The Institute for Excellence in Education (IEE)

9th Annual IEE Education Conference and Celebration

Oral Abstract and Poster Presentations

March 27th, 2020
Armstrong Medical Education Building
1600 McElderry Street
Baltimore, Maryland 21205
www.hopkinsmedicine.org/IEE
Abstract Review Committee

Tina Tran, MD, (Chair) Assistant Professor, Anesthesiology and Critical Care Medicine; Assistant Professor, Ophthalmology; Assistant Program Director; Co-Director, Clinical Anesthesiology Clerkship; Chief of Ophthalmic Anesthesiology, Wilmer Eye Institute, JHUSOM
Michael C. Banks, MD, Assistant Professor, Anesthesiology and Critical Care Medicine; Co-Course Director, Optimal Anesthesia Management, JHUSOM
Dorianne Feldman MD, MS, Assistant Professor, Physical Medicine and Rehabilitation; Medical Director, Inpatient Rehabilitation Program, JHUSOM
Victoria Goode, PhD, MSN, RN, Director, Nurse Anesthesia DNP Program, Practice Track, JHUSON
Simon Hill, RN – Nurse Education Facilitator, Wilmer Eye Surgical Unit, JHH
Gillian R. Isaac, MD, PhD, Associate Program Director, Anesthesiology Residency; Fellowship Director, OB Anesthesia;
Assistant Professor, Anesthesiology and Critical Care Medicine, JHUSOM
Thuy L. Ngo, DO, MEd, Assistant Professor, Pediatrics; Director, Clinical Operations, Pediatric Emergency Medicine, JHUSOM
Silka C. Patel, MD, MPH, Assistant Professor, Gynecology and Obstetrics; Director, Medical Student Clerkship, JHUSOM
Janet D. Record, MD, Assistant Professor, Medicine; Assistant Dean for Undergraduate Medical Education, JHBM
Mustafa O. Saheed, MD, Assistant Professor, Emergency Medicine; Medical Director, The Johns Hopkins Hospital, Department of Emergency Medicine, JHUSOM
Shameema Sikder, MD, Assistant Professor, Ophthalmology; Director, Center of Excellence for Ophthalmic Surgical Education and Training, JHUSOM
Divya Srikumaran, MD, Assistant Professor, Ophthalmology; Chief, Wilmer Eye Institute, JHUSOM
Samuel M. Vanderhoek, MD, Assistant Professor, Anesthesiology and Critical Care Medicine, JHUSOM
Fasika A. Woreta, MD, MPH, Assistant Professor, Ophthalmology; Associate Director, Ophthalmology Residency Program, JHUSOM

Guided Poster Review

Sarah L. Clever, MD, MS, FACP (walkabout Co-leader), Assistant Professor of Medicine; Assistant Dean for Student Affairs; Associate Director, Clinical Skills Course, JHUSOM
Gillian R. Isaac, MD, PhD (walkabout Co-leader), Associate Program Director, Anesthesiology Residency; Fellowship Director, OB Anesthesia; Assistant Professor, Anesthesiology and Critical Care Medicine, JHUSOM
Oral Presentations

Oral Presentation 1: Implementing a Hybrid Rapid-Cycle Deliberate Practice Simulation Faculty Development Course: Phase I, Online Training

Authors: Julianne S Perretta, Shannon Poling, Lynne Farrow, Jordan Duval-Arnould, Elizabeth Hunt, Nancy Sullivan, Kristen Brown, Justin Jeffers, Julianna Jung

Content Developers: Robert Kearns, Megan Thorne, Lindsay Ledebur

Abstract: Developed by a team of educational scholars at Johns Hopkins University and first published in 2014, rapid-cycle deliberate practice (RCDP) is a learner-centered simulation instructional strategy that identifies performance gaps and targets feedback to improve individual or team deficiencies. It incorporates deliberate practice, mastery learning, contextual learning, social learning theory, and leverages practice and errors to improve learner performance. At least eight studies on RCDP have offered evidence to support its effectiveness in healthcare simulation training. Recently, healthcare educators have been eager to learn how to incorporate RCDP into healthcare education, but no formal training exists. The Johns Hopkins Medicine Simulation Center, partnering with the Office for Continuing Medical Education and the Office for Online Education (OOE), built a hybrid RCDP course, pairing online modules (Phase I) with a two-day on-site immersive training (Phase II).

Faculty experts developed the RCDP curricula; modules were designed by the JHU OOE. Content includes RCDP concepts and educational foundations, indications for use, key components, and introduction to developing RCDP curricula. The course culminates with learner’s designing their own RCDP course, including needs assessment, goals and learning objectives, simulation scenarios, and training prescriptions for use during feedback-replay loops.

Phase I launched in January 2019 on the JHU SOM online learning site (https://learn.hopkinsmedicine.org), with continuous open enrollment available. Twenty-four learners have initiated the course, and eleven have completed the didactic content (modules 1-3). The average score of formative assessments for modules 1 (Background) and 2 (RCDP in Action) are 97% and 93%, respectively. Three have successfully submitted an RCDP lesson (module 4); two received feedback from the instructor and a passing grade, and one learner was provided with remediation and an opportunity to submit a second draft, which received a passing grade.

Registration for Phase I was initially lower than expected; feedback solicited from interested registrants indicate that many are waiting to enroll in Phase I until Phase II is available. Interestingly, all module 4 submissions focused on cardiac arrest, suggesting that content for the live course could tailor to resuscitation. We anticipate a significant increase in Phase I attendance after publishing Phase II dates.

Oral Presentation 2: The GIMBoree Experience: Strengthening Primary Care Career Interest and Community in Residency

Authors: Deborah Freeland, MD, Paul D. O’Rourke, MD, MPH

Needs and Objectives: There is a shortage of primary care physicians in the United States, and residencies must find ways to emphasize the importance of primary care and support residents who are interested in the fields of general internal medicine (GIM) and geriatrics. We developed a monthly primary care community night for residents and faculty called “GIMboree” with the goal of increasing resident sense of community and interest in primary care careers through a tripartite model: 1) exposure to role models; 2) strengthening medical knowledge related to outpatient medicine through journal club; and 3) fostering a community in which residents feel supported in their outpatient interests.

Setting and Participants: We invited Johns Hopkins Bayview primary care residents and GIM/Geriatrics faculty to attend voluntary GIMboree events held at faculty members’ homes. In the first 14 months of implementation (7/2018 to 9/2019), resident attendance averaged seven per evening and 19 of the 21 eligible primary care residents attended at least one GIMboree. An average of three faculty attended per evening.
**Description:** GIMboree is held monthly and each two-hour meeting includes dinner, primary literature journal article discussion, a faculty member’s career story, and time for reflection about clinic. A resident volunteer leads the group through analysis of a recent research article that pertains to outpatient medicine. A faculty member shares their career story and advice. Clinic reflection allows residents to obtain feedback about an encounter or to discuss joys and challenges specific to outpatient medicine.

**Evaluation:** At each meetings’ end, residents are surveyed with Likert scale and open-ended reflection questions. The short-answer responses are assessed for common themes across meetings.

**Lessons Learned:** Preliminary results reveal three main themes: excitement about a career in primary care medicine, a growing sense of community, and goals for self-improvement. In 2019, GIMboree received an ACGME Back to Bedside grant to allow for expansion to two other residencies. GIMboree is a unique combination of community, evidence-based medicine, and reflection on outpatient medicine that could be adapted by other fields as a mechanism to encourage professional community growth, increase primary care interest, and highlight fulfilling aspects of medicine.

**Oral Presentation 3: Innovative Course on Advanced Diagnostic and Procedural Skills for Nurse Practitioner Students**

**Authors:** Nancy Gentry Russell, DNP, MSN, APRN, FNP-BC, Rita F. D’Aoust, PhD, ANP-BC, CNE, FAANP, FNAP, FAAN

**Needs and Objectives:** Nurse practitioners (NPs) face a complex healthcare environment upon entering practice. As full practice authority increases for NPs across the U.S., NPs perform and bill for advanced diagnostics and procedure skills (Schallmo et al., 2019). Nursing programs must educate and train NP students to perform advanced diagnostics and procedure skills and be practice ready upon graduation, but diagnostic and clinical procedure training for NPs is not well described in the literature (Schallmo et al., 2019). The objective of this innovative course is to prepare NP students to perform the advanced diagnostic and procedural skills necessary for entry-level practice upon graduation.

**Setting and Participants:** The setting is an advanced practice nursing program at an internationally leading school of nursing. The participants are NP students.

**Description:** This course was developed after 1) conducting a systematic review to analyze the alignment of primary care NP procedure education in curricula and practice, 2) surveying other nursing programs regarding their diagnostics and/or procedure education for NPs, and 3) reviewing American Association of Nurse Practitioner practice survey results. The course is required for all NP students prior to beginning clinical practicums, and provides theoretical knowledge and emphasizes psychomotor skills necessary to provide selected advanced practice nursing interventions utilized in the evaluation and management of patients. This course introduces evaluation, selection, interpretation, and application of diagnostic testing, evaluation techniques and procedures. Evidence-based clinical reasoning and decision-making techniques are presented and applied in simulation lab practices for skills acquisition and demonstration of competency. Course objectives are supported by institutional program outcomes, AACN’s Essentials of Doctoral Education for Advanced Nursing Practice 2006, and the National Organization of Nurse Practitioner Faculties Core Competencies.

**Evaluation:** Summative assessments, course evaluation data and preceptor feedback demonstrate this course to be accepted by students and effective in assisting NP students to perform advanced diagnostics and procedural skills. Post-graduation data from NP students entering practice who have taken the course will be available starting May 2020.

**Lessons Learned:** Challenges have included adapting the course for online delivery while maintaining competency assessments, and obtaining appropriate images to develop learning materials in the course.

**Oral Presentation 4: Empowering Students in the Development of Medical Curricula: Do Students Believe it Works?**
**Authors:** Kumar, P, Pickering, CM, Qin, CX, Whang, KA, Atta, L, Burns, AG, Chu, RF, Gracie, T, Goldberg, HR

**Summary:** The purpose of this study was to assess student perceptions about the efficacy and utility of the Student Curriculum Review Team (SCRT).

**Background:** In 2012, members of the Johns Hopkins University School of Medicine (JHU SOM) founded the Student Curriculum Review Team (SCRT) to establish a student-led curricular improvement process. SCRT has provided a voice for student feedback—offering class-wide open forums for discussion through ‘town halls,’ direct peer-to-peer correspondence, and a collaborative, confidential avenue to provide comments. The perceived efficacy and utility of SCRT among the student body was unknown; here, we set out to identify distinguishing features of the organization.

**Methods:** A cross-sectional analysis was conducted between October and November 2019 using an anonymous survey distributed to second- (MS2) and third-year (MS3) medical students at JHU SOM. The 13-question survey assessed student perceptions of the efficacy of SCRT.

**Results:** 113 (47%) completed surveys (MS2s: 64, MS3s: 49) were returned. 48 (43%) students submitted free-form responses describing interactions with SCRT. A majority of students (60%) reported SCRT’s impact on their medical education as “positive,” with most (97%) endorsing it as an effective forum that enables them to express their concerns. Students interacted with SCRT through course evaluations (80%), town halls (68%), and communication with SCRT members (42%). Critically, students expressed enthusiasm for the added value of a program like SCRT, with 84% of respondents agreeing that “SCRT meets needs that are not met by other curricular organizations at Hopkins.” Respondents were significantly more likely to turn to systems used by SCRT than any other (P=0.04). Content analysis of student responses describing an experience with SCRT revealed three themes: feeling validated when communicating with peers, collaborating to identify areas for course refinement, and engaging in self-reflection during these conversations.

**Conclusion:** JHU SOM students value that SCRT is a student-led, curricular change organization and are most likely to provide course feedback through a SCRT-affiliated modality. It may be beneficial for other academic institutions to implement similar feedback mechanisms, both to empower students and to decrease the disconnect between student and faculty perspectives.

**Oral Presentation 5: A Team-Based Approach to Dementia Education in Medical School**

**Authors:** Christine Gummerson, Yujie Wang, Charlene Gamaldo, Lolita Nidadavolu, Susan Lehmann, Mary Anne Wylie, Amit Pahwa, Jessica Colburn, Cynthia Fields, Rachel Salas

**Background:** Effective team communication is essential in providing comprehensive care to individuals with dementia. Geriatrics, Neurology, Psychiatry, Nursing and Health System Science educators at Johns Hopkins developed programming within the Neurology/Psychiatry clerkship block to address these educational needs and amplify the voice of the caregiver, a vital member of the healthcare team.

**Aim:** To examine students’ knowledge, attitudes and perceptions of the caregiver’s role as a healthcare team member.

**Methods:** 248 students completed the Neurology/Psychiatry clerkship block at Johns Hopkins in the 2017-2018 and 2018-2019 academic years, of which 212 students participated in the session. The session features a caregiver interview followed by an interprofessional panel discussion. Discussions focus on illustrating best practices to improve students’ communication skills and recognize primary caregivers as vital members of a patient’s care team. Pre- and post-session surveys were collected to evaluate the impact of the session on students’ knowledge and attitudes. We reviewed the pre- and post-distribution of Likert scale survey data as well as students’ self-reported take-home points.

**Results:** Our study demonstrated that, following the two-hour session, over 90% of participating students rated working in an interprofessional team as “very important” or “essential” when caring for patients with dementia, with 71% of students choosing “essential”. Over 80% of students also rated communication skills as “very important” or “essential” when caring for patients with dementia. At baseline, however, only 64% of
students reported feeling “mostly” or “definitely” comfortable in communicating with patients with dementia and their caregivers. A random sample of 50 students’ take-home points revealed that the value of caregiver perspectives, the importance of caring for caregivers, and/or enhanced communication skills were the predominant lessons learned through participation in the session (70% of sampled comments).

**Conclusions:** Participation in an interprofessional session with a primary caregiver improved students’ appreciation of the role of caregivers and multidisciplinary teams in dementia care. Qualitative data (take-home comments) suggest that students’ perspectives on caregiving and their comfort with communication skills were enhanced by this two-hour session. Future quantitative pre-post assessment of students is planned to measure the impact of the session on students’ self-reported communication skills.

**Oral Presentation 6: Gender Bias in Plastic Surgery Resident Assessment: A Survey of 8,377 Cases**

**Authors:** Carisa M. Cooney, MPH, Pathik Aravind, MBBS, Scott Hultman, MD, MBA, FACS, Robert A. Weber, MD, Sebastian Brooke, MD, Damon S. Cooney, MD, PhD, Scott D. Lifchez, MD

**Background:** Previous studies have shown that male and female attendings rate or provide operating room (OR) autonomy differently to male and female residents, with male attendings providing higher ratings and more OR autonomy to male residents.

**Study Aim:** To determine if male and female plastic surgery resident trainees are evaluated differently according to attending physician sex.

**Methods:** Operative Entrustability Assessment (OEA) data were abstracted from MileMarker™, a web-based program capable of storing trainee operative skill assessments of any CPT-coded procedure. Ratings are based on a 5-point scale (1=“observed case” and 5=“can take junior resident through case”). We extracted all complete OEAs (those containing self-assessments and attending evaluations) from three institutions. We used linear regression adjusting for post-graduate year (PGY) to compare male and female attendings’ assessments of male and female residents.

**Results:** We included 8,377 OEAs completed by 64 unique residents (25% female) and 51 unique attendings (29% female). Adjusted analysis showed that male attendings rated female residents significantly lower than male residents (p<0.001, 95%CI= -0.311 to -0.197). Scores by female attendings demonstrated no significant difference between male and female residents (p=0.067, 95%CI= -0.198 to 0.007).

**Conclusions:** Our dataset including 4.5 years of data from three training programs showed that female plastic surgery residents are scored lower than their male counterparts by male attendings. As plastic surgery begins its pilot of competency-based training, further studies are needed to determine reasons for these differences to ensure appropriate advancement of all trainees.
Innovations Submissions:

**Poster 1:** Bad Reputation: Using Three-dimensional Printed Heart Models to Supplement Cardiac Ultrasound Training for Undergraduate Medical Students.  
**Authors:** Kate M. Serralde, Vaughan H. Lee, and Gregory L. Brower  

**Abstract:** What is the point of a 3D printed model of a heart? On the surface, this seems like a pretty basic question. But ‘what’s the point’ questions are anything but basic. This is a loaded question: presented as an inquiry, when in reality, it is an implicit statement that our heart has no inherent purpose. How has our heart earned such a bad reputation? Did it spend too much time smoking in the bathroom? We indirectly answered our ‘what’s the point question’, by testing the effectiveness of incorporating 3D printed heart models into novice sonographers’ educational practices. Undergraduate medical students struggle with visualizing cardiac anatomy and physiology when learning ultrasound. 3D printing is an emerging technology used to produce accurate anatomical models. However, this technology has not as yet been evaluated as an adjunct in teaching first-year undergraduate medical students integrated Point of Care Ultrasound. The study goal was to determine if 3D heart models are effective to aid students in acquiring and interpreting normal cardiac images obtained using B-mode ultrasound.  

**Methods:** 3D cross-sectioned models depicting both halves of a human heart cut along the parasternal long axis plane were created using computed tomography DICOM data. Through segmentation, this data set, was used to create a model in stereolithographic file format to generate the 3D print. The heart models were made available to first-year medical students (total n=196) completing a cardiac POCUS activity in the Structure and Function of Major Organ Systems block at Texas Tech University Health Sciences Center School of Medicine. Students acquired and submitted a PLAX image for a grade. Results: The in-house printing of cardiac models was $64. This is considerably less expensive than commercial models. Students found the PLAX cardiac heart models to be useful for orienting themselves during cardiac ultrasound training. Conclusion: Our experience incorporating 3D printed heart models in medical anatomy and physiology education, provides evidence supporting 3D printed cardiac models help novice sonographers better understand relevant surface and cardiac anatomy. Accordingly, in-house printing of 3D cardiac models is a cost-effective approach to facilitate development of clinical skills in first-year medical students.

**Poster 2:** Case Based Neuroethics in Undergraduate Medical Education: Designing and Implementing a New Ethics Module in the Neurology Core Clerkship  
**Authors:** Maya Overby Koretzky, Michael Halstead, Carlos Romo, Charlene Gamaldo, Doris Leung, Rachel Marie E. Salas  

**Needs and Objectives:** Medical students are exposed to challenging conversations during the neurology clerkship, including ethical issues related to end of life care, brain death, and capacity for decision-making. While education in ethics is considered a core competency by the America Academy of Neurology during residency training, undergraduate medical education in this area is underdeveloped. The aim of this pilot project is to identify, implement, and evaluate tools for teaching medical students about important topics in neuroethics during the Neurology core clerkship via a case based curriculum.  

**Setting and Participants:** Medical students at Johns Hopkins (second-fourth year) participated in an one-hour peer-facilitated ethics module during the Neurology clerkship.  

**Description:** The ethics module utilized a peer-teaching framework to promote discussion on decision making capacity, surrogate decision-making, brain death, and optimizing goals of care conversations. Participants were asked to use a series of cases to reflect in small groups on their own personal beliefs related to quality of life, and how these beliefs may influence their delivery of care as a physician.  

**Evaluation:** The activity was assessed via a pre and post survey designed to identify students’ exposure to, level of interest in, and confidence in neuroethics topics. A paired T-test will be used to analyze statistical
differences between individuals’ responses on the surveys. Success of the intervention is defined as improvement in students’ confidence approaching difficult conversations and demonstration of greater knowledge of bioethics frameworks on the second two surveys. Additionally, data from the pre-survey regarding students’ previous exposure to goals of care conversations and capacity assessments will be tracked against their progression in the medical school curriculum in order to better understand how and when students gain ethics experience during undergraduate medical education.

Lessons Learned: While statistical analysis is ongoing, early results suggest that students viewed the ethics activity favorably and demonstrated an increase in interest in and factual knowledge of ethical issues in neurology at the conclusion of the module. A case-based ethics curriculum can be a valuable element of the clinical curriculum for undergraduate medical students.

**Poster 3 Enhancing the DNP Curriculum to Ensure Graduates can Manage Patients with Chronic Pain and Those with OUD**

**Authors:** Tammy Slater

**Needs and Objectives:** Prescription and illicit opioids are responsible for 130 deaths each day in the United States. Opioid medications are being prescribed to one out of every five patients in acute and chronic care settings. Such prescribing should include the ability to assess, tailor and taper opioids based on established guidelines. The opioid epidemic has heightened the need to address the more than 2 million Americans with opioid use disorder (OUD) and that only 20% of them receive treatment. The medication, buprenorphine has expanded access to treatment. Recently, advanced practice nurses have been authorized to prescribe this medication.

The objective of this innovative project is to prepare advanced practice registered nurse (APRN) graduates of the Doctor of Nursing Practice (DNP) program to be able to address both sides of the coin: management of patients with pain including safe prescribing of opioids and buprenorphine medication treatment for OUD.

**Setting and Participants:** This project is being conducted at the school of nursing with students enrolled in the DNP program.

**Description:** The innovation includes enhancing DNP curriculum to ensure graduates can manage patients with chronic pain and those with OUD.

**Evaluation:** The placement of four learning modules, two of which are case based, has been determined for one of four specialty tracks.

**Lessons Learned:** Building the modules around already existing web-based materials proved challenging. While web-based case studies were accessible at the onset of building the modules, they were later removed. In retrospect, it would have been beneficial to allocate funds for the development of enduring video cases. When the content was ready, course faculty were completing the development of new DNP courses that were to be taught for the first time. This timing meant that the content was not able to be required for the first cohort. From the onset, implementing the project within the track overseen by the PI (i.e., adult acute care nurse practitioner) would have been a realistic goal.

**Poster 4: RIME, Competency and Graduate Advanced Practice Nursing Students**

**Authors:** Catherine Ling, PhD FNP-BC CNE FAANP FAAN, Kristen Brown, DNP, CRNP, CPNP-AC, CHSE-A, Kim McIltrot, DNP CNE CPNP CWOCN FAAN

**Needs and Objectives:** This inter-institutional collaboration was developed to adapt a clinical competency model as an instructional and evaluation road map for NP students across their curriculum. The PRIME model describes a progressive continuum of five performance levels: professional, reporter, interpreter, manager, and educator. This model has been adopted by numerous medical schools and is an proven tool to construct and assess the overall progression of the students’ clinical skills and competency.
**Setting and Participants:** The faculty are from the doctoral primary care nurse practitioner programs of Johns Hopkins University School of Nursing and the DKI Graduate School of Nursing at the Uniformed Services University.

**Description:** The model has been adapted to align with national nurse practitioner education competencies. Clinical competency is delineated as a series of iteratively building expectations didactically, in simulation and clinical settings. Steps in the initial roll out include building a mental model of expectations, refinement of evaluation instruments, initiation of benchmarking activities and building reflective OSCE scenarios.

**Evaluation:** Currently we are in year one of a three year cycle of implementation and funding. Initial findings from the first year of this effort include the adaptation of the simulation design and evaluation, ongoing faculty training and benchmarking initial student outcome progression.

**Lessons Learned:** A major take away from pre-award pilot work is the need for ongoing faculty training to articulate and clarify student performance expectations and key competencies associated with each phase.

**Poster 5: Sustaining Communities and Nursing Education: CCIAS**

**Authors:** Catherine Ling, PhD FNP-BC CNE FAANP FAAN, Phyllis Sharps PhD RN FAAN, Patty Wilson PhD PMHNP-BC, Kimberly Hill, MS, Alexis Peay, Lucine Francis PhD RN

**Needs and Objectives:** The Center for Community Innovations and Scholarship (CCIAS) at Johns Hopkins University School of Nursing has created a sustainable model for promoting the well-being of underserved populations in Baltimore by forming alliances with residents, integration with Johns Hopkins Medical Institute and other vested university groups, community based organizations, business leaders and health care organizations. A key component of that integration is service learning.

**Setting and Participants:** JHU School of Nursing students work on community based initiatives in the three primary areas: School Based (with Henderson Hopkins School), Community Based (with Wald Center for Nursing and Birth Companions Program) and Insecurely housed/Shelter (with House of Ruth) initiatives.

**Description:** CCAIS also supports education and training, wellness programs, service learning, community health initiatives and outreach, scholarship through community and academic engagement. Stakeholders are actively involved in planning, implementing and evaluating. Mission, communication and operationalization are clearly and widely articulated. Over-reliance on single source funding is avoided.

**Evaluation:** Over the past nine years, over 500 students have provided more than 17,000 hours of service to the Baltimore community. Key components of the sustainability of these service learning efforts are strong and mutual partnerships, diversification of funding and maintaining mission constancy with structural flexibility.

**Lessons Learned:** Key components of the sustainability of these service learning efforts are strong and mutual partnerships, diversification of funding and maintaining mission constancy with structural flexibility.

**Poster 6: Development of a Curriculum to Train SON Students in Advanced Practice Nursing**

**Authors:** Victoria Goode, PhD, CRNA, Bruce A. Schoneboom, PhD, MHS, CRNA, FAAN

**Needs and Objectives:** Since its inception in 1889, the Johns Hopkins School of Nursing (SON) has aspired to the highest professional standards for preparing nursing professionals. The opening of Johns Hopkins Hospital SON pioneered contemporary nursing in the United States. In 1983, the SON became the eighth division of the Johns Hopkins University (JHU) and has rapidly established its position as a top-ranking school of nursing. The SON brings an innovative, outcomes-focused approach to nursing education. To aid in reducing the anesthesia provider shortage we propose an innovative and novel model for educating certified registered nurse anesthetists (CRNAs) through a partnership with the Department of Anesthesiology and Critical Care Medicine to integrate principles of safety and quality into services provided across the
continuum of care, to diverse patient populations, particularly in medically underserved communities like East Baltimore.

**Setting and Participants:** The SON admission process was highly competitive with over 86 applicants applying for admission. The applicants were recruited nationwide for admission to the program. Admission was extended to the inaugural cohort of CRNA students and the students will matriculate in May 2020. The cohort is culturally and racially diverse.

**Description:** There is increasing evidence that advanced practice registered nurses including CRNAs provide access to cost-effective, high quality care. With the emphasis on the Doctoral degree this program places nurse anesthesia on the forefront in advancing patient outcomes at JHH and throughout the United States. The 3-year 88 credit program provides a rich didactic and clinical experience which trains students in their full scope of practice.

**Lessons Learned:** There is continued work to be done in preparation of the program’s start. The Program of Study includes 38 credits Distance Education Credits within the DNP core curricula and 4 credits of Human Anatomy taught through the School of Medicine. The program’s 46 anesthesia credits are being built with the instructional design team and requires a dedicated strategy to achieve success with the course build. It is important to reflect on the importance of collaboration with the ACCM, JHH clinical partners, and faculty. Those relationships have contributed to our program’s success.

---

**Poster 7: SNAPT: A Curriculum-to-Career Initiative to Support New Nurse Practitioners**

**Authors:** Miki Goodwin, Marianne Logan Fingerhood

**Needs:** Recruitment and retention of advanced practice nurses is critical to building a robust and sustainable health workforce. One way to promote the development of new nurse practitioners is to build a fellowship program in collaboration with community partners to support a curriculum-to-career transition. SNAPT (Supporting Nursing Advanced Practice Transitions) was created as such a program which commences while nurses are still in school and follows them through their first year of practice in the community.

**Objectives:** Design a 12-month fellowship program for new nurse practitioners beginning in school and transitioning into practice.

- Determine components of curricular and clinical support required to impact positive patient outcomes.
- Identify methods to measure sustainability and success of a curriculum-to-career program.

**Description:** A Taskforce comprising faculty and community partners was assembled to plan the 12-month SNAPT fellowship program, targeting dynamic elements of primary care practice that new nurse practitioners find challenging. A gap analysis was used to identify needs for real-world practice, from which effective models of curricular and clinical support were designed to promote positive patient outcomes. Core competencies based on accreditation requirements for NP fellowships were embedded in online and on-site training, including case studies, mentorship and specialty modules.

**Evaluation:** Survey groups determined a substantial demand for graduate NP education. All respondents cited the need for more structure while transitioning to practice. A subset of the group had participated in a formalized program. They indicated that dedicated mentors, practical education sessions, rotations in specialty care sites and peer support provided the foundation needed to transition to independent practice. Those without a formalized program indicated the following needs: dedicated mentorship, additional education regarding complex patients, business acumen, and communication with specialty providers. The insights from the surveys were used to plan structure, content and measures of success for the program.

**Conclusions:** The SNAPT program transitioning new nurse practitioners into primary care provides a model for other practice settings. Outcomes include strengthening academic-community partnerships and understanding the cross-over between school and practice. Evaluation metrics from the program determine how building the pipeline of highly prepared NPs is effective and sustainable.
**Poster 1: Differences in Operative Self-Assessment Between Male and Female Plastic Surgery Residents**

**Authors:** Carisa M. Cooney, MPH, Pathik Aravind, MBBS, Scott D. Lifchez, MD, Scott Hultman, MD, MBA, FACS, Robert A. Weber, MD, Sebastian Brooke, MD, Damon S. Cooney, MD, PhD

**Background:** Previous studies of resident physicians have shown that male and female residents rate their work performance differently, with women tending to underrate and men tending to overrate their own performance.

**Study Aim:** To determine if plastic surgery resident trainee self-evaluations differed by resident sex.

**Methods:** Operative Entrustability Assessment (OEA) data were abstracted from MileMarker™, a web-based program capable of storing trainee self-assessments and their associated attending assessments of any CPT-coded procedure. Ratings are based on a 5-point scale where 1=“observed case” and 5=“can take junior resident through case.” All OEAs completed by plastic surgery programs at three institutions were extracted. Complete OEAs are defined as those containing a self-assessment by the trainee (plastic surgery resident) and an evaluation from an attending surgeon. We used linear regression to assess differences between trainee and attending scores by trainee sex and post-graduate year (PGY).

**Results:** We included 8,149 OEAs from three training programs for the entire period of each program’s MileMarker use. OEAs were completed by 64 unique residents, of whom 25% were female, and 51 unique attending surgeons (29% female). When comparing residents’ self-evaluations to the attending’s evaluations, male residents’ self-evaluation scores were higher than the attendings’ scores (mean=3.48, 95% CI: 3.46-3.51) and female residents’ self-evaluation scores were lower than the attendings’ scores (mean=3.15, 95% CI: 3.08-3.20). After adjusting for PGY, both male and female residents’ self-assessment scores for PGY1 were significantly lower than the attendings’ scores (p<0.001). During PGY2-6, male residents’ self-assessment scores were significantly higher than the attending scores; however, female residents’ self-assessment scores remained below the attendings’ ratings of their performance throughout training.

**Conclusion:** Our dataset including 4.5 years of data from 3 plastic surgery training programs showed that when compared to attending assessments, after PGY1 male residents overestimated their operative performance. However, female residents underestimated their performance throughout training. Further studies are needed to determine reasons for these differences.

**Figure 1.** Differences in self-assessment and attending assessment scores for plastic surgery residents by post-graduate year (PGY) of training. “*”: statistically significant. (A) Male residents (assessments: n=6,751). (B) Female residents (assessments: n=1,398)
**Poster 2: Faculty Perspectives on Student-Driven Feedback: Value Added and Challenges Faced**

**Authors:** Kumar, P, Pickering, CM, Qin, CX, Whang, KA, Atta, L, Burns, AG, Chu, RF, Gracie, T, Goldberg, HR

**Summary:** The purpose of this study was to assess faculty perceptions about the efficacy and utility of the Student Curriculum Review Team (SCRT).

**Background:** Student feedback has become an increasingly valued part of course development within the preclinical curriculum at the Johns Hopkins School of Medicine (JHU SOM), with multiple modalities for students to provide input. The primary forums include course evaluations and the Student Curriculum Review Team (SCRT). SCRT was developed with the mission of fostering a learner-centered model of curriculum review that synthesized student opinions into actionable recommendations to deliver to faculty course directors. The utilization of SCRT among course directors was unknown; here, we set out to identify the perceived value of the organization and scope of changes implemented due to student feedback.

**Methods:** A cross-sectional analysis was conducted between October and November 2019 using an anonymous survey distributed to preclinical course directors at the JHU SOM. The 13-question survey assessed perceptions about the utility and efficacy of SCRT.

**Results:** 13 course directors completed surveys. 11 (85%) faculty submitted free-form responses for describing SCRT themes. Most faculty (69%) reported SCRT’s impact on their respective course as positive. 62% of faculty agreed with the statement, “SCRT provides additional information/value that is not included in the course evaluations or given by other curricular organizations.” Content analysis highlighted the importance of having an opportunity to problem-solve with stakeholders (42%) and the provision of a neutral forum to discuss suggestions (50%).

A majority of faculty (69%) agreed with the statement “SCRT suggestions are realistic and actionable.” The types of changes made influenced by SCRT feedback included: exam/quiz (46%), curricular content (54%), lecture content (46%), small group (54%), and schedule (31%). The two most common challenges to implementing SCRT-influenced changes were logistics/time constraints (54%) and pedagogical philosophy (38%).

**Conclusion:** Understanding faculty viewpoints regarding the presence, type, and format of student feedback is critical to developing student-feedback platforms. Here, we find that faculty are receptive and responsive to student feedback through SCRT, indicating a role for a student-centered curriculum feedback platform to cater to the evolving environment of medical education.

**Poster 3: Impact of Revised CMS Guidelines for Medical Student Documentation on Physician Attitudes and Behaviors Regarding Student Documentation and Clinical Involvement**

**Authors:** Wainger J, Chen L, Strowd R, Gamaldo C, Viguerra Altoaguirre C, Salas R

**Background:** In February 2018, the Centers for Medicare and Medicaid Services (CMS) began to allow verification of student notes for billing instead of requiring faculty clinical preceptors to re-document an encounter. Limited data exist regarding the effects of this change on preceptors.

**Hypotheses/Aim:** Our aim was to assess neurology preceptor attitudes and self-reported behaviors regarding student involvement in clinic and documentation prior to departmental CMS policy implementation. Our hypotheses were that CMS changes would facilitate higher student engagement in outpatient clinic, preceptor productivity, student documentation, and positive preceptor satisfaction.

**Methods, Results:** Twenty-three neurology clinical preceptors (i.e., Osler Attending Preceptors in Neurology) completed online cross-sectional surveys before and after departmental implementation of CMS policy changes. The pre-implementation surveys were collected in March and April of 2019. An announcement regarding the changes was made in June 2019. Post-implementation surveys were collected from November 2019 to January 2020.

Fewer preceptors felt students in clinic decreased productivity post-implementation as compared to pre-implementation (52.2% [N=12] prior and 34.8% [N=8] after). Additionally, fewer preceptors cited limited student ability to document in the electronic medical record (EMR) as a barrier to involvement (39.1% prior
More preceptors had students write patient notes post-implementation (34.8% [N=8] prior and 43.5% [N=10] after). The number of preceptors that felt slightly, likely or extremely likely to use a student note to assist with documentation doubled from 26.1% [N=6] prior to 52.2% [N=12] after implementation. The number of preceptors that used student documentation for billing increased (30.4% [N=7] prior versus 39.1% after [N=9]). Most preceptors expressed a neutral level of satisfaction with the changes (69.6% [N=16]) with 1 preceptor very dissatisfied (4.3%) and 6 satisfied or very satisfied (26.1%). Fifteen (65.2%) preceptors surveyed post-implementation stated they understood the change.

**Conclusion:** After implementation, preceptors felt more productive and more likely to use student documentation and largely neutral satisfaction with the changes may stem from a relatively low rate of understanding of the policy change.

**Poster 4:** Analysis of Medical Students' Procedural Skills Experience in the Neurology Core Clerkship

**Authors:** Bongiorno DM, Gamaldo CE, Strowd RE, Salas RME

**Summary:** The 2019 American Academy of Neurology-endorsed core curriculum guidelines for Neurology clerkships reflect the importance of procedural skills (e.g. neurological exams, lumbar punctures). A study of Johns Hopkins medical students demonstrated improving neurological physical exam skills is students’ most common Neurology clerkship goal. Whether students have opportunities to participate in procedures and greater confidence in procedural skills after Neurology clerkships is unknown. This study evaluates students’ confidence in and experience with procedural skills during the Neurology Core Clerkship.

**Background:** Both Neurology and general medical education guidelines support the importance of medical student procedural skills, but literature suggests graduating students have limited procedural experience. Given recent Neurology clerkship guidelines, we evaluate whether the Neurology Core Clerkship meets expectations of training students in key procedural skills.

**Hypotheses/Aims:** We aim to determine how frequently lumbar puncture experience is among students’ top Neurology clerkship goals, and assess whether students participate in procedures and have greater confidence in procedural skills after the clerkship.

**Methods:** We retrospectively reviewed previously collected data on students’ top Neurology clerkship goals. Then, pre-/post-clerkship data will be reviewed to determine change in confidence in procedural skills (history-taking, neurological exams, and oral presentations), and to quantify the proportion of students participating in bedside procedures.

**Results:** Among 200 students, 6% included practicing lumbar punctures among their top three Neurology clerkship goals. We will analyze data collected on clerkship students’ procedural skills after eIRB approval.*

**Conclusion:** Findings will help Neurology clerkship educators determine which procedural skills students typically gain, and which skills students may have difficulty with, after clerkship completion.

**Poster 5:** Evaluating the Impact of Using Pediatric Clerkship Student Notes for Billing

**Authors:** McRae A, Carter R, Macatangay R, Golden WC, Pahwa A

**Background:** In 2018, the Center for Medicare & Medicaid Services changed their policy to allow attending physicians to utilize medical student (MS) documentation for billing purposes. Our institution implemented a formal note-writing curriculum and a policy permitting billing with MS notes.

**Hypothesis:** Using MS notes for billing will improve students’ perceived involvement in patient care and increase note-writing feedback from attendings.

**Methods:** Students at our institution completed an evaluation of our note-writing curriculum. Additionally, students were surveyed about their note-writing experience during their pediatric clerkship prior to (“pre-survey”) and after (“post-survey”) the implementation of the curriculum and policy. We also graded “pre-
“implementation” and “post-implementation” student note quality using PDQI-9. All comparisons were made using the independent t-test.

**Results:** Twenty-four students (53%) completed the curriculum evaluation; the majority felt it increased their skills related to writing in the electronic medical record (58%) and helped them think more critically about what information to include in admission (67%) and progress notes (71%). The pre- and post-survey response rates were 50% (26 responses) and 71% (32), respectively. Pre- and post-survey responses were not significantly different (Table 1). Although 71% of pre-survey respondents agreed that using their notes for billing would make them feel like a more valuable team member, there was no difference in perceived contribution to patient care between pre- and post-survey respondents (50% vs. 69%, p=0.2). Overall, only 22% reported receiving feedback on more than half of their notes and 45% received feedback on under 25% of notes. Seventy-eight percent of post-survey responses indicated that they were asked to write a reasonable amount of notes. The mean pre- and post-implementation note scores did not differ (27.2, SD4.4 vs. 25.3, SD 4.9 respectively).

**Conclusion:** Implementing a policy on billing with MS notes did not improve student perception of contribution to patient care. However, note quality remained consistent and students indicated that using their notes for billing was not burdensome. Further research is needed on how to best improve student perception of their utility to the medical team and encourage note-writing feedback.

**Table 1:** Comparing pre- and post-survey responses

<table>
<thead>
<tr>
<th>Question</th>
<th>% affirm</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>I had adequate time to finalize my notes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pre</td>
<td>85%</td>
<td></td>
</tr>
<tr>
<td>Post</td>
<td>84%</td>
<td>0.8</td>
</tr>
<tr>
<td>Writing notes on patients contributes to my education</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pre</td>
<td>92%</td>
<td>0.5</td>
</tr>
<tr>
<td>Post</td>
<td>96%</td>
<td></td>
</tr>
<tr>
<td>I felt my notes contributed to patient care</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pre</td>
<td>50%</td>
<td>0.2</td>
</tr>
<tr>
<td>Post</td>
<td>69%</td>
<td></td>
</tr>
<tr>
<td>My team asked me to write a reasonable amount of notes daily</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pre</td>
<td>73%</td>
<td>0.2</td>
</tr>
<tr>
<td>Post</td>
<td>78%</td>
<td></td>
</tr>
<tr>
<td>The time spent writing notes was balanced with my education</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pre</td>
<td>&gt;50%</td>
<td>0.4</td>
</tr>
<tr>
<td>Post</td>
<td>75%</td>
<td></td>
</tr>
<tr>
<td>I received feedback on the following percentages of notes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pre</td>
<td>27%</td>
<td>0.4</td>
</tr>
<tr>
<td>Post</td>
<td>19%</td>
<td></td>
</tr>
<tr>
<td>What percentage of notes were you able to finalize before rounds</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pre</td>
<td>35%</td>
<td>0.9</td>
</tr>
<tr>
<td>Post</td>
<td>38%</td>
<td></td>
</tr>
</tbody>
</table>

**Poster 6:** Perspectives of Medical Students Regarding the Workflow and Involvement in the Electronic Medical Record in Outpatient Neurology Clinics

**Authors:** Chen LK, Wainger J, Viguerra Altolaguirre C, Gamaldo CE, Strowd RE, Salas RME

**Background:** While outpatient experiences are crucial to student education, facilitating breadth and depth of student engagement can be challenging due to time and logistical constraints, perceptions of increased work among preceptors, and the subspecialized nature of certain fields. Implementation of standardized workflows and CMS guideline changes that allow student notes to be used for billing may decrease barriers for student involvement; however, there is limited understanding of student perspectives regarding clinic involvement.

**Hypotheses/Aim:** We aim to understand student attitudes and preferences regarding clinic involvement and responsibilities, especially related to documentation in the electronic medical record (EMR). We hypothesize that students desire greater responsibility and learning opportunities but may doubt their roles while rotating through subspecialized clinics.
Methods, Results: From April-December 2019, 95 students completed an online survey at the end of their four-week Neurology clerkship. Student comments expressed strong desires to contribute to workflow and patient care, for clear expectations of their responsibilities, and for timely feedback on notes. Most students preferred to independently interview and examine (75.1% [N=71/95]) rather than shadow (3.2% [N=3/95]), interview and examine with a preceptor (7.4% [N=7/95]), or independently interview only (14.7% [N=13/95]). Most preferred to present outside (98% [N=93/95]) rather than inside (2.1% [N=2/95]) the patient room. Many felt that writing notes helped them develop necessary skills (75.5% [N=71/94]) and contributed to learning (80% [N=76/95]). However, only 34.3% (N=23/67) felt that their notes were read, and 64.2% (N=43/67) felt that writing notes helped them receive feedback. Many preferred to be given time during clinic to complete notes (67% [N=64/95]) and to write 1-2 notes (rather than more) per clinic session (61.1% [N=58/95]). Most preferred a standardized workflow for student involvement (70.2% [N=66/95]) and note-writing (71.3% [N=67/95]), although some preferred individualization according to student and/or preceptor needs.

Conclusions: Most students prefer to see patients and formulate assessments independently, and to document in the EMR when it contributes to learning, clinic efficiency, and patient care, which may be facilitated by new CMS guidelines that give physicians greater incentive to use student notes. To optimize student involvement in outpatient clinics and EMR, it is important to establish clear expectations, timely feedback, and a balance of meaningful responsibilities.

Poster 7: Healthcare in the Age of Mass Incarceration: A Selective Course for Medical Students in their Pre-Clinical Years

Authors: Gips J, Spiegel, A Norton, P Gandhi, Hardenbergh D, Gatt, J, Pugh L, Jones A, Sufrin C

Background: While medical school curricula increasingly address health disparities, content regarding health of and healthcare for persons impacted by incarceration is a persistent and notable gap. There is a high burden of disease among incarcerated populations, and unique healthcare challenges continue after incarceration. We developed a pre-clinical course to introduce medical students to the current landscape of mass incarceration in the U.S. and implications for health and healthcare delivery to people impacted by this system.

Aim: Our aim for the course was to describe the pervasiveness of mass incarceration in the U.S., explain how social determinants of health lead to disproportionate incarceration of certain populations, define how healthcare is delivered to people who are incarcerated, and provide realistic scenarios that highlight the problems that have prevented physicians from providing appropriate healthcare to people who are incarcerated. Overall, we hoped to help students become advocates for currently and formerly incarcerated persons.

Methods: We developed a 3.5-hour elective course taken by 19 first-year medical students in its first year and 20 first-year medical students in its second. The course utilized lecture, case-based discussion, and guest speaker modalities to introduce students to the history of mass incarceration, healthcare delivery within the carceral system, and challenges in accessing needed care during and following incarceration.

Results: Students were sent two surveys following the course. In the first, 100% of respondents reported outstanding, excellent, or good levels of satisfaction with various selective components, including organization, learning activities, and student discussion. The second found significant increases in knowledge about mass incarceration and incarceration health issues (p < 0.001), in addition to significant increases in interest in volunteering, advocating, or providing healthcare for incarcerated and formerly incarcerated populations (p < 0.001).

Conclusion: Given the current landscape of mass incarceration, students will encounter patients impacted by this system, and this elective course sought to better prepare students to effectively care and advocate for these patients. We were limited by time availability, and possible future directions include incorporating a standardized patient exercise, trauma-informed care principles, and perspectives from providers working within the carceral system.
**Poster 8: Teaching High-Value Care in Ophthalmology Training Programs: A Pilot Intervention in the Emergency Department**

**Authors:** Teng D, Zafar S, Tran T, Agarwal A, Patel A, Cho A, Srikumaran D, Woreta FA

**Background:** Unnecessary preoperative testing in the emergent setting contributes to the burden of rising healthcare costs and is a potential area to improve value of care in patients undergoing emergent ophthalmic surgery.

**Hypotheses/Aim:** To determine the prevalence of unnecessary preoperative testing among patients presenting for emergent open globe surgical repair.

**Methods:** Retrospective analysis of patients who underwent emergent open globe repair at the Wilmer Eye Institute between July 2016 and June 2019. Data on the following variables were collected: demographics, comorbidities, medications, preoperative tests ordered, and the pre-operative ASA score.

**Results:** A total of 204 patients underwent emergent open globe surgical repair during the study period. The mean age was 46 years and 71% were males. 93% of patients underwent a Type and Screen was despite no chance of receiving a blood transfusion during ophthalmic surgery. Similarly, 89% of patients received a blood coagulation test (INR/PT) without any history of anti-coagulation medication or underlying liver and/or hematologic disease. 88% had a complete blood count and 83% had comprehensive metabolic panel (CMP) without prior history liver, renal, or diabetic disease, respectively. An electrocardiogram (EKG) was performed in 49% of patients without underlying cardiovascular disease, arrhythmias, or hypertensive medication use.

**Conclusion:** A high prevalence of unnecessary testing exists in the ED for patients requiring emergent ophthalmic surgery. Interventions aimed at reducing such tests may help decrease healthcare costs and improve healthcare resource utilization. Involving residents in quality improvement projects can instill the importance of high-value care in their training.

**Poster 9: Assessing Workplace Incivility Between Ophthalmology and Emergency Room Residents**

**Authors:** Sidra Zafar MD, Joseph Cofrancesco MD, Linda Regan MD, Divya Srikumaran MD, Fasika A. Woreta MD, MPH

**Background:** Workplace incivility is associated with a wide range of serious negative outcomes, including psychological and physiological distress for the people involved. The hostile work environment in turn, can affect patient outcomes and safety.

**Hypotheses/Aim:** To determine the prevalence of workplace incivility in the emergency department, a high-stress work environment.

**Methods:** Online survey sent to ophthalmology and emergency room (ER) residents at the Johns Hopkins Hospital and assess frequency, origin, reasons and situations where workplace incivility was reported.

**Results:** Of the 42/45 ER residents that responded, 9.5% reported frequent (1/week), 23.8% occasional (1/month) and 47.6% (1/quarter) reported rare incidents of incivility in interactions with ophthalmology residents. In comparison, of the 13/15 ophthalmology residents that responded, 15.4% reported frequent (1/week), 15.4% occasional (1/month) and 69.2% (1/quarter) reported rare incidents of incivility in interactions with ER residents. More than half (54%) of ER residents considered the quality of their interactions with ophthalmology residents to be better than other specialties. Incivility between ED and ophthalmology residents most frequently occurred while obtaining routine consults (68.1%) followed by arranging for in-patient admission (13%). The most common reasons cited by residents for why incivility occurred were: stress (30.9%), loss of empathy/burnout (25.2%) and, attempts to shift responsibility to another party (23.7%).

**Conclusion:** Most residents have experienced some form of incivility at least once, with stress often thought to be the most common reason for incivility occurring in the workplace.
**Poster 10: Integration of Palliative Care into Advanced Practice Education**

**Authors:** Binu Koirala PhD, MGS, RN, Rita F. D’Aoust, PhD, ANP-BC, CNE, FAANP, FNAP, FAAN, Sharon Kozachik, PhD, RN, FAAN, Joanne Silbert-Flagg, DNP, CRNP, IBCLC, FAAN, Tammy Slater, DNP, MS, ACNP-BC, Rab Razzak, MD, Cheryl R. Dennison Himmelfarb, RN, ANP, PhD, FAAN

**Background:** Diagnostic and treatment capabilities continue to advance, resulting in longer life expectancy and increased needs for quality palliative care. Palliative care focuses on improving quality of life and survival outcomes through collaborative communication, symptom management, and supporting patients and family with serious illnesses. Availability of primary palliative care has lagged behind patient needs due to insufficient training. Advanced practice nurses are well-positioned to meet the palliative care needs of seriously ill persons across the lifespan; they have the requisite skills and knowledge to assess, plan, implement, and evaluate comprehensive patient-centered care.

**Aim:** To address this need, we proposed an educational program to integrate palliative care throughout our advanced practice curricula and accelerate palliative care competencies among Advanced Practice-Doctor of Nursing Practice (AP-DNP) graduates.

**Methods:** Our strategy to accomplish this consisted of two goals: Create academic-clinical partnerships to increase AP-DNP students’ access to high-quality palliative care sites by providing clinicians and preceptors in all practice settings access to training in palliative care; Promote AP-DNP graduates’ readiness to provide palliative care by integrating palliative care content into AP-DNP curricula through didactic content, co-simulations, interprofessional education, and clinical experiences with a variety of patient populations. To evaluate the program’s impact, the Palliative Care Quiz for Nursing (PCQN) and the Palliative Care Self-efficacy (PCSE) scale for confidence in providing palliative care services were administered to clinicians, preceptors, faculty and AP-DNP students.

**Results:** The preliminary data suggest improvement in palliative care self-efficacy among faculty and preceptors. Students’ (n=51) baseline average (SD) score for PCQN was 12.2 (3.95) and PCSE was 32.7 (9.40). Lessons learned in year one include the need for a strategic approach to collaborate with practice partners, preplanning, and contingency plans. A policy imperative, rich resources and networks are available to fuel the agenda but resources need to be valued and effectively utilized within the academic program.

**Conclusion:** As the country grapples with a growing aging population and a longer lifespan of pediatric population with serious illnesses, the work of developing palliative care capacity among advanced practice nurses is critically important.

---

**Poster 11: Impact of Parental leave on Ophthalmology Residents’ Performance**

**Authors:** Peter Ugoh¹, Sidra Zafar², Fasika Woreta², Divya Srikumaran² ¹Baylor College of Medicine, Houston, TX, USA ²Wilmer Eye Institute, Johns Hopkins Hospital, USA

**Background:** Taking parental leave during ophthalmology residency is perceived by program directors to be negatively associated with resident scholarly activities and surgical volume. However, limited data exists on whether taking parental leave has any association with objective measures of resident performance.

**Purpose:** To determine whether taking parental leave has any association with key measures of resident performance.

**Methods:** Retrospective review of the 2015-2019 graduating ophthalmology resident classes at the Wilmer Eye Institute stratified by parental leave status. Measures of resident performance assessed were: OKAP scores, publications during residency, milestones scores, and surgical volume.

**Results:** Six out of 25 (24%) residents took parental leave. There were no significant differences in mean OKAP scores, number of publications, milestone scores and surgical volume between residents who took parental leave vs. those that did not. In a multivariable model adjusted for gender, pre-residency performance (i.e. medicine and surgery core clerkship grades, USMLE scores, and publications), parental status during residency and the presence of additional degrees, no significant differences were found in any of our measures of performance between residents who took parental leave vs. those that did not.

**Conclusions:** Parental leave did not negatively influence any of our studied measures of resident performance.
**Poster 12:** Does Operative Time Predict Overall Technical Skill in Cataract Surgery?

**Authors:** Sidra Zafar¹, S. Swaroop Vedula², Shameema Sikder¹ ¹ The Wilmer Eye Institute, Johns Hopkins Hospital, Baltimore MD, USA² Malone Center of Engineering in Healthcare, Johns Hopkins University, Baltimore MD, USA

**Background:** Operative Time is a universally measurable, and perhaps the most well-recognized metric of surgical technical skill.

**Purpose:** To evaluate whether operative time predicts overall technical skill in cataract surgery.

**Methods:** We manually annotated 100 cataract surgery videos for phases in the procedure and skill using ICO-OSCAR:phaco. Time for each phase and overall procedure was computed using two global indices (wound neutrality; overall speed). We specified expert/novice labels using appointment (faculty/trainee, respectively), and using global indices (wound neutrality; overall speed): 5 on one and >= 4 on the other as expert. Machine learning models were used to predict skill for procedure and for capsulorhexis using operative time.

**Results:** Time to complete phases in cataract surgery predicted surgeons' appointment more accurately than global skill (AUC = 0.82; 95% CI, 0.70 to 0.91 and 0.73; 95% CI = 0.63 to 0.83, respectively).

**Conclusions:** Operative time predicts appointment status of surgeons and not technical skill; therefore it is of limited value as a measure of technical skill in cataract surgery and capsulorhexis.