 2) gives a unique web-link for an ESE that can be completed on a smartphone, populates a database, and is incorporated into a summative evaluation for each month.

**Evaluation/Discussion:** We created an electronic ESE that was accepted and utilized by residents and faculty. From January 2018-November 2019, 7,792 ESE's were assigned and 3,526 were completed (45.3%). Responses were equally divided among categories of assessment and response rates remained stable. There was a wide range of completion rates between attendings (<2%-100%). Administrative burden has improved for residents (who no longer need to seek out faculty to complete a paper ESE) and for core faculty (who no longer must collect and interpret hand-written evaluations). Future efforts will be geared towards expanding the system to communicate with new scheduling software platforms and to further evaluate user feedback.

1. Department of Emergency Medicine, University of Pittsburgh School of Medicine
2. Department of Emergency Medicine, Allegheny Health Network

## Characteristics and Academic Productivity Among Pediatric Plastic Surgeons in the United States

**Authors:** Francesco M. Egro, MBChB MSc MRCS<sup>1</sup>, Abraham A. Williams, BS<sup>1</sup>, Eva Roy, BS<sup>1</sup> Brandon T. Smith, MS<sup>1</sup>, Jesse A. Goldstein, MD<sup>1</sup>, Joseph E. Losee MD<sup>1</sup>, Vu T. Nguyen MD<sup>1</sup>

**Affiliation:** 1. Department of Plastic Surgery, University of Pittsburgh Medical Center, 3550 Terrace Street, 6B Scaife Hall, Pittsburgh, PA 15261, USA

**Introduction:** The characteristics that predispose plastic surgeons to a career in pediatric plastic surgery remains unclear. Therefore, the aim of this study is to analyze the characteristics of current pediatric plastic surgeons, and to determine their academic productivity.

**Hypothesis:** H-index, number of publications, and number of citations can be applied to pediatric plastic surgery as it has been in other fields as a measure academic productivity.

**Methods:** Pediatric plastic surgeons were identified through an internet search of all academic children's hospitals affiliated with an Accreditation Council for Graduate Medical Education (ACGME) accredited integrated or independent plastic surgery program. Demographics, training background, institutional and leadership positions, and academic productivity were determined.

**Results:** A total of 304 pediatric plastic surgeons were identified. The average age is 48.2, with 57.9% (n=176) of the cohort completing residency before 2009. The majority of pediatric plastic surgeons were White (n=217, 71.8%) males (n=235, 77.6%). Clinical fellowships were completed by 86.8% (n=263) of the cohort, with craniofacial surgery (n=181, 59.7%) being the most common followed by hand surgery (n=54, 17.8%). Among the cohort, 41.1% had clinical fellowship training at 10 top institutions, with the top three most represented programs being University of Pennsylvania (n=19, 6.2%), University of California-Los Angeles (n=16, 5.3%), and Harvard University (n=15, 4.9%). Among the cohort, 25.7% (n=78) held leadership positions within their institutions (fellowship or residency directors, and chiefs/chairs). A significant higher academic productivity was found among research fellowship-trained surgeons, chiefs of pediatric plastic surgery, fellowship directors, and members of departments of plastic surgery. Those who completed an independent residency had a significant higher H-index and number of citations.

**Conclusion:** This study showed a variation in training background and a persistent gender and race disparity among pediatric plastic surgeons. The impact of training environment and academic productivity on career advancement is of great significance and should be highlighted for those interested in pursuing the field.

**Significance:** A comprehensive presentation of how certain variables influence academic productivity of pediatric plastic surgeons in order to optimize their career progression.

**Title: A Glimpse Into the Eye – Introducing Ophthalmology to Preclinical Medical Students through a Lunch Talk Series at UPSOM**

**Authors:** Yadav S<sup>1</sup>, Enzor R<sup>2</sup>, Bowers E<sup>1</sup>, Waxman E<sup>2</sup>

**Affiliations:** <sup>1</sup>University of Pittsburgh School of Medicine, <sup>2</sup> University of Pittsburgh Medical Center Department of Ophthalmology

**Needs and objectives:** The required curriculum at the majority of U.S. medical schools provides minimal exposure to ophthalmology preclinically. Consequentially, physicians may lack a foundation in diagnosing and managing ophthalmologic problems. Additionally, medical students may not consider ophthalmology due to a lack of early exposure. This article describes an initiative taken by the Ophthalmology Interest Group (OIG) at the University of Pittsburgh School of Medicine (UPSOM) to educate students in ophthalmology over lunch. These lectures aim to provide medical students with foundational knowledge about ophthalmology, as a useful supplement to their pre-clinical coursework.

**Setting and participants:** Seven, 1-hour long talks were organized during the lunch hour by OIG at UPSOM over a 12-month period in 2018-2019. The talks were prepared and presented by ophthalmology faculty, residents, and staff. They were advertised via email to pre-clinical medical students and were attended voluntarily. A similar series of talks is being given during the current year.

**Description:** The talks included an introductory presentation on eye anatomy and ophthalmology and lectures on Cardiology and the Eye, Ocular Genetic Disorders, Ocular Infections and Immunology, Neuro-Ophthalmology, a guest lecture on International Ophthalmology, and a special lecture by the Ophthalmology Chairman. The talks complemented the pre-clinical medical school curriculum so that students could integrate their knowledge of ophthalmic pathology with their knowledge of systemic diseases. Generally, each talk started with a brief background about the topic followed by case presentations and an audience Q and A session.

**Evaluation:** Attendance at the lectures ranged from 14 – 57 people, with higher attendance at the lectures on eye anatomy, ocular infections, and the Chairman’s talk. Students informally provided feedback, stating that the lectures helped to solidify concepts from their pre-clinical coursework. For example, one student commented that the lecture material on ocular genetic disorders helped him on a practice Step 1 examination.

**Discussion:** Providing medical students with early exposure to ophthalmology may increase their interest in this field and motivate them to pursue more training in ophthalmology throughout their medical education. The optional lunchtime lecture series supports this initiative, and informal student feedback indicates the series’ efficacy. A potential future step is to collect student feedback in an organized way and make iterative improvements in the talks to better serve students’ needs.

**Rita M. Patel GME Leadership Conference**  
**“10,000 Hours Deliberate Practice for GME Excellence”**  
**February 20, 2020**

<b>Last name</b>	<b>Full Name</b>	<b>Abstract # (O)ral or (P)oster</b>
	<b>All Author Index</b>	
<b>Agarwal</b>	<b>Agarwal, Vikas, MD</b>	<b>P24</b>
<b>Akunne</b>	<b>Akunne, Ugochinyerem, MD</b>	<b>P15</b>
<b>Aneja</b>	<b>Aneja, Rajesh, MD</b>	<b>P25</b>
<b>Arnold</b>	<b>Arnold, Robert, MD</b>	<b>O3</b>
<b>Au</b>	<b>Au, Alicia, MD</b>	<b>P25</b>
<b>Bai</b>	<b>Bai, Kiran, MD</b>	<b>P15</b>
<b>Beiriger</b>	<b>Beiriger, Justin BSE</b>	<b>P27</b>
<b>Bonidie</b>	<b>Bonidie, Michael, MD</b>	<b>P18</b>
<b>Bourne</b>	<b>Bourne, Debra</b>	<b>O1</b>
<b>Bower</b>	<b>Bower, Eve, BA</b>	<b>P1, P32</b>
<b>Brown</b>	<b>Brown, Amanda, MD</b>	<b>O3</b>
<b>Brown</b>	<b>Brown, Emily, MD</b>	<b>P7</b>
<b>Brucha</b>	<b>Brucha, Diana, C-TAGME</b>	<b>P12</b>
<b>Buranosky</b>	<b>Buranosky, Raquel, MD</b>	<b>P11</b>
<b>Butler</b>	<b>Butler, Sharlay, MD</b>	<b>P2</b>
<b>Carroll</b>	<b>Carroll, Piper, MD</b>	<b>P3</b>
<b>Castelli</b>	<b>Castelli, Gregory, PharmD</b>	<b>P17</b>
<b>Chen</b>	<b>Chen, Wendy</b>	<b>O1</b>
<b>Choi</b>	<b>Choi, Sylvia, MD</b>	<b>O3</b>
<b>Conti</b>	<b>Conti, Tracey, MD</b>	<b>P13, P28, P29</b>
<b>Dakroub</b>	<b>Dakroub, Allie, MD</b>	<b>P4</b>
<b>David</b>	<b>David, Joshua, MD, BS</b>	<b>P5</b>
<b>Delacruz</b>	<b>Delacruz, Carolyn</b>	<b>O1</b>
<b>DiNardo</b>	<b>DiNardo, Deborah, MD, MS</b>	<b>P20, P21</b>
<b>Dorfsman</b>	<b>Dorfsman, Michele, MD</b>	<b>P7</b>
<b>Doshi</b>	<b>Doshi, Ankur, MD</b>	<b>P30</b>
<b>Douaihy</b>	<b>Douaihy, Antoine, MD</b>	<b>P8</b>

<b>Egro</b>	<b>Egro, Francesco MBChB, MSc, MRCS</b>	<b>P31, P26, P27</b>
<b>Eichenberger</b>	<b>Eichenberger, David, MD</b>	<b>P6</b>
<b>Emlet</b>	<b>Emlet, Lillian, MD</b>	<b>O3</b>
<b>Enzor</b>	<b>Enzor, Rikki, MD, PhD</b>	<b>P1, P19, P32</b>
<b>Faeder</b>	<b>Faeder, Morgan, MD</b>	<b>P8</b>
<b>Farber</b>	<b>Farber, Stephanie, MD</b>	<b>P5</b>
<b>Ferderber</b>	<b>Ferderber, Jason, MD</b>	<b>P7</b>
<b>Fishman</b>	<b>Fishman, Daniel, MD</b>	<b>P8</b>
<b>Garrison</b>	<b>Garrison, Jessica, MD</b>	<b>O2</b>
<b>Georgeson</b>	<b>Georgeson, Andrew, MD</b>	<b>P9</b>
<b>Goldstein</b>	<b>Goldstein, Jesse A. , MD</b>	<b>P31</b>
<b>Goldstein</b>	<b>Goldstein, Hilary, MD, MPH</b>	<b>P28, P29</b>
<b>Gonzaga</b>	<b>Gonzaga, Alda Maria, MD</b>	<b>P4</b>
<b>Gopalan</b>	<b>Gopalan, Priya, MD</b>	<b>P8</b>
<b>Guillen</b>	<b>Guillen, Daniel, MD</b>	<b>O2</b>
<b>Gusenoff</b>	<b>Gusenoff, Jeffrey, MD</b>	<b>P22</b>
<b>Hamitlon</b>	<b>Hamilton, Melinda, MD, MSc</b>	<b>O3</b>
<b>Hassan</b>	<b>Hassan, Sadiq, MD</b>	<b>P14</b>
<b>Hedayati</b>	<b>Hedayati, Daniel, MD</b>	<b>P14</b>
<b>Holland</b>	<b>Holland, Shari, MA, CPC</b>	<b>P28</b>
<b>Joseph</b>	<b>Joseph, Walter, MD</b>	<b>P5</b>
<b>Kashiwagi</b>	<b>Kashiwagi, Tom, MD</b>	<b>P15</b>
<b>Keppel</b>	<b>Keppel, Kevin, MD</b>	<b>P19</b>
<b>Kreuger</b>	<b>Kreuger, Jessica, MD</b>	<b>P10</b>
<b>Kyle</b>	<b>Kyle, Jillian, MD</b>	<b>P11</b>
<b>Landolina</b>	<b>Landolina, Martha</b>	<b>P8</b>
<b>Lang</b>	<b>Lang, Susan MD</b>	<b>P12</b>
<b>Lin</b>	<b>Lin, Chyongchiou Jeng, PhD</b>	<b>P17</b>
<b>Lin</b>	<b>Lin, Liu Yi, MD</b>	<b>P13</b>
<b>Losee</b>	<b>Losee, Joseph, MD</b>	<b>P31, P27, P5</b>
<b>Lu</b>	<b>Lu, Jiayun, MD</b>	<b>P14</b>
<b>Lubin</b>	<b>Lubin, Fritz, MD</b>	<b>P15</b>
<b>Lunoe</b>	<b>Lunoe, Maren, MD, MS</b>	<b>P16, O3</b>
<b>Maurer</b>	<b>Maurer, Scott, MD</b>	<b>O3</b>
<b>McGaffey</b>	<b>McGaffey, Ann, MD</b>	<b>P17</b>
<b>McGuire</b>	<b>McGuire, Patricia, MD</b>	<b>P14</b>
<b>McNeil</b>	<b>McNeil, Melissa, MD</b>	<b>P11</b>

<b>Melnyk</b>	<b>Melnyk, Alexandra, MD, Med</b>	<b>P18</b>
<b>Middleton</b>	<b>Middleton, Donald B., MD</b>	<b>P17</b>
<b>Mieczkowski</b>	<b>Mieczkowski, Alexandra, MD</b>	<b>P4</b>
<b>Milad</b>	<b>Milad, Magdy</b>	<b>P2</b>
<b>Moalli</b>	<b>Moalli, Pamela, MD, PhD</b>	<b>P18</b>
<b>Moore</b>	<b>Moore, Jason, MD</b>	<b>P23</b>
<b>Morcheid</b>	<b>Morcheid, Rebecca</b>	<b>P15</b>
<b>Moroni</b>	<b>Moroni, Elizabeth, MD</b>	<b>P5</b>
<b>Mortensen</b>	<b>Mortensen, Peter, MD</b>	<b>P19</b>
<b>Mullins</b>	<b>Mullins, Mark, MD</b>	<b>P24</b>
<b>Mutter</b>	<b>Mutter, Marina, MD</b>	<b>P20, P21</b>
<b>Myers</b>	<b>Myers, Sara, MD</b>	<b>O1</b>
<b>Ng-Glazier</b>	<b>Ng-Glazier, Joanna, MD</b>	<b>P22, P5</b>
<b>Nguyen</b>	<b>Nguyen, Vu T., MD</b>	<b>P31, P26, P27, P5</b>
<b>Nightingale</b>	<b>Nightingale, Barbara, MD</b>	<b>P13</b>
<b>Nobile</b>	<b>Nobile, Joseph, MD</b>	<b>P23</b>
<b>Nowalk</b>	<b>Nowalk, Andrew, MD, PhD</b>	<b>P9</b>
<b>Nowalk</b>	<b>Nowalk, Mary Patricia, PhD, RD</b>	<b>P17</b>
<b>Nowalk</b>	<b>Nowalk, Alexandra</b>	<b>P8</b>
<b>Ouyang</b>	<b>Ouyang, Tao, MD</b>	<b>P24</b>
<b>Pan</b>	<b>Pan, Jerry, MD</b>	<b>P15</b>
<b>Parviainen</b>	<b>Parviainen, Kristina MD</b>	<b>P12</b>
<b>Peterson</b>	<b>Peterson, Ryan, MD</b>	<b>P8</b>
<b>Polak</b>	<b>Polak, Catherine, MD</b>	<b>O2</b>
<b>Policeni</b>	<b>Policeni, Bruno, MD</b>	<b>P24</b>
<b>Pollock</b>	<b>Pollock, Gary, MD</b>	<b>P6</b>
<b>Rakkar</b>	<b>Rakkar, Jaskaran, MD</b>	<b>P25</b>
<b>Roy</b>	<b>Roy, Eva B.S.</b>	<b>P31, P26, P27</b>
<b>Runge</b>	<b>Runge, Megan A.</b>	<b>P2</b>
<b>Salahuddin</b>	<b>Salahuddin, Daniel, MD</b>	<b>P3</b>
<b>Sassani</b>	<b>Sassani, Jessica, MD</b>	<b>P18</b>
<b>Schilling</b>	<b>Schilling, Benjamin</b>	<b>O1</b>
<b>Sharp</b>	<b>Sharp, Eleanor, MD</b>	<b>O2, P25</b>
<b>Sinex</b>	<b>Sinex, Deanna, BS</b>	<b>P18</b>
<b>Smith</b>	<b>Smith, Brandon T.</b>	<b>P31, P27</b>
<b>Sobehart</b>	<b>Sobehart, Robert, MD</b>	<b>P30</b>
<b>Srinivasan</b>	<b>Srinivasan, Sukanya, MD</b>	<b>P28, P29</b>

<b>Suffoletto</b>	<b>Suffoletto, Brian, MD, MS</b>	<b>P30</b>
<b>Szymusiak</b>	<b>Szymusiak, John, MD</b>	<b>P9</b>
<b>Taylor</b>	<b>Taylor, Alexandria, MD</b>	<b>P10</b>
<b>Tobias</b>	<b>Tobias, Adam, MD, MPH</b>	<b>P30</b>
<b>Ufomata</b>	<b>Ufomata, Eloho, MD</b>	<b>P3</b>
<b>Uprety</b>	<b>Uprety, Sajal, MD</b>	<b>P15</b>
<b>Waxman</b>	<b>Waxman, Jake, MD, PhD</b>	<b>P1, P19, P32</b>
<b>Williams</b>	<b>Williams, Abraham, B.S.</b>	<b>P31</b>
<b>Williamson</b>	<b>Williamson, Ryan, PhD</b>	<b>P19</b>
<b>Wunderle</b>	<b>Wunderle, Kathryn, MD</b>	<b>P23</b>
<b>Yadav</b>	<b>Yadav, Sayna, BS</b>	<b>P1, P32</b>
<b>Yecies</b>	<b>Yecies, Emmanuelle, MD, MS</b>	<b>P20, P21</b>
<b>Zalewski</b>	<b>Zalewski, BS</b>	<b>P27</b>
<b>Zuckerbraun</b>	<b>Zuckerbraun, Noel, MD, MPH</b>	<b>P16, O3</b>