MEDICAL COLLEGE OF WISCONSIN
8701 WATERTOWN PLANK ROAD
MILWAUKEE, WI 53226

MCW

2017 MCW INNOVATIONS IN MEDICAL EDUCATION RESEARCH CONFERENCE

APRIL 27 | 10:00AM - 4:30PM

MCW.EDU/IME

KEYNOTE SPEAKER
POSTERS SESSION
PRESENTATIONS

SPONSORED BY THE
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WELCOME

2017 MCW INNOVATIONS IN MEDICAL EDUCATION RESEARCH CONFERENCE

The MCW Department of Academic Affairs is pleased to host the 4th annual MCW Innovations in Medical Education (IME) Research Conference. This conference provides the medical education community opportunities to share their new teaching programs and methods with one another and to be inspired to implement new ideas for future learning and teaching.

The 2017 Innovations in Medical Education Research Conference brings together a community of educators from within MCW and our region who are passionate about discovering new approaches to assessing learning, faculty development, curricular design and teaching delivery methods that enhance the student learning experience and prepare students for a career in medicine.

The goals of the Innovations in Medical Education Research Conference are:

- To encourage our educators to consider innovations in medical education as an area for research focus and scholarship.
- To develop educators research skills and encourage educators, residents, fellows and students to conduct research in medical education.
- To learn from one another so that we all benefit from new and creative approaches to educating students and residents.

We have an exciting day planned with a nationally known keynote speaker, hands-on workshops with practical takeaways and the latest research on medical education.

I want to compliment all our presenters on their success. Please join me in expressing our thanks to their efforts in putting together their talks and posters. And for those who are not represented this year, we look forward to seeing your work represented at new year's conference!

William J. Hueston, MD
Senior Associate Dean for Academic Affairs

ABOUT OUR KEYNOTE

Stuart Slavin, MD, MEd

Stuart Slavin, MD, MEd is Associate Dean for Curriculum and Professor of Pediatrics at Saint Louis University (SLU) School of Medicine.

A graduate of Saint Louis University School of Medicine, Dr. Slavin completed his residency training in pediatrics at UCLA and then served as a faculty member there for 17 years before returning to St. Louis in 2004. In addition to his administrative duties at Saint Louis University, Dr. Slavin teaches actively in the undergraduate medical curriculum and serves as director of the Applied Clinical Skills series of courses. He has led significant efforts to improve the mental health and well-being of medical students at SLU and has recently expanded his work to residents, college students, and high school students.

Dr. Slavin has given workshops and presentations at regional and national medical education meetings as well as at medical schools across the U.S. and internationally. He has received numerous education and teaching awards including the Alpha Omega Alpha Robert J. Glaser Distinguished Teacher Award in 2013.

SCHEDULE

10:00 - 10:30 a.m. On-site Registration/Check-in

10:20 - 10:30 a.m. Welcome - William J. Hueston, MD
Location: Alumni Center

10:30 - Noon Workshops

Workshop 1: M2535-M2545	Workshop 2: M2555-M2565	Workshop 3: Alumni Center	Workshop 4: M2575-M2585
Is That Your Final Answer: Using a Game Show Approach to Teaching	W2: How to Create an Interprofessional Simulation-based Educational Session	W3: Self-Directed Learning in Medical Student Education	W4: Simple Strategies for Teaching Your Residents to Teach… While Shoring Up Your Own Clinician-Educator Prowess

Noon - 1:15 p.m. Lunch and Keynote
Location: Alumni Center

Welcome and Introduction: John R. Raymond, Sr., MD, Joseph E. Kerschner, MD, and William J. Hueston, MD

Keynote: Stuart Slavin, MD, MEd

1:15 - 2:00 p.m. Poster Session
Location: L&S Classroom M2035-M2085

2:00 - 3:40 p.m. Breakout Sessions

	Breakout 1: M2535-M2545	Breakout 2: M2555-M2565	Breakout 3: M2575-M2585	Breakout 4: Alumni Center
2:00 - 2:15 p.m.	OP1: Treat	OP2: Saudek	OP3: McKinney	Developing an Online Interactive Manual for Virtual Microscopy Laboratory Sessions
2:15 - 2:30 p.m.	OP4: De Roo	OP5: Kwong*	OP6: Hueston	
2:30 - 2:45 p.m.	OP7: Prunuske	OP8: Muntz	OP9: 2 Saudek	The MCW Student Resilience Project Pilot
2:45 - 2:55 p.m.	*Break*	*Break*	*Break*	
2:55 - 3:10 p.m.	OP10: Kruper	OP11: Broutman	OP12: Rood	
3:10 - 3:25 p.m.	OP13: Wrzosek	OP14: Adams	OP15: Mattman	Can You Learn From Me Now? A Look at a Distance Education Instance
3:25 - 3:40 p.m.		OP16: Palmer	OP17: Koller	
	** Indicates medical student author*			

3:45 - 4:30 p.m. Posters and Refreshments: Announcement of award winners
Location: L&S Classroom M2035-M2085

DIGITAL NOTES

Join the Conversation

Share your experience at the 2017 Innovations in Medical Education Research Conference by following the Medical College of Wisconsin on Twitter at @MedicalCollege and tag your tweets with the conference hashtag **#MCWIME**.

QR Code Reader

Use a QR Code Reader to download this program, podium and poster presentations.

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EVALUATIONS

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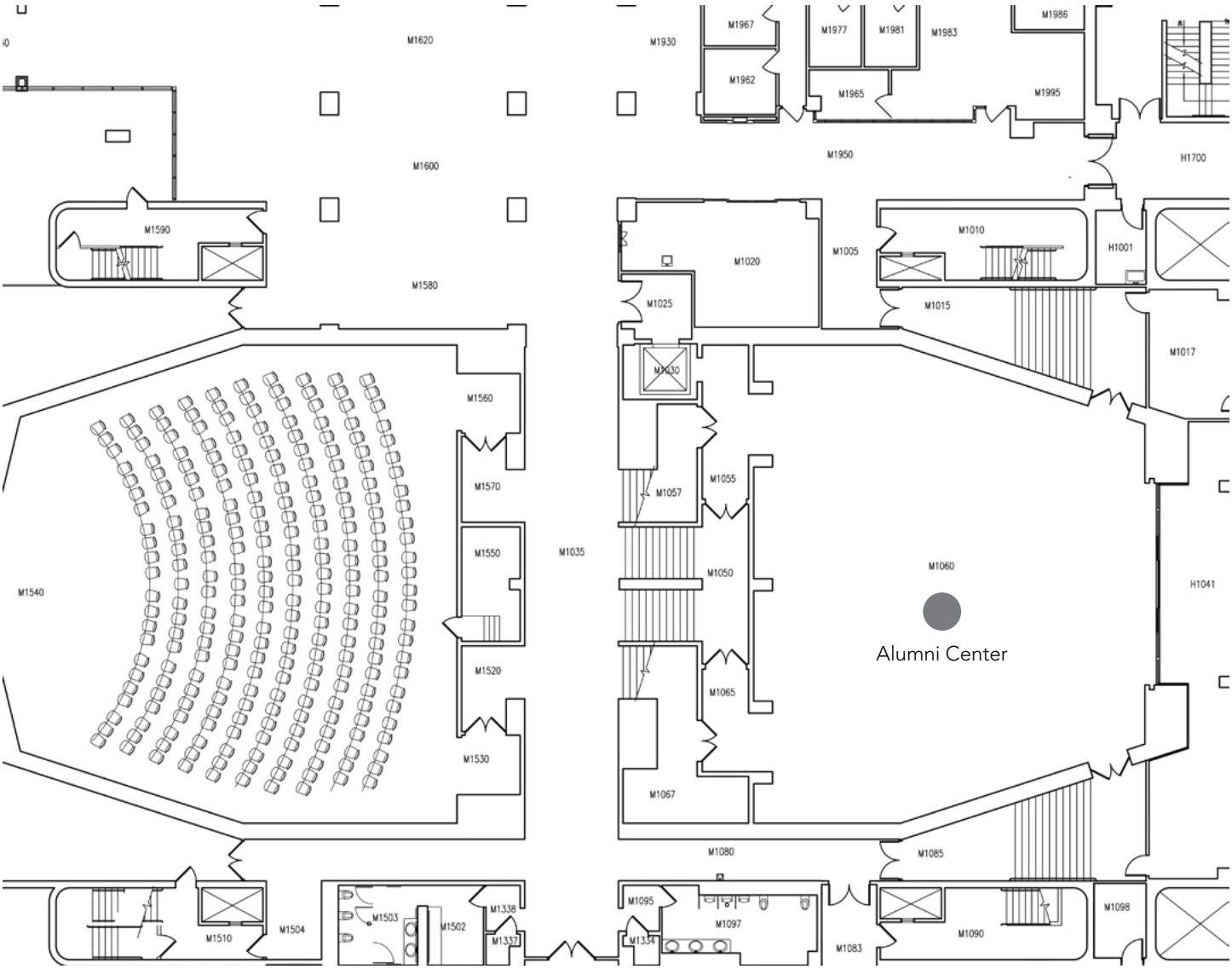
MAPS

Medical Education Building, First Floor

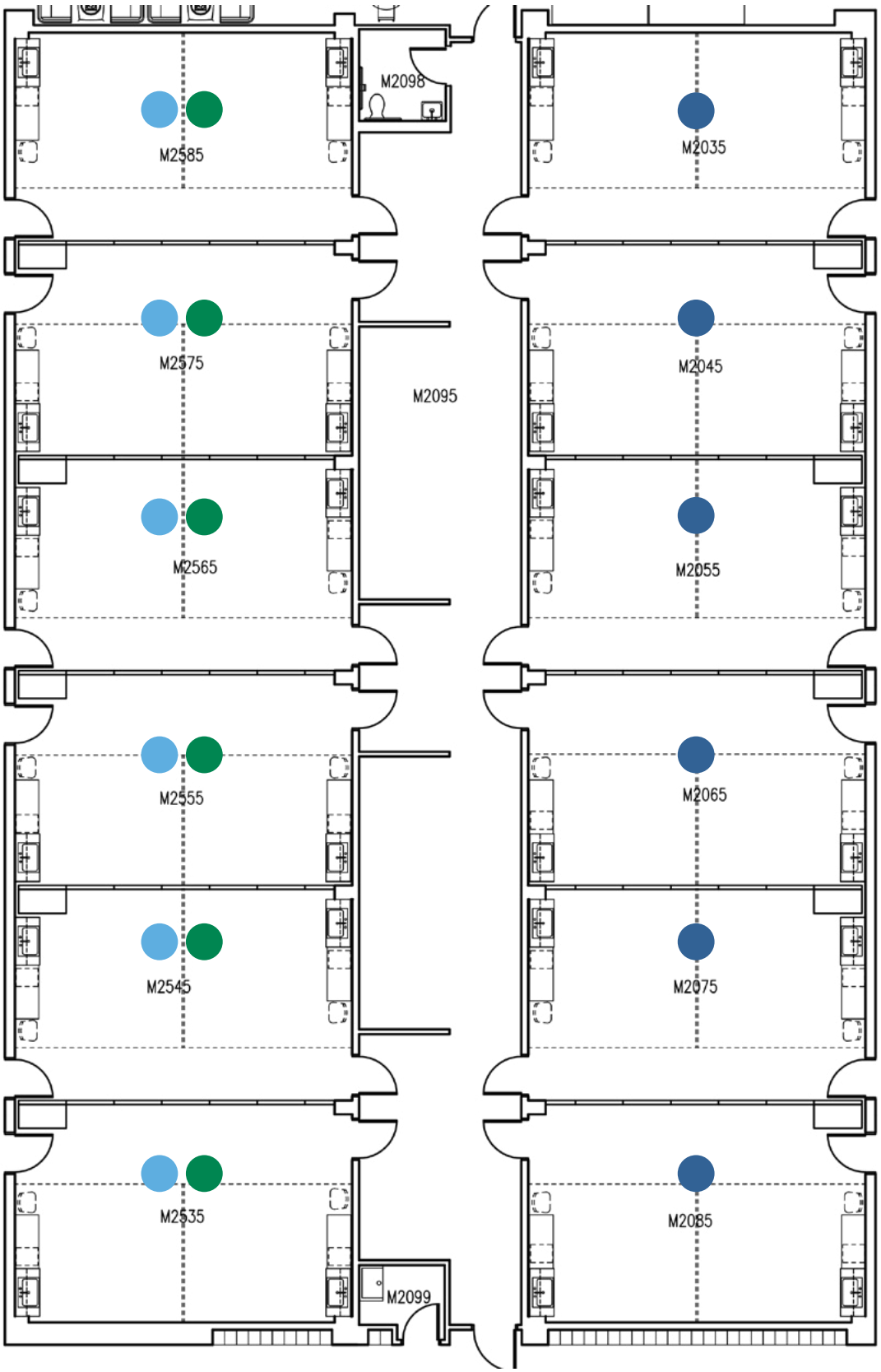


Sessions in the Alumni Center:

- Welcome
- Workshop 3
- Lunch and Keynote
- Breakout Session #4 (Faculty Development Sessions)

MAPS

Medical Education Building, Second Floor



Oral Presentations
Breakout sessions 1,2,3

Workshops
Workshops 1,2,4

Posters

WORKSHOPS

Time: 10:30 a.m. - Noon
Location: Workshops 1, 2, 4 - Learning & Skills Classrooms - M2055-M2085
Workshops 3 - Alumni Center

W1 **Is That Your Final Answer?: How to Develop, Implement, and Tailor an Exciting Game Show Program for your Learners"**
Erica Chou, MD; Sara Lauck, MD; Michael Weisgerber, MD, MCW Department of Pediatrics

This workshop aims to provide you with the skills and excitement to design and implement your own game show teaching sessions. We will discuss the benefits and drawbacks of this teaching method based on current literature and share evidence from our own program. Teams will then compete in a variety of different games while learning strategies to achieve game show teaching success. Tips include matching learning objectives to appropriate game formats, effective ways for hosting and facilitating game show format teaching sessions, and troubleshooting pitfalls. Prizes will be awarded and example templates will be shared. And that is our "final answer."

W2 **How to Create an Interprofessional Simulation-based Educational Session**
Catherine Ferguson, MD, MCW; Jean Pearce, MD, MS, MCW; Sue Korek, MAED, MCW; MaryJo Wiemiller, PA-C, College of Health Sciences, Marquette University; Marilyn Frenn, PhD, RN; Marquette University College of Nursing

Simulation is a powerful learning tool for groups of interprofessional students, as it can provide a dynamic and psychologically safe environment for learning about clinical and professionalism topics. Interprofessional simulation-based education (IPSE) allows for students to practice team-based patient care in a variety of settings and get immediate feedback from peers and faculty from disciplines outside of their own. While a useful and well-accepted learning method, IPSE can also provide many logistical and planning challenges. This workshop will highlight both the opportunities and challenges of interprofessional simulation by giving participants the time, space, and tools to plan a simulation session with a small group of other workshop participants.

W3 **Self-Directed Learning in Medical Student Education**
Marty Muntz, MD; Travis Webb, MD, MHPE; Andrew Kastenmeier, MD; Hershel Raff, PhD, FAAAS, FAPS

Self-directed learning (SDL) is described as education "in which individuals take the initiative, with or without the help of others" to identify knowledge gaps and develop strategies to fill these gaps, and then "evaluating learning outcomes." In addition to being an LCME requirement for medical schools to ensure the curriculum includes these activities, SDL

provides students with skills to become lifelong learners and continuously assess and develop professional competency.

While many faculty are likely already utilizing SDL, often our educators and learners are either unaware they are using SDL or only fulfilling a few of the components of SDL. Multiple additional opportunities to integrate SDL into teaching exist, but specific training for educators and learners is needed to encourage this from day one through graduation. This workshop is designed for any faculty and staff with teaching responsibilities who may be interested in identifying, improving, and/or incorporating SDL into their instructional activities.

W4 Simple Strategies for Teaching Your Residents to Teach…While Shoring Up Your Own Clinician-Educator Prowess

Marika Wrzosek, MD, MCW; Sean Blitzstein, MD, University of Illinois College of Medicine - Chicago

Medical students interact with teachers at various levels of professional development, including residents and junior faculty. As such, as faculty we have an obligation to ensure that we provide our clinical preceptors with the tools they need to be effective educators, as well as examine our own practice to ensure we are indeed practicing what we preach. This workshop will share a successful "resident as teacher" curriculum developed at the University of IL at Chicago (UIC), and will also guide participants through the application of the skills taught in the curriculum. Through the use of interactive small and large group work, hands-on practice, and discussion, this workshop will specifically demonstrate and teach the skills of 1) providing effective feedback, and 2) "teaching on the fly" (following the one-minute preceptor model).

POSTERS

Time: 1:15 - 2:00 p.m.
Location: Learning & Skills Classrooms - M2055-M2085
Abstracts: Appear on pages 18 - 49

Posters are listed alphabetically by first author.

P1 **Entrustable Professional Activities (EPAs): A Tool for Medical Student Assessment**
Bethany Auble, MD, MEd, Robert Treat, PhD, Michael Weisgerber, MD, MS

P2 **Utilization of Asthma Action Plans in the Adult Population at an Academic Hospital**
Bradley M. Boelkins, MD, Kory Koerner, MD, FACP

P3 **How Can I Help You?...Improving a Residents as Educators Curriculum Using Medical Student Feedback**
Alina G. Burek, MD, Kris Saudek, MD

P4 **A Process to Identify MOC Part IV Performance Improvement Geriatric Targets for Primary Care Providers**
Kathryn Denson, MD, Deborah Simpson, PhD, Edmund Duthie, MD, AGSF, M. Malone, MD, S. Barczi, MD, S. Denson, MD, J. Myers, MS

P5 **Creating Future Leaders: Clinical Leadership Track Development for Family Medicine Residents**
Jason Domagalski, MD

P6 **Residents as Teachers: Evaluating Resident's Preparedness to Teach in OB/Gyn**
Amy Domeyer-Klenske, MD, Kristina Kaljo, PhD, Kalliope Varaklis, MD

P7 **Improving Advance Directive Completion by Geriatric Patients Through Physician Education**
Edmund Duthie, MD, Judith M. Myers, MS, Kathryn Denson, MD, Kristin Ouweneel, Deborah Simpson, PhD, Steven Denson, MD

P8 **Promotion of High Quality Documentation Among Residents on Inpatient Pediatric Wards Using a Standardized Tool to Enhance Faculty Feedback**
Danita Hahn, MD, Julie Kolinski, MD, Heather Toth, MD, Michael Weisgerber, MD, Caitlin Pilon BA, Amalia Wegner, MD

P9 **Targeting the Needs of Multiple Providers: Measuring the Efficacy of a Breastfeeding Educational Symposium**
Cresta Jones, MD, Kristina Kaljo, PhD, Robert Treat, PhD

P10 Distance Learning in Medical Education – Perceptions of Experience and Expectations among Medical Students and Teaching Faculty in the M1 Year
Kristina Kaljo, PhD, Robert Treat, PhD, Matthew Tews, DO

P11 Reinforcing Skills of the Novice Surgeon through Online Learning, Video Recording, and Self-Assessment
Kristina Kaljo, PhD, Raj Narayan, MD, Rahmouna Farez, MD, Michael Lund, MD, Andrew Kastenmeir, MD

P12 Pilot Study of a Sports Medicine Curriculum for Family Medicine Residents
Yuka Kobayashi, DO, Laura Gottschlich, DO, Allen Last, MD, Seth Bodden, MD, Simon Griesbach, MD, Jeff Morzinski, PhD

P13 Increasing Interprofessional Collaboration Between Medical, Physician Assistant, and Nursing Students Through Interdisciplinary Bedside Manners Play
Sue Korek, MAED, Catherine Ferguson, MD, Geoffrey Lamb, MD, Jen Kraus, BS, Judy Kintner, MS, PA-C, Chris Schindler, PhD, RN, CPNP-AC/PC, WCC

P14 Using Interdisciplinary Teams to Promote Collaboration Between Medical Students and Physical Therapy Students
Sue Korek, MAED, Kimberly Stoner, MD, Alexa Smith, MEd, Laurie Kontney, PT, DPT, MS, Jeff Wilkens, PT, DPT, OCS, Kaitlin Pike, MS

P15 The Relationship between Medical Students' Emotional Intelligence and Trait Anxiety
Diane L. Brown, MS, Robert Treat, PhD, William J. Hueston, MD, Jennifer Janowitz, MS, Matthew Tews, DO, Kristina Kaljo, PhD, Dawn Bragg, PhD

P16 No Difference between Third Year Medical Student and Intern Presenter Empowerment Action Scores During Pediatric Patient- and Family-Centered Rounds
Sara Lauck, MD, Sarah Vepraskas, MD, Jennifer Hadjiev, MD, Anjali Sharma, MD, Heather Toth, MD, Dawn Bragg, PhD, Michael Weisgerber, MS, MD

P17 Effects of Yammer Social Media Discussions on NBME Subject Examination Performance
Martin Muntz, MD, Bipin Thapa, MD, Robert Treat, PhD, Kerrie Quirk, MEd

P18 Suicide Symposium: a multidisciplinary approach to risk assessment and the emotional aftermath of patient suicide.
Julie Owen, MD, Mara Pheister, MD

P19 WI AHEC IP Case Competition: Advancing Patient Centered Care One Team at a Time
Laura Pettersen, MS, Jill Niemczyk

P20 M2 Cardiovascular (CV) Unit: Impact of Take-home Extra Credit Electrocardiogram (ECG)-Related Problems
Sandra Pfister, PhD, Marcie Berger, MD, Kris Scheel, Catherine Malmsten, MD

P21 SURFBoards Program: An innovative mixed methods comprehensive pediatric resident boards review curriculum
Amanda Rogers, MD, Michael Weisgerber, MD, Jennifer Di Rocco, DO, Sara Lauck, MD

P22 Simulation Curriculum Associated with Improved Resident Self-Confidence in Code Team Leadership Skills
Cailyn Rood, MD, Amanda Rogers, MD, Abigail Schuh, MD, Robert Treat, PhD, Michael Weisgerber, MD

P23 Self-Assessing Competency Skills and Comparing Self Perceptions with Evaluator Ratings
Alexa Smith, MEd, Kathleen Beckmann, DO, Jason Crowley, Michael Lund, MD, Marty Muntz, MD, FACP, Raj Narayan, MD

P24 A Longitudinal Quality Improvement Curriculum Improves Pediatric Resident Comfort and Knowledge
Paula Soung, MD

P25 Using LibGuides to Promote Self-Directed Learning
Elizabeth Suelzer, MLIS, Barbara Ruggeri, MLIS, Rita Sieracki, MLS

P26 Analyzing the Mediator Relationship between M-1 Medical Student Personality and Trait Anxiety through Emotional Intelligence
Robert Treat, PhD, William J. Hueston, MD, Kristina Kaljo, PhD, Jennifer Janowitz, MS, Matthew Tews, DO, Dawn Bragg, PhD

P27 Analyzing the Relationship between Medical Student Burnout with Positive and Negative Affect across Three- and Four-Year Medical School Curricula
Robert Treat, PhD, Diane Brown, MS, Koenraad De Roo, Amy Prunuske, PhD, Kristina Kaljo, PhD, Jennifer Janowitz, MS, Dawn Bragg, PhD, William J. Hueston, MD

P28 The Impact of Trait-Anxiety and Perceived Stress on Student Well-Being in a New Three-Year Medical Degree Curricula
Robert Treat, PhD, Diane Brown, MS, Matthew Tews, DO, Kristina Kaljo, PhD, Jennifer Janowitz, MS, Dawn Bragg, PhD, William J. Hueston, MD

P29 Focusing Student Preparation for Step 1: A Pilot Delivers Assessment Performance Analysis by Category
Sally Twining, PhD, Amy Bingenheimer, MLIS, Larry Roscoe, Diane Wilke-Zemanovic, MS

P30 Simulation for Interprofessional Education
Karen Van Beek, MSN, RN, CCNS, Joan Bedinghaus, MD, Mark Bake, MS, RTR, Kathie DeMuth, MS, RN, Stephanie Stewart, PhD, RN, JoAnn Swanson, MS, RN, Kim Udlis, PhD, RN, FNP, Sue Korek, MAED

P31 Educational Benefits from Interprofessional Teaching with Nursing Students
Kathryn Wolff, Nancy Havas, MD, Sue Korek, MAED, Rebecca Bernstein, MD, Renee Wenzlaff, DNP, Nicole Corso, RN, Lisa Benson, BSN, Phil Allen

FACULTY DEVELOPMENT SESSIONS

Breakout Sessions #4
Time: 2:00 - 3:40 p.m.
Location: Alumni Center

2:00 - 2:30 p.m. **Developing an Online Interactive Manual for Virtual Microscopy Laboratory Sessions**
Beth B. Krippendorf, PhD

Learning Objectives:
- Briefly describe the format of Articulate's Storyline software
- Summarize the responses of M1 students to using an online interactive lab manual designed with Storyline software

2:30 - 3:10 p.m. **The MCW Student Resilience Project Pilot**
Catherine C. Ferguson, MD

Learning Objectives:
- List and describe the goals of the MCW Student Resilience Project
- Explain three specific skills to improve student resilience
- Discuss the most important components of a curriculum aimed at improving student wellness

3:10 - 3:40 p.m. **Can You Learn From Me Now? A Look at a Distance Education Instance**
Amy Prunuske, PhD, Jake Prunuske, MD

Learning Objectives:
- Design & deliver an effective distance learning teaching session
- Apply adult learning principles and educational research to optimize the distance learning environment
- Anticipate and eliminate barriers to effective distance learning
- Describe emerging trends in distance learning

ORAL PRESENTATIONS

Time: 2:00 - 3:40 p.m. (concurrent sessions)
Location: M2535-M2585
Abstracts: Appear on pages 50 - 67

Breakout 1: M2535-M2545

2:00 - 2:15 p.m. OP1 Analyzing the Relationship of Medical Student Self-Direction and Achievement - Competing or Complimentary Values?
Robert Treat, PhD, Diane Brown, MS, Kristina Kaljo, PhD, Jennifer Janowitz, MS, Matthew Tews, DO, Dawn Bragg, PhD, William J. Hueston, MD

2:15 - 2:30 p.m. OP4 The Impact of Medical Student Resilience on the Relationship of Trait Anxiety with Happiness and Life Satisfaction
Koenraad De Roo, Diane Brown, MS, Robert Treat, PhD, Kristina Kaljo, PhD, Amy Prunuske, PhD, Jennifer Janowitz, MS, Dawn Bragg, PhD, William J. Hueston, MD

2:30 - 2:45 p.m. OP7 Evaluation of an Interdisciplinary Program Designed to Promote the Self Efficacy of Medical Students Underrepresented in Medicine
Amy Prunuske, PhD, Anna Wirta Kosobuski, Abigail Whitney, BS, Andrew Skildum, PhD

2:55 - 3:10 p.m. OP10 Bridging the Gap: Identifying Needs to Integrate Behavioral Health and Ob-Gyn
Abbey Kruper, PsyD, Kristina Kaljo, PhD

3:10 - 3:25 p.m. OP13 The Good, the Bad, and the Worthy: A Pilot e-Professionalism Curriculum for General Psychiatry Residents
Marika Wrzosek, MD

Breakout 2: M2555-M2565

2:00 - 2:15 p.m. OP2 Dear Program Director . . . Understanding Letters of Recommendation
Kris Saudek, MD, Peter J. Bartz, MD, Robert Treat, PhD, Rachel Weigert, MD, David Saudek, MD, Michael Weisgerber, MD

2:15 - 2:30 p.m. OP5 An Educational Intervention for Medical Students to Improve Firearm Injury Prevention Counseling
Jacky Kwong, Jennifer Gray, Marlene Melzer-Lange, MD

2:30 - 2:45 p.m. OP8 Bite-Sized (Beast Mode) Teaching on the Internal Medicine Clerkship
Martin Muntz, MD, Kerrie Quirk, MEd, Bipin Thapa, MD, MaryAnn Gilligan, MD

2:55 - 3:10 p.m. **OP11** **Tricks for FRICS (Faculty of Remediation in Clinical Skills): Our 4 Year Story at Chicago Medical School to Prepare Students for the USMLE Step 2 Clinical Skills Exam**
Laurie Broutman, MD, Ariel Katz, MD, MPH, Anthony Purgianto, PhD, Olsi Gjyshi, PhD

3:10 - 3:25 p.m. **OP14** **Using Likelihood Ratios to Improve the Quality of Resident Medical Education**
Justin Adams, MD

3:25 - 3:40 p.m. **OP16** **It's time to play… Respiratory Feud!: Using a Family Feud Game Show Format as an Innovative Approach to Teach Medical Students About Common Pediatric Respiratory Disorders**
Brandon L. Palmer, MD, Erica Y. Chou, MD, Sara M. Lauck, MD, Robert Treat, PhD

Breakout 3: M2575-M2585

2:00 - 2:15 p.m. **OP3** **"A Day in the Life of…": A Personal and Practical Health Professions' Pipeline Initiative for African American High School Students**
Veneshia McKinney-Whitson, MD

2:15 - 2:30 p.m. **OP6** **Round 2: Comparing Medical Student Performance between Two New Three-Year Medical School Regional Campuses and a Four-Year Traditional Campus**
William J. Hueston, MD, Robert Treat, PhD

2:30 - 2:45 p.m. **OP9** **Evaluating Early Predictors of Overall Resident Performance**
Kris Saudek, MD, Amanda Rogers, MD, Robert Treat, PhD, Bethany Auble, MD, Caitlin Pilon, Michael Weisgerber, MD

2:55 - 3:10 p.m. **OP12** **Novel Evaluation Tool Demonstrates That Residents Underrate Their Code Team Leadership Skills**
Cailyn Rood, MD, Amanda Rogers, MD, Abigail Schuh, MD, Robert Treat, PhD, Michael Weisgerber, MD

3:10 - 3:25 p.m. **OP15** **Disasters Waiting to Happen: Training Students and Residents to Identify Unsafe Patient Situations**
Theresa Maatman, MD, Kathlyn E. Fletcher, MD, MA

3:25 - 3:40 p.m. **OP17** **Discharge Readiness: An Educational Innovation to Guide Residents in Patient Discharge Preparation and Improve Discharge Efficiency**
Sara Koller, DO, Kory Koerner, MD, Laura Michaelis, MD

POSTER ABSTRACTS

Innovations vs. Research Abstracts	
An **innovation** abstract is a report on a unique educational experience that has developed enough to provide valuable lessons and insight worth sharing with the medical education community. It is designed to foster scholarly dissemination of novel ideas, methods, or materials in medical education. The focus can be on curriculum, teaching, assessment, or any other aspect of medical training. An innovations abstract summarizes a problem statement, methodological approach, and lessons learned from the study.	A **research** abstract is a report on a completed empirical investigation that contributes to medical education research and practice, which can include pilot projects, exploratory studies, or even components of larger projects. A research abstract summarizes the major aspects of a project in a prescribed sequence that includes the overall purpose of the study, its basic design, major findings s a result of the analysis, and a summary of interpretations and conclusions.

P1 Entrustable Professional Activities (EPAs): A Tool for Medical Student Assessment

Bethany Auble, MD, MEd, Robert Treat, PhD, Michael Weisgerber, MD, MS

Background: Outcome-based medical education is crucial in medical education because it provides assurance that students meet specified criteria and goals prior to residency, which should improve the quality and safety of health care in the United States. The research shows that direct observation of patient encounters provides a reliable way to ensure that trainees are meeting milestones. With the advent of Entrustable Professional Activities (EPAs), we are tasked to ensure that trainees meet all specified skills to be trusted to practice independently within their scope at the start of residency. A validated tool is needed to allow EPAs to be formally assessed.

Methods: A pilot study on the pediatric inpatient wards that used an EPA tool to directly observe a history and physical exam by senior resident. A subset was co-observed by faculty, and data from the EPA tool was scored for each intervention. Survey of the residents were quantified by item and Likert score (1-5). Analysis included Intra-class correlation coefficient (ICC) for co-observation comparison, inter-item reliability (Cronbach's alpha) was analyzed, and descriptive statistics for survey (median, mean, SD) were reported.

Results: Direct observation took place in 17 history and physicals with 5 co-observed by faculty. Intra-class correlation coefficient was 0.671 to 0.923, which reveals strong agreement from two observers. Survey reveals that residents enjoy teaching (median 4.0, SD 0.5), and there is low understanding of EPAs (median 1.6, SD 2.0). The tool was thought to be useful (median 4.0, SD 0.5), and residents want to use it again for future observations (median 4.0, SD 0.5). Cronbach's alpha of 0.924 shows strong for inter-item reliability from the tool.

Conclusions: Limitations to this pilot study was notable for small sample size. Senior residents are often busy with acutely ill patients and may not observe an H&P. The robust agreement from two observers using this tool is useful in moving forward towards inter-rater reliability, which would involve a pair of observers in multiple encounters using the tool. From the survey, it was clear that residents need more education on EPAs, that tool was feasible to use, and the residents want to use it in the future to provide meaningful feedback to medical students during direct observation.

Significance: Robust agreement from two observers makes this tool useful for direct observation of a student's history and physical exam for an EPA.

P2 Utilization of Asthma Action Plans in the Adult Population at an Academic Hospital

Bradley M. Boelkins, MD, Kory Koerner, MD, FACP

Background: Asthma is the ninth most common chronic condition in the U.S. and its annual direct costs from hospital services alone are estimated at $3.2 billion. Patient self-management of asthma, including a personalized asthma action plan, with support from physicians and other health care professionals has been proven to reduce emergency use of healthcare resources. This study's primary aim was to increase utilization of asthma action plans in our observation unit to 75% after 3 months.

Methods: Our study analyzed the current utilization of personalized asthma action plans in our observation unit over a 3-month period. We also assessed providers' comfort with personalized asthma action plans. We then met with our discharge providers, reviewed the evidence supporting asthma action plans, and discussed how to implement them into our discharge process. Lastly, we measured the utilization rate over another 3-month period and reassessed provider comfort with the plans.

Results: In a 3-month period prior to our intervention, 7% (2/28) of patients discharged from our observation unit following asthma exacerbations had personalized asthma action plans. In the 3-month period following our intervention, 31% (5/16) of patients discharged from our observation unit following asthma exacerbations had personalized asthma action plans. Prior to our intervention, 50% of our discharge providers answered "neutral" or "disagree" to the statement "I am comfortable with reviewing an asthma action plan with a patient". Following our intervention, 100% of our discharging providers agreed with the statement.

Conclusions: We did not reach our goal of 75% utilization rate over 3 months. We believe the primary reason for the underutilization is the limited functionality of the electronic medical record. Our discharge providers either had to fill them out by hand or use a previously created electronic version that was very long. We did succeed, however, in improving provider's comfort with using the plans. Future direction should involve creating a more time efficient manner to generate the personalized asthma action plans.

Significance: We demonstrated that more study is needed in creating asthma action plans that can be generated in a time efficient manner through the use of the electronic medical record.

P3 How Can I Help You?...Improving a Residents as Educators Curriculum Using Medical Student Feedback

Alina G. Burek, MD, Kris Saudek, MD

Problem Statement: Literature supports that up to two-thirds of medical student teaching is provided by residents who often have no prior formal teaching experience. Because of this, accrediting bodies require that residents are taught to become effective teachers of medical students as part of their training. The Residents as Educators (RAE) curriculum has been utilized by residency programs to provide the elements of this training to their residents. There is considerable variation in RAE curriculums as medical educators develop it covering what they believe most beneficial. Feedback from medical students regarding resident teaching could have great impact in the development of RAE curriculums.

Approach: The purpose of this study was to analyze feedback obtained from medical students at the end of their pediatric clerkship to develop and modify an existing RAE curriculum. For the 2015-2016 academic year we conducted a descriptive cohort study of third year pediatric clerkship students. An open-ended survey was sent to the students at the end of their 6-week clerkship. The students were asked to list 3 qualities of an excellent teacher and to give specific feedback how to make residents better teachers. Through an iterative process we used grounded theory to review individual responses, identified similar traits and themes, and grouped them based on consensus into categories.

Lessons Learned: We had a 28% response rate (55/200). For the qualities of an excellent teacher we identified 5 distinct categories: communication, engaging, approachable, gives feedback, and teaches to the appropriate level. For the open-ended response how to make residents better teachers we identified 4 distinct categories: learner assessment, giving appropriate autonomy, direct observation/feedback, and more structured/formal teaching.

Significance: RAE curriculums that incorporate sessions on identifying gaps in knowledge, feedback using direct observation, developing teaching resources, providing graduated autonomy, and how to be more engaging and approachable may best serve medical students.

P4 A Process to Identify MOC Part IV Performance Improvement Geriatric Targets for Primary Care Providers

Kathryn Denson, MD, Deborah Simpson, PhD, Edmund Duthie, MD, AGSF, M. Malone, MD, S. Barczi, MD, S. Denson, MD, J. Myers, MS

Background: The explosion of medical knowledge and practice evolution requires physicians continuously learn. On-going assessment and improvement activities to improve patient outcomes using\evidence and best practices benchmarked to peer and national standards is one required element for physicians to maintain board certification (MOC Part IV). Caring for older adults is a critical domain for nearly all specialties, however; the process for identifying physician, patient and system relevant and metric-based topics for those seeking MOC outside of geriatrics is not well defined. We systematically identified "win-win" Part IV MOC geriatric focused topics for Wisconsin-based primary care physicians practicing in competing healthcare systems.

Methods: Geriatric physician educators in three health care systems developed a step-wise process for MOC Part IV education for primary care physicians. We: (1) Generated a list of primary care provider geriatric knowledge/practice needs linked to each organizations' system metrics ensuring relevance and meaningful data reporting; (2) Identified 4-6 key stakeholders in each organization including quality leaders, primary care physicians, advanced practice providers, clinic directors, and educators. (3) Invited key stakeholders to a ½ day retreat to identify MOC topics.

Results: Each organization's retreat participants represented leaders in primary care, quality, geriatrics and CME. These participants generated > 60 geriatric relevant MOC Part IV topics ranging from oral health and medication reconciliation to CGCAPHS items and prevention and screening topics. Final topic selection was based on primary care provider interest and ease of metric access within organizations, ability to design education to meet Part IV requirements and patient care gaps. : Each organization's retreat participants represented leaders in primary care, quality, geriatrics and CME. These participants generated > 60 geriatric relevant MOC Part IV topics ranging from oral health and medication reconciliation to CGCAPHS items and prevention and screening topics. Final topic selection was based on primary care provider interest and ease of metric access within organizations, ability to design education to meet Part IV requirements and patient care gaps.

Conclusions: Using geriatricians as the "common link" within three competing health care organizations can result in identification of MOC Part IV geriatric relevant topics for primary care providers. This process will result in three jointly developed Part IV modules then independently approved and deployed through each organization's ABMS MOC Portfolio mechanism with potential to impact >90% of Wisconsin's primary care physician workforce and our geriatric patients statewide!

P5 Creating Future Leaders: Clinical Leadership Track Development for Family Medicine Residents

Jason Domagalski, MD

Problem Statement: At a time when the ever changing field of medicine desperately needs strong individuals to rise to the challenges of our complex healthcare system we currently face a shortage of physician leaders to answer the call. In the development of our new residency at Community Memorial Hospital in Menomonee Falls, Wisconsin we identified a need to construct a pipeline for future physician leaders in primary care for our organization by way of creating a longitudinal training track. The aim of this project is to identify the needs and resources available to achieve this endeavor.

Approach: The aim of this project will be to develop and conduct a needs assessment targeted at core faculty within the program, Department administrators at our Sponsoring institution as well as key leaders and administrators in our immediate organization to develop curricular products in the way of didactic modules, longitudinal curriculum goals and objectives, as well as opinions on inclusion of a final project and availability/interest in local leadership mentors. Current Family Medicine residents in MCW's other four residencies were surveyed as well for levels of interest in different topics for training.

Lessons Learned: Amongst current medical leaders those modules deemed the most relevant included leading teams, team building and self-awareness. Development and management of professional networks was deemed least important or valued. In regards to management topics, quality improvement and safety topped the list as the most valued while supply chain management scored lower in importance. In contrast to the leadership survey, residents showed a greater interest in topics such as negotiating with patients and colleagues and less interest in Self-awareness. Financial planning and management had the highest interest in management topics while supply chain management and clinical service enterprise.

Significance: The value of clinical leadership to an organization as well as the field of healthcare is unparalleled. Physician leaders have been shown to have a positive impact on patient outcomes, patient as well as provider satisfaction, quality improvement plans, patient safety initiatives as well as measures to attain and retain key clinical staff. This project has highlighted those aspects of training that are most valued by current clinical leaders as well as levels of interest by current family medicine residents. This work will assist in the development for not only this training track, but may lend as useful information for current or future development of similar training programs.

References: 1. Ackerly DC, Devdutta GS, et al. Trainng the Next Generation of Physician-Executives: An Innovative Residency Pathway in Management and Leadership. Academic Medicine. 2011; 86:575-579. 2. Goyal R, Aung K, et al. Survey of MD/MBA Programs: opportunities for physician management education. Academic Medicine 2015; 90 (1):121. 3. Patel AT, Bohmer RM, et al. National assessment of business-of-medicine training and its implications for the development of a business-of-medicine curriculum. Laryngoscope. 2005; 115:51-55. 4. Blumental DM, Bernard K, et al. Addressing the leadership gap in Medicine: Residents' Need for Systematic Leadership Development Training. Acad Medicine 2012; 87:513-522. 5. Patel N, Brennan PJ, et al. Building the Pipeline: The Creation of a Residency Training Pathway for Future Physician Leaders in Health Care Quality. Acad Medicine 2015; 90.

P6 Residents as Teachers: Evaluating Resident's Preparedness to Teach in OB/Gyn

Amy Domeyer-Klenske, MD, Kristina Kaljo, PhD, Kalliope Varaklis, MD

Background: Residents play a critical role in medical student education and have the capacity to significantly contribute to learner's knowledge and clinical skill acquisition. Currently, no standardized resident teacher preparation model exists, with many programs attempting to fit in teaching strategies sporadically throughout a four-year residency (1). Couple this with additional barriers such as duty hour restrictions, patient demands, and departments' varying level of commitment to teaching have tremendous impact on the efficacy of residents as educators, and in turn, student learning.

Methods: A validated, anonymous survey was e-mailed to 1st-4th year residents of ACGME-accredited OB/GYN programs across the United States. Responses were reviewed and open-ended results were coded by the study authors. To gather additional institution-specific data, an OB/GYN 'Residents as Educators' workshop was facilitated to collectively delineate common medical student learning expectations and identify barriers to effective teaching. Workshop discussions were recorded and emerging themes were coded.

Results: Residents indicated that the training to prepare residents to teach was inconsistent: no training (n=17), informal training by residents (n=30) and training by attendings (n=23), formal didactics (n=22) or courses (n=12). In general, fourth year residents were more confident teachers than first year residents. Barriers to teaching included: time to teach, balance of clinical duties, student interest, and knowledge of what to teach. Respondents indicated they preferred observing skilled attendings (n=41), didactics (n=35) or role-modeling didactics (n=26) as a format to learn teaching skills. Results are forthcoming from the workshop session.

Conclusions: Residents need to develop a strong set of teaching skills, yet variable training continues to exist. Unfortunately, a majority of residents continue to report they receive either informal or no training. Ample and diverse opportunities must be provided for residents to develop the necessary pedagogical skills to effectively prepare medical students for to successfully meet clinical expectations. A role-modeling based educational intervention for residents could serve as a useful model to improve the teaching of students and could further address identified barriers to teaching.

Significance: Structured resident-as-educators training sessions may alleviate the challenges that continue to persist (2). Implementation of various strategies will reach diverse teaching and learning styles.

References: 1. Heflin MT, Pinheiro S, Kaminetzky CP, McNeill D. 'So you want to be a clinician-educator…': Designing a clinician-educator curriculum for internal medicine residents. Medical Teacher. 2009; 31: e233-e240. 2. Post et al. Residents-as-teachers curricula: a critical review. Academic Medicine 2009; 84(3): 374-80.

P7 Improving Advance Directive Completion by Geriatric Patients Through Physician Education

Edmund Duthie, MD, Judith M. Myers, MS, Kathryn Denson, MD, Kristin Ouweneel, Deborah Simpson, PhD, Steven Denson, MD

Background: Advance directive (AD) completion is an established quality of care marker. Numerous models for AD completion - ranging from Honoring Choices to Five Wishes - have been implemented and educational resources are available for teaching about ADs. Despite these efforts, the average completion rate across the U.S. is less than 30%. Physician education about ADs is a strategy that addresses specific barriers to AD completion through continuing medical education (CME) activities.

Purpose: To identify barriers to completing ADs in primary practice clinics and determine the educational resources available to design CME to address those barriers in the care of geriatric patients.

Methods: A literature review was conducted using the search terms primary care, advance directives, and geriatrics. The Portal of Geriatrics Online Education (POGOe), a national repository for geriatric education materials, was also reviewed.

Results: Literature revealed key barriers to AD completion in primary care clinics include multiple process oriented barriers: multiple-visit strategy, lack of team-oriented approach, competing priorities within the limited time of a primary care clinic visit, and patients' failure to return a completed AD. Conversations between the primary care provider and patients are critical to the process and can be difficult. POGOe results emphasized the content of ADs, but had limited education focused on processes needed to address the barriers.

Conclusions: Physician oriented AD education must focus on process - the how to complete ADs. Next steps will be to design a physician focused CME activity that focuses on processes for AD completion within primary care clinics.

P8 Promotion of High Quality Documentation Among Residents on Inpatient Pediatric Wards Using a Standardized Tool to Enhance Faculty Feedback

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Background: Inpatient progress notes are a key component of patient care for hospitalized patients, and the Accreditation Council for Graduate Medical Education has emphasized high quality documentation for residents. The objectives of our study were to: 1) assess the quality of progress notes using a standardized tool called the Physician Documentation Quality Instrument 9-item version (PDQI9), and 2) provide a framework for faculty feedback of resident documentation during the Pediatric Hospital Medicine (PHM) rotation.

Methods: Education regarding high-quality progress notes was provided to residents, and education on the use of the PDQI9 tool was provided to PHM faculty. The PDQI9 evaluates the following attributes on a 1 (not at all) to 5 (all the time) Likert scale: up-to-date, accurate, thorough, useful, organized, comprehensible, succinct, synthesized, and internally consistent. Each faculty member was asked to evaluate one progress note per resident per week using the PDQI9 and give feedback. Descriptive statistics were analyzed for PDQI9 scores and type of feedback, and a correlation between resident PDQI9 score and documentation evaluation score (Interpersonal Communication Skills 6 [ICS6]) was performed.

Results: Data were collected from October 2015 to October 2016 and is ongoing. There were a total of 258 faculty-resident pairings created for evaluation. 58.1% of evaluations were completed. The highest-rated note attributes were "comprehensible" (mean 4.66) and "accurate" (mean 4.54). The lowest-rated attributes were "synthesized" (mean 4.24) and "succinct" (mean 4.23). 68.9% of completed evaluations noted feedback was given (58.6% verbal, 10.3% emailed). Resident PDQI9 total scores statistically correlated with ISC6 scores (Spearman's rho correlation coefficient 0.38, p=0.003).

Conclusions: A new initiative to provide pediatric residents with feedback on progress notes using a standardized tool has resulted in the majority of residents on the PHM service receiving faculty feedback. The highest-rated note attributes were "comprehensible" and "accurate," while the lowest-rated attributes were "synthesized" and "succinct." Additionally, total PDQI-9 scores correlate with resident evaluation scores related to documentation.

Significance: The use of the PDQI9 tool has the potential to identify areas for improvement in resident progress notes and can be used to inform resident feedback on their documentation.

References: 1. The Pediatrics Milestone Project. January 2012. Collaboration of the AAP and ACGME. 2. Stetson, P.D. et al. 2012. Assessing Electronic Note Quality Using the Physician Documentation Quality Instrument (PDQI9). Applied Clinical Informatics. 3(2): 164–174.

P9 Targeting the Needs of Multiple Providers: Measuring the Efficacy of a Breastfeeding Educational Symposium

Cresta Jones, MD, Kristina Kaljo, PhD, Robert Treat, PhD

Background: Breastfeeding is recognized to have numerous health benefits for infants and mothers, including lower rates of hospital admissions, gastrointestinal illnesses, decreased rates of breast and ovarian cancer, and reduced risk of diabetes (1-4) However, studies have found that undergraduate and graduate medical education do not adequately prepare future physicians to support breastfeeding mothers. (5) A collaborative effort by healthcare providers is integral in supporting a woman's decision regarding breastfeeding. The purpose of this study is to determine the efficacy of a breastfeeding educational intervention.

Methods: Three nationally recognized speakers facilitated a half-day educational breastfeeding symposium for MCW pediatricians, obstetrician/gynecologists, lactation consultants, and nurses. Sixty-one participants completed a pre-/post-survey on breastfeeding clinical behaviors (scale: 1=never/4=always) and clinical knowledge of best practice (1=strongly disagree/5=strongly agree). At the conclusion of the symposium, participants reported their satisfaction (1=very poor/10=excellent) and intent to use the content (1=none/10=all). Differences in means assessed through repeated-measures ANOVA and Cohen's d effect sizes. Statistical analysis generated with IBM® SPSS® 24. This study was IRB approved.

Results: Participants reported significant increases in knowledge of local community organizations who provide lactation support ($p<.001$) and being comfortable determining which medications are safe in breastfeeding ($p<.008$). Significant increases in pre-post breastfeeding quiz scores ($d=1.00$, $p<.001$) were reported, with nurses reporting a greater pre-post effect size ($d=1.66$, $p<.001$) than physicians ($d=.74$, $p<.003$). Nurses were significantly ($d=.70$, $p<.003$) more satisfied with the symposium (mean (sd)=9.4 (.8)) than physicians (8.5 (1.4)). Nurses planned to use significantly ($d=.81$, $p<.003$) more content (9.3(1.0)). Satisfaction and intent to use were significantly correlated ($r=0.5$, $p<.001$).

Conclusions: This symposium identified a knowledge gap among physicians and nurses, especially when providing consistent patient breastfeeding education. This educational experience increased knowledge for all participants. Due to the differences in knowledge utilization, it is important to be cognizant of the diverse audience participants, their experiences, needs, and in turn, how to present content to assure for the greatest professional impact.

Significance: The symposium was effective improving knowledge in healthcare providers who were both satisfied with the experience and indicated that they planned to use what they learned in their clinical practice.

References: Opnion. 2016; 658; 1-7. 2. Victora CG, Bahl R, Barros AJ, Franca GV, Horton S, Krasevec J, Murch S. Breastfeeding in the 21st century: epidemiology, mechnaisms, and lifelong effect. The Lancet. 2016;387(10017):475-90. 3. Freed GL, Clark SJ, Sorenson J, Lohr J, Cefalo R, Curtis P. National assessment of physicians' breast-feeding knowledge, attitudes, training, and experience. JAMA 1995; 273: 472-6. 4. Office of the Surgeon General (US); Centers for Disease Control and Prevention; Office on Women's Health. The Surgeon General's Call to Action to Support Breastfeeding. Rockville (MD): Office of the Surgeon General; 2011. 5. Pound CM, Williams K, Grenon R, Aglipay M, Plint AC. Breastfeeding knowledge, confidence, beliefs, and attitudes of Canadian physicians. J Hum Lact 2014; 30:298-309.

P10 Distance Learning in Medical Education – Perceptions of Experience and Expectations among Medical Students and Teaching Faculty in the M1 Year

Kristina Kaljo, PhD, Robert Treat, PhD, Matthew Tews, DO

Background: To address the country's primary care physician shortage, the Medical College of Wisconsin has matriculated students into accelerated 3-year campuses located in Central Wisconsin (CW) and Green Bay (GB). To assure consistent content delivery within the basic science curriculum, students at all three sites participate simultaneously in daily learning activities. The purpose of this study is to examine the experiences of students and teaching faculty to determine the effective components of a successful distance learning environment.

Methods: Beginning in the 2015-2016 academic year, nine individual focus groups with end-of-session surveys were conducted separately with 37 students from Milwaukee (MK) and GB and 12 faculty who facilitated the first- year basic science courses. In 2017, the study was expanded to include student focus groups from CW. The audio recordings of the focus groups were transcribed and thematically coded using NVivo 11 Plus. At the conclusion of each focus group, an eight-item, seven-point Likert-scale survey was distributed to the students' and faculty. Numerical data was analyzed with IBM® SPSS® 24.

Results: In 2017, 33 students and 4 faculty participated in focus groups on 3 campuses. All students reported satisfaction of the learning experience and reduced technological disruptions compared to 2016. Additional themes of peer/faculty relationships, social persuasion/feedback, and preference of learning/teaching style emerged. Discrepancies between learning preference and teaching delivery were noted between the student and faculty. Survey analysis (alpha=0.7) indicated that student's overall satisfaction with their experiences in 2015/16 was significantly higher ($p<.028$) on the regional Green Bay campus (mean (sd) = 7.6 (0.6)) than in Milwaukee (6.7 (1.6)).

Conclusions: Students at each of the campuses expressed a strong desire for a variance in pedagogical delivery- small groups, targeted, well-constructed ARS questions, case-based learning, and increased student discussion. However, faculty perceived that medical students prefer more straightforward, lecture-based experiences in order to best learn the content.

Significance: Medical students must acquire tremendous content to prepare for clinical years. As learning styles become more diverse, faculty must implement various methods to actively engage students.

P11 Reinforcing Skills of the Novice Surgeon through Online Learning, Video Recording, and Self-Assessment

Kristina Kaljo, PhD, Raj Narayan, MD, Rahmouna Farez, MD, Michael Lund, MD, Andrew Kastenmeir, MD

Problem Statement: An unprecedented shift continues to limit the amount of hands-on opportunities medical students have to engage, practice, and master technical skills (Drosdek et al, 2013). Unfortunately, due to various barriers there may be some medical students who complete their third year with significant gaps in their technical proficiency. Thus, hands-on opportunities and ample resources must be integrated to allow medical students to actively and confidently practice, develop, and self-assess complex surgical techniques (Wulf et al, 2006).

Approach: Awarded funds from the Learning Resources Grant, the study team designed a randomized control trial. Incoming M3 students completed an online self-assessment of their current suture skills and knowledge of surgical techniques. During the Transition to Clerkship (TTC) workshop in August 2016, all M3 students participated in a 90-minute introductory suture and knot tying experience with direct instruction, partner evaluation, and independent practice. Students self-selected to participate in the study and received a personal suture pad with instruments and supplemental videos. The study students videotaped a selected skill and constructed a self-reflection, guided by a standardized rubric.

Lessons Learned: Currently, the study team is gathering student video-recorded data and reflections, results are forthcoming. Upon the conclusion of the TTC Suture and Knot Tying workshop, students remarked that it is helpful to have basic skills scaffolded prior to beginning surgical rotations such as Obstetrics and Gynecology and Surgery. Initial students enrolled in the study reflected that the suture pads and supplemental videos were helpful for practice and face-to-face workshops (provided by SEMA and Student Surgical Society) were helpful to improve muscle memory. Feelings of doubt were documented when initially learning advanced suture skills, however with ongoing practice, confidence improved.

Significance: Gaps are observed in M3 suture skills. The potential exists to reinforce skills without strain or interference to required course work when longitudinally applying and evaluating surgical skills.

P12 Pilot Study of a Sports Medicine Curriculum for Family Medicine Residents

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Background: Didactic teaching sessions for family medicine (FM) residents rely heavily on sub-specialists, whose content can be outside the scope of patient oriented family medicine practice, and is often delivered in a lecture format. Sports medicine lectures are no exception to this trend, where Orthopedic surgeons often lead musculoskeletal didactic teachings. To role model excellence in FM, the MCW 2016-17 CURE (Core Units – Medical Education) longitudinal curriculum on sports medicine was designed and delivered by experienced FM faculty using interactive and hands-on teaching.

Methods: The CURE intervention was planned and implemented by four clinician co-directors from each participating FM residency site and an educational faculty advisor. CURE was delivered in monthly, 2.5 hour sessions from September thru May. Hands-on, active participation and repetitive exposure through pre- and post-tests were used to enhance retention, consistent with evidence on adult learning (1,2). Subjects were FM residents (N=86) from four affiliated sites. They answered pre- / post-session quizzes and completed post-session surveys (4-6 items including Likert-type and open-ended). Analysis included descriptive statistics and content analysis of text.

Results: 35-40 (41-47%) of all eligible FM residents participated each month. • Correct quiz scores ranged from 13-82% pre-session (mean 39-63%, median 39-66%), to 39-100% post-session (mean 82-91%, median 90-93%). • Satisfaction ratings (1=poor and 7=excellent): For lecture sessions, mean was 6.45 (SD 0.59-0.74); for hands-on sessions, mean was 6.48 (SD 0.59-0.9). • Content analysis revealed multiple positive comments for hands-on elements. Other frequent comments were "thorough and informative", "concise," "relevant" and appropriate "breadth of topics." • Drawbacks included inadequate visibility of hands-on portions, difficulty visualizing subtle imaging and inadequate number of injection model.

Conclusions: Attendance was limited due mainly to resident duties, scheduling and distance / video conferencing challenges. CURE sessions resulted in improved quiz scores and high resident satisfaction. Hands-on session ratings were only slightly higher than lectures – due to possible ceiling effect. We conclude that this FM-delivered curriculum is highly relevant to FM practice and is leading to positive learner outcomes.

Significance: Sports medicine is a key area of FM specialization but greater competence is needed (3). These results advance local scholarship on the effectiveness of this CURE conference series for FM residents.

References: 1) Knowles, MS et al. (2011) The Adult Learner. 7th ed. Burlington, MA: Butterworth-Heinemann. 2) Schackow, ET, et al (2003). Audience Response System: Effect on Learning in Family Medicine Residents. AFP 2003 Annual Scientific Assembly. 36 (7): 496-504 3) Lynch JR, Schmale GA, Schaad DC, Leopold SS. Important demographic variables impact the musculoskeletal knowledge and confidence of academic primary care physicians. J Bone Joint Surg Am 2006;88:1589 –95.

P13 Increasing Interprofessional Collaboration Between Medical, Physician Assistant, and Nursing Students Through Interdisciplinary Bedside Manners Play

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Problem Statement: Medical, physician assistant, and nursing students must learn to work effectively in interprofessional teams to ensure high quality communication, collaborative relationships and regard for one another's expertise in order to provide quality patient-centered care.

Approach: Interprofessional education (IPE) prepares health care professionals to work in multidisciplinary teams and foster the development of collaborative skills, shared expertise, and education for varied professional roles, responsibilities, and knowledge. MCW and Marquette University (MU) Colleges of Health Sciences, Nursing, and Communications developed an IPE session that brought together 50 medical students, 28 physician assistant students, 56 nursing students and 2 theater students to view and participate in an interprofessional play, Bedside Manners, which consists of a series of vignettes covering topics from daily interactions to breakdowns of communication during high stress scenarios.

Lessons Learned: Students provided feedback to identify strengths and areas of improvement. Medical, physician assistant, and nursing faculty appreciated the learning experience and outcome for their respective learners. Feedback revealed that students valued the collaboration with other professions and increased their awareness of other profession's roles, responsibilities, and knowledge. Students expressed a desire to expand the MCW-MU IPE sessions at multiple student levels. Additional IPE events will utilize role play in the future.

Significance: Interprofessional Education remains fairly new in medical literature, although is growing tremendously. Lessons learned included modifying the interdisciplinary play to add other professions, regional campuses, and increase the small group discussions to provide added value to next year.

References: Gordon, S., Hayes, L., (2013). Bedside Manners Play and Workbook. Downloaded from http://www.bedsidemannerstheplay.com/ on January 24, 2017.

P14 Using Interdisciplinary Teams to Promote Collaboration Between Medical Students and Physical Therapy Students

Sue Korek, MAED, Kimberly Stoner, MD, Alexa Smith, MEd, Laurie Kontney, PT, DPT, MS, Jeff Wilkens, PT, DPT, OCS, Kaitlin Pike, MS

Problem Statement: It is imperative that physicians and physical therapists continue to work together to promote better understanding and respect of each other's roles in order to provide optimal patient care. Sharing knowledge and building professional relationships between medicine and physical therapy to promote an increased respect of each other's role, responsibilities, and knowledge.

Approach: The Medical College of Wisconsin (MCW) and Marquette University Department of Physical Therapy developed and conducted an IPE session that brought 48 M2 medical students and 32 DPT-4 and DPT-5 students together for an interdisciplinary team session. Students listened a lecture on athletic training and physical therapy. The lecture was delivered by multi-institutional faculty from Medical College of WI, Alverno College, and Marquette University. During a hands-on, small group activity, the physical therapy students used their educational and technical skills to demonstrate how to complete joint (knee and ankle) exams on the medical students. A joint debrief resulted in a rich discussion.

Lessons Learned: Medical and physical therapy faculty valued the learning experience and outcome for their respective learners. Feedback revealed that students valued collaborating with other disciplines and increasing their awareness of another professional role, responsibilities, teamwork, and knowledge.

Significance: At this time, there is not a lot of published work on Interprofessional Education with medicine and physical therapy, although medical students as well as physical therapy students were able to expand their knowledge of each others' professions to a higher level. Medical students asked to further their collaborations with physical therapy students into other parts of the Discovery Curriculum which has happened. Our lessons learned showed that medical students would prefer to have physical therapy students answer their questions in class verses the instructor. Medical students indicated a higher comfort level in asking another student who is closer to their age and not evaluating them.

P15 The Relationship between Medical Students' Emotional Intelligence and Trait Anxiety

Diane L. Brown, MS, Robert Treat, PhD, William J. Hueston, MD, Jennifer Janowitz, MS, Matthew Tews, DO, Kristina Kaljo, PhD, Dawn Bragg, PhD

Problem Statement: The transition from undergraduate to medical school is a key stressor for first-year medical students. Students struggle with increased anxiety at the onset of their medical training due to new academic pressures, social/personal adjustments, and learning how to cope with challenging curriculum.[1] Studies show that students who have the ability to cope with pressure and regulate their emotions experience decreased anxiety and increased academic performance.[2] This investigation will report on the relationship of emotional intelligence (EI) and trait anxiety (TA) for first-year medical students.

Approach: Fall 2015, 60/230 M-1 medical students voluntarily completed of the 20-item State/Trait Anxiety Inventory for Adults and the 30-item Trait Emotional Intelligence Questionnaire-Short Form. Confidentiality was ensured and students completed the assessments in a controlled, classroom setting. Pearson and Spearman rho correlations assessed relational strength between EI and TA scores using IBM® SPSS® 21.0. This research was IRB approved.

Lessons Learned: Correlation analysis reveals a moderately strong, statistically significant and negative relationship between overall EI and overall TA ($r=-.60$, $p<.001$). Seventeen of 20 TA items (85%) were significantly correlated with overall EI. Twenty of 30 EI items (67%) correlated with overall TA. Individual EI items that correlated strongest with overall TA were: I am pleased with my life (rho=-0.61, $p<.001$), I am able to deal with stress (rho=-.57, $p<.001$), things will work out fine in my life (rho=-.49, $p<.001$). Individual TA items that correlated strongest with overall EI were: worrying too much about something that doesn't matter (rho=-.53, $p<.001$), being happy (rho=.51, $p<.001$), and being satisfied with myself (rho=.51, $p<.001$).

Significance: Our results show that the higher the level of emotional intelligence, the lower the level of long-term anxiety and transitional pressures in medical school need to be managed by first-year medical students.

References: 1. Chew B, Hassan F, and Zain A. (2015). Medical students with higher emotional intelligence were more aware of self-anxiety and scored higher in continuous assessment: A cross-sectional study. Medical Science Education, 25; 421-430. 2. Libbrecht N, Lievens F, Carette B, and Cote S (2014). Emotional intelligence predicts success in medical school. Emotion, 14(1); 64-73.

P16 No Difference between Third Year Medical Student and Intern Presenter Empowerment Action Scores During Pediatric Patient- and Family-Centered Rounds

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Background: Medical students and interns are the primary communicators during pediatric patient- and family-centered rounds (PFCR). They assume the role of the presenter, sharing key elements of the history, exam, results of diagnostic studies, and their assessment and plan. The term presenter empowerment actions (PEAs) is used to represent specific behaviors that presenters can perform to empower themselves to be excellent presenters during PFCRs, ensuring the delivery of effective, patient- and family-centered care. At our institution third year medical students (M3) are not formally trained on the PEAs, or how to best convey information and interact with patients and families during PFCR.

Methods: 6 trained observers (TOs) completed a 2-month rater training phase using a modified version of a validated tool for presenters on PFCR.[1] Equal numbers of observations were assigned during each half of the clerkship. A 6-month pilot phase established scoring consistency between TOs. TOs assigned scores on a 3-point scale in 4 domains: Spot-on; Style; Synthesize; Sleuth/Family Interaction.[1] Inter-rater reliability (IRR) was calculated using the intra-class correlation coefficient (ICC). Cronbach's alpha was calculated. Because patients and families were not always present, statistics were completed with and without the Sleuth Domain. Multivariate analysis was used to compare mean scores.

Results: 242 presentations were observed during 21 PFCR sessions. ICCs were 0.83 and 0.80 (both p.001), with and without the sleuth domain, respectively. Cronbach's alpha revealed internal consistency within domains (overall: 0.71; without Sleuth Domain: 0.88). There was no significance (p = .26) between the M3 overall domain score (ODS) (mean (SD) = 42.93 (7)) and pediatric and medicine-pediatric interns (P/MP I) ODS (44.26 (8.4)). There was no significance (p = .83) between the M3 domain score without Sleuth (SWS) (mean (SD) = 36.78 (5.3)) and P/MP I SWS (36.59 (5.3)). There was no significant difference in the domain scores in either half of the clerkship.

Conclusions: IRR was achieved with 6 TOs rating 4 domains during PFCRs. M3s performed similarly to PI and MPI during PFCR. Despite lack of specific training, they had comparable abilities and style to the interns in presenting data, assessment, and plans to patients and families. Interestingly, experience gained throughout the month did not affect M3 domain scores. The study was limited by lack of blinding of the TOs to the presenter level of training.

Significance: Mean domain scores below the maximum possible signify that M3 presentations have potential for improvement. A workshop to teach PEAs was implemented prior to the pediatric rotation.

References: 1. Vepraskas S, Weisgerber M, Toth H, Bragg D. The Instructor's Guide for Promoting Presenter Empowerment Actions and Evaluating Presenters During Patient- and Family Centered Rounds. MedEdPORTAL Publications; 2015. Available from: www.mededportal.org/publication/10160.

P17 Effects of Yammer Social Media Discussions on NBME Subject Examination Performance

Martin Muntz, MD, Bipin Thapa, MD, Robert Treat, PhD, Kerrie Quirk, MEd

Background: Increasing self-directed learning provides an opportunity to leverage technology and develop alternatives to traditional didactics. Yammer, a secure social media platform, allows medical students and faculty to engage in asynchronous clinical discussions during the Internal Medicine (IM) clerkship. The use of social media to engage learners and communicate professionally is not new; however, resulting objective performance outcomes have not been well-described. All MCW students complete National Board of Medical Examiners (NBME) subject examinations during IM, Surgery, Obstetrics & Gynecology, Psychiatry, and Pediatrics clerkships; Yammer is used only during IM. We hypothesized the Yammer.

Methods: All students on the IM clerkship participated with a minimum of twelve posts. Core faculty moderated the discussions to ensure accuracy, clarify concepts, identify learning resources, and broaden student-initiated discussions. All NBME exam scores were analyzed for the study (January 2013-June 2015) and the historical control (January 2010-June 2012) periods. Independent t-tests and Cohen's d assessed statistically significant pre-post differences and effect sizes for five NBME subject examination mean scores (IM, obstetrics/gynecology, pediatrics, psychiatry, and surgery) across time.

Results: There is a statistically significant ($p<.001$) increase in NBME IM NBME exam scores between pre-Yammer (Mean (SD)=75.7 (7.8), N=505) to post-Yammer (Mean (SD)=78.0 (7.6), N=483), which yields an effect size of Cohen's d=0.30. During the same time period, pediatrics (d=0.13, $p<.037$), psychiatry (d=0.21, $p<.001$), and surgery (d=0.21, $p<.001$) had statistically significant increases in mean scores as well, while obstetrics/gynecology did not (d=0.05, $p<.404$). During the post-Yammer period, obstetrics/gynecology (d=0.35, $p<.001$), psychiatry (d=0.25, $p<.012$), and surgery (d=0.39, $p<.001$) reported statistically significant increases in exam scores if completed after IM when compared to exam scores before.

Conclusions: Our students' improvement in medical knowledge as measured by a validated and standardized exam is an important step in legitimizing the use of social media in clinical education. While other clerkships' NBME scores improved, the magnitude was larger in IM. Sustained score increases on subsequent clerkships suggest a potential sustained effect of the Yammer experience

Significance: As physical distance and competing responsibilities increasingly limit face-to-face teaching time, social media can increasingly facilitate effective learning opportunities.

P18 Suicide Symposium: a multidisciplinary approach to risk assessment and the emotional aftermath of patient suicide.

Julie Owen, MD, Mara Pheister, MD

Background: Studies estimate that approximately 50% of psychiatrists and 25% of psychologists will lose at least one patient to suicide over the duration of their careers. These losses have significant emotional impact on the mental health practitioner, including intense levels of grief, guilt, feelings of inadequacy, anxiety, and depression. This distress can lead to isolation and professional difficulties. Our purpose in creating this multidisciplinary symposium was to provide a structured, safe environment where mental health trainees and practitioners obtain collegial support and education to reduce the stigma and fear surrounding patient suicide.

Methods: Psychiatry residents and fellows, psychology interns, and nurse practitioner students were invited to participate. The symposium utilized didactic, facilitated small group discussion, and role play to address the role of clinical intervention (developing a safety plan, means restriction) and the experience of patient loss to suicide (logistical protocol, emotions, coping). Attendees completed anonymous pre- and post-surveys evaluating confidence in conducting a risk assessment and means restriction on a suicidal patient, as well as attitudes about suicide.

Results: Twenty-two participants completed both pre- and post-surveys. Data showed a statistically significant increase in comfort seeking support from a colleague and/or from a professional after losing a patient to suicide. Additionally, participants felt "adequately prepared" to assess risk in a suicidal patient and to deal with the loss of a patient to suicide after attending the symposium.

Conclusions: After participating in the symposium, attendees anticipated feeling more comfortable reaching out to colleagues and professionals if they lost a patient to suicide. Based on the positive feedback from participants and meaningful improvement shown on pre- and post- surveys, our institution repeats a similar conference biennially.

Significance: The results of this study suggest that a formalized, multidisciplinary approach to the topic of patient suicide may better prepare mental health practitioners to cope effectively when loss occurs.

References: Henton, H., Haas, A.P., Maltsberger, J.T., Szanto, K., Rabinowicz, H. (2004). Factors contributing to therapists' distress after the suicide of a patient. American Journal of Psychiatry, 161, 1442-1446.

P19 WI AHEC IP Case Competition: Advancing Patient Centered Care One Team at a Time

Laura Pettersen, MS, Jill Niemczyk

Problem Statement: Interprofessional teamwork in health care improves health, enhances patient care and controls costs. Yet due to the complexity of developing and offering Interprofessional programs, a limited number of health professions students have the opportunity to engage in interprofessional education (IPE) experiences. Northeast WI Area Health Education Center (NEWAHEC) and Scenic Rivers Area Health Education Center (SRAHEC) both convened workgroups to discuss IPE opportunities: what was currently occurring, and what was wanted/needed. A lack of IPE opportunities led the workgroups to plan and implement a cross-institution experiences. Across the state, regional Area Health Education Centers (AHEC) centers work with partners to support IPE programming on various levels. In response to the growing interest in, and need for IPE education, WI AHEC, developed the Interprofessional Case Competition.

Approach: The IPCC teams, made up of 4-5 students from at least 3 different healthcare disciplines from public and private universities across the state, represent all seven Wisconsin AHEC regions. The teams compete for cash prizes, $3,000 first place, $2,000 second place, $1,000 third place. Teams are assigned a case study of a mistreated patient and conduct an analysis of the Interprofessional efforts during the care of that patient. The teams work together throughout the fall semester to dissect the case, prepare their analysis, conduct research, and develop recommendations, some in consultation with a team advisor. Teams submit an executive summary, one page budget, and slides, which are reviewed and rated on a rubric. The top eight teams then present their findings and recommendations to a multi-disciplinary panel of judges.

Lessons Learned: After four years of running the WI AHEC Interprofessional Healthcare Case Competition, we have learned and discovered many things that have changed the way we perform the program; such as, choosing a case that is relevant to the current healthcare environment and is reflective of the state, having a champion at an academic setting to help with the recruitment of student's teams along with acting as an advisor for the team competition process. Having a website where students can find all the competition rules and guidelines for reference as well as periodically communicating with the student teams about the expectations of the competition along with the rules and guidelines. We have made a few revisions over the past two years to make it easier for more student teams to be part of the competition.

Significance: The current literature highlights competencies needed for professional success in the ever-changing healthcare environment. AHEC's goal is to provide students positive IP opportunities to continue to enhance students core competencies outlined by IPEC and deliver the highest quality care.

P20 M2 Cardiovascular (CV) Unit: Impact of Take-home Extra Credit Electrocardiogram (ECG)-Related Problems

Sandra Pfister, PhD, Marcie Berger, MD, Kris Scheel, Catherine Malmsten, MD

Problem Statement: ECGs are used in diagnosis of heart disease and understanding ECGs has life-saving implications. Accurate interpretation of ECGs is a crucial skill for medical students to develop. However, reports showed deficiencies in ECG interpretation in medical students and residents (1-3) with most medical students not being confident in ability to interpret ECGs. The 2013 and 2014 M2 students enrolled in the CV Unit at MCW mirrored these concerns with comments that there was not enough time spent on teaching ECGs and feeling inadequately prepared. Time constraints limit having more class time to teach about ECGs. Therefore, starting with the 2015 CV unit it was decided that one way to address these concerns was to offer students more exposure outside the classroom to ECG interpretation. The CV unit provided daily take-home ECG problems that students could do for extra credit.

Approach: In both the 2015 and 2016 CV Unit, after students received introductory lectures on ECGs, ECG-related problems were posted to D2L. Questions were of a multiple-choice format and first covered basic skills like determining heart rate and heart rhythm. The number of questions asked per day varied throughout the unit and questions tested more difficult concepts (example, identify left anterior fascicular block from ECG) as course progressed. Students had until midnight of the day the questions were posted to submit answers. There was no way to keep students from working together on questions and students were told that the most important purpose of the ECG problems was to provide them with more experience in understanding difficult concepts.

Lessons Learned: Approximately 30 questions were used in 2015 and 2016. The number of students that answered questions was similar each year with close to 100% participation. Comparisons were made between exam scores on ECG-related questions from 2013 and 2014 (the first two years of CV unit and before extra-credit ECGs implemented) to exam scores on ECG-related questions in 2015 and 2016. Scores were 74.9 ± 9.2%, 75.2 ± 6.9%, 83.7 ± 5.1%, 85.6 ± 2.8% (mean ± SEM for n = 10-22) for 2013, 2014, 2015, 2016, respectively. While differences were not statistically different, the upward trend in exam scores suggested that extra exposure to ECG interpretation was beneficial. Student comments (2016) reflected a greater confidence in understanding difficult ECGs and appreciation for having more practice on ECG interpretation facilitated by the ability to work with fellow students outside of class.

Significance: There is limited data on how to correct graduating medical students reported deficiencies in ECG interpretation (1-3). Our approach suggests that one step is to include graded practice problems for students to do outside of the classroom in a collaborative manner, if desired.

References: 1. RS. Jablonover, E. Lundberg, Y. Zhang, A. Stagnaro-Green, Competency in Electrocardiogram Interpretation Among Graduating Medical Students. Teaching and Learning in Medicine 26: 279, 2014. 2. G. Kopeć, W. Magoń, M. Hołda, P. Podolec, Competency in ECG Interpretation Among Medical Students, Med Sci Monit 21:3386, 2015. 3. A. Pourmand, M. Tanski, S. Davis, H. Shokoohi, R. Lucas, F. Zaver, Educational Technology Improves ECG Interpretation of Acute Myocardial Infarction among Medical Students and Emergency Medicine Residents, West J Emer Med 16:133, 2015.

P21 SURFBoards Program: An innovative mixed methods comprehensive pediatric resident boards review curriculum

Amanda Rogers, MD, Michael Weisgerber, MD, Jennifer Di Rocco, DO, Sara Lauck, MD

Background: The Medical College of Wisconsin Pediatric Residency Program's average General Pediatrics Certifying Examination (GPCE) first-time pass rate was below goal, at or below the national average. A needs assessment survey identified several factors contributing to why some residents failed: poor test taking skills, boards specific knowledge deficits, poor long term and end game preparation, and external factors. Our residency program therefore created a comprehensive curriculum aimed at improving our GPCE first-time pass rate.

Methods: We developed the SURFboards (Strategic Unified Regimen For passing the boards) program grounded in three guiding principles: 1) Focus on contributing factors, 2) Align with resources identified by the specialty board and 3) Incorporate multiple forms of active learning and fun to keep learners engaged. This seven-element program includes tools that help form the foundation of boards preparation and conferences designed to meet the varied needs of residents at different stages of their boards preparation. The curriculum also includes a customized coaching program of varying intensity proportional to risk for residents identified as being at mild, moderate, or higher risk of not passing.

Results: The SURFboards program has been in place for six years. Prior to the program, the residency's average GPCE first-time pass rate was 72-84% apart from one high performance class, at or below the national average. Following implementation of the program, the first-time pass rate has improved to 95-96%, well above the national average.

Conclusions: We were able to successfully implement an innovative mixed methods comprehensive boards review curriculum and increase our GPCE first-time pass rate to well above national averages consistently for a six-year period.

Significance: Passing the GPCE is a fundamental goal of pediatric residency. Implementing an innovative mixed methods curriculum was associated with improvements in the first time pass rate.

P22 Simulation Curriculum Associated with Improved Resident Self-Confidence in Code Team Leadership Skills

Cailyn Rood, MD, Amanda Rogers, MD, Abigail Schuh, MD, Robert Treat, PhD, Michael Weisgerber, MD

Background: Learning to function as a leader on an inter-professional code team is an important component of residency training. Preliminary needs assessment results indicated that residents do not lead codes because they lack self-confidence in four essential domains: recognition of critical patients, management of critical patients, procedural skills, and leadership skills. We therefore implemented a longitudinal simulation-based curriculum to improve resident self-confidence in their code team leadership skills.

Methods: We developed a high-fidelity mannequin-based simulation curriculum which included a mock code and a leadership skills workshop. Pre- and post-tests assessed the impact of the curriculum on resident self-confidence in the four domains identified on the needs assessment. Residents were assessed on 14 individual five-point Likert scale items (1=strongly disagree, 5=strongly agree) grouped into the four domains. Data was de-identified and unpaired between pre- and post-assessments. The individual item and domain scores were compared with Mann-Whitney U-tests and independent t-tests, respectively. Effect size was calculated with Cohen's d. Inter-item reliability was assessed with Cronbach alpha.

Results: Fifty residents completed assessments. Nine of the 14 individual items (64%) reported significant increases in median scores (all $p \leq .050$), with the largest increases in leadership skills ($\Delta=1.5$, $p<.001$) and logistical abilities ($\Delta=2.0$, $p<.001$). There were statistically significant pre-post increases in resident confidence in their management ($d=0.7$, $p<.001$), procedural, ($d=0.9$, $p<.001$), and leadership skills ($d=1.0$, $p<.001$). No significant difference was seen for recognition of critical patients. The inter-item reliability for the 14 individual items was alpha=0.92.

Conclusions: Resident participation in a simulation-based code team leadership curriculum is associated with improved self-confidence in their management, procedural, and leadership skills. Future results of the study will include assessing the impact of this improved self-confidence on residents' ability to lead patient code events.

Significance: The largest barrier to residents leading code teams was lack of confidence. We showed simulation can be an effective method to cultivate self-confidence and improve resident leadership skills.

P23 Self-Assessing Competency Skills and Comparing Self Perceptions with Evaluator Ratings

Alexa Smith, MEd, Kathleen Beckmann, DO, Jason Crowley, Michael Lund, MD, Marty Muntz, MD, FACP, Raj Narayan, MD

Problem Statement: Student's perceptions of their own strengths and weaknesses can vary greatly from the perceptions of those assessing their clerkship performances. Comparing students' self-assessment of their competency performance against the assessment of their preceptors throughout their third year can provide insight into specific areas where students typically over- and under-estimate their clinical skills.

Approach: During the 2015-2016 academic year, the Continuous Professional Development Course at MCW began requiring all 200 third year medical students to complete a self-assessment of their competency skills at two intervals throughout the year. The self-assessment required students to rate themselves on identical competency-based assessment forms as their preceptors used during clerkships, at the same points throughout the year. Multiple preceptor ratings for each competency-based item were compiled and averaged for each student; the preceptor average rating was then compared to the student self-assessment rating. This comparison data was presented to students two times during the third year when they met individually with directors of the Continuous Professional Development course.

Lessons Learned: Third year medical students at the Medical College of Wisconsin rated themselves lower, on average, than preceptors rated them on the same competency-based assessment items. Discrepancies within these averages also existed, and many students rated themselves higher than preceptor evaluators on the same competency items. When this individual data was presented to the third year students, many of them were surprised to find that their preceptors had rated them higher in certain competency areas. For the students that rated themselves higher than their preceptors did, this same element of surprised existed when the results were compared side by side.

Significance: Continuing to compare how students rate themselves against how preceptor ratings is a valuable tool for analyzing the validity of our competency based model. It also gives students deeper insight into their own strengths and weaknesses.

References: Dunning, D., Heath, C., & Suls, J.M. (2004). Flawed Self-Assessment: Implications for Health, Education, and the Workplace. Psychological Science in the Public Interest, 5 (3), 69-95. Retrieved from: http://faculty-gsb.stanford.edu/heath/documents/PSPI%20-%20Biased%20Self%20Views.pdf

P24 A Longitudinal Quality Improvement Curriculum Improves Pediatric Resident Comfort and Knowledge

Paula Soung, MD

Background: Developing a quality improvement (QI) curriculum is essential to comply with ACGME requirements. In the era of the expanding field of healthcare quality, curriculums need to provide skills that prepare residents for roles in quality that are now affecting all medical professionals. Despite time constraints on resident training, integrating a longitudinal QI curriculum and project to provide adult learning opportunities and hands on experiences is a model to provide QI skill sets essential for residents' future careers.

Methods: A longitudinal 2-2.5-year curriculum was developed including workshop opportunities, faculty mentorship and small group project support. Knowledge Assessment and Self-Assessment Tools are administered to participating residents at the onset and on completion of the curriculum to assess knowledge and self-reported comfort in QI skills. Comparison of average pre and post assessments performed with further statistical analysis with non-parametric tests pending.

Results: On self-assessment, pediatric residents have an increased proportion of rating moderate to extreme comfort in QI skill sets when comparing pre and post curriculum assessments. Comfort ratings (on a scale of 0-3) increased for key QI skills including using the PDSA model, using small cycles of change, identifying if a change leads to improvement, and building a next improvement project with 25% increase in all categories when comparing average pre (n=44) and post (n=31) ratings. Knowledge assessments also show improvement in average scores when comparing pre and post assessments.

Conclusions: A longitudinal QI curriculum combined with inter-professional QI projects is possible to integrate into residency training programs. Longitudinal curriculums improve resident comfort and knowledge in QI skill sets with hands on applications and learning opportunities. Further statistical analysis of self-assessment and knowledge assessment data may further demonstrate the benefits of this curriculum and learning model.

Significance: Quality improvement curriculum development and teaching methods are of increasing relevance to all aspects of medical education from medical students to residents and fellows

References: 1. ACGME Common Program Requirements 2016. http://www.acgme.org/Portals/0/PFAssets/ProgramRequirements/CPRs_07012016.pdf 2. Moses J, Ogrinc G. BCRP Pediatric QIKAT (Quality Improvement Knowledge Assessment Tool) 3. Oyler J, Vinci L, Johnson J, Arora V. University of Chicago Medical Center. Quality Assessment and Improvement Curriculum (QAIC) Toolkit. http://www.a4hi.org/docs/Peer/2010/8/QAIC_Tool_Kit.pdf 4. Jones A, Shipman S, Ogrinc G. Systematic Review: Key characteristics of successful quality improvement curricula in physician education: a realistic review. BMJ Quality & Safety. 2015;24:77-88. doi:10.1136/bmjqs-2014-002846 5. Cooke M, Ironside P, Ogrinc G. Mainstreaming quality and safety: a reformulation of quality and safety education for health professionals. BMJ Quality & Safety. 2011;20 (Suppl 1):i79ei82. doi:10.1136/bmjqs.2010.046516

P25 Using LibGuides to Promote Self-Directed Learning

Elizabeth Suelzer, MLIS, Barbara Ruggeri, MLIS, Rita Sieracki, MLS

Problem Statement: To empower self-directed learning, the learner needs to be aware of the resources that are available to support them. It is often challenging for library users to locate and identify the resources and services that are applicable for their specific needs. MCW Libraries supports all the missions of MCW, which include education, research, patient care and community outreach, and our list of resources and services reflect this. The amount of information can be overwhelming. It takes time, awareness, and practice to learn which resources are most appropriate to use in given situation.

Approach: In 2016, MCW Librarians began using LibGuides software to create custom webpages that convey content for specific classes, subjects and topics. The software provides a user-friendly framework that is easily customizable by librarians. Initially, we built guides for specific user groups, such as students, residents and clinical providers, and these were created in collaboration with staff and faculty. The guides are linked to in D2L or on department intranet pages, and they are discoverable in Google or by browsing the library's website. Guides were also created to serve a specific information need. Some were created to assist our users with common reference questions, and others are a convenient, curated list of resources. 20 guides were created in the first 6 months of purchasing this product. We plan on further expanding our guides and look forward to future collaborations.

Lessons Learned: It is beneficial to collaborate with subject experts, including faculty, students and staff when designing pages for specific classes or topics. This allows the various groups to share knowledge and to evaluate the resources that are considered useful to the discipline. It is important to have a formal way to introduce users to the guides, and to have links to the guides on users' frequently accessed webpages, such as D2L and departmental intranet pages. Resources that are featured on LibGuides have higher usage. Guides that are associated with librarian-taught classes see peaks in usage. This shows us that LibGuides are effective at creating awareness of library resources.

Significance: LibGuides can be used to support teaching and self-directed learning. MCW Librarians can collaborate with educators on curating, organizing and linking to electronic resources and quality sources of information that users can easily access.

References: 1. Dalton M, Pan R. Snakes or ladders? evaluating a LibGuides pilot at UCD library. The Journal of Academic Librarianship. 2014;40(5):515-520. 2. Mi M, Stefaniak JE. Knowledge management of medical information resources and tools. In: Cases on human performance improvement technologies. IGI Global; 2015:244-269. 3. Ream T, Parker-Kelly D. Expanding library services and instruction through LibGuides. Med Ref Serv Q. 2016;35(3):342-349.

P26 Analyzing the Mediator Relationship between M-1 Medical Student Personality and Trait Anxiety through Emotional Intelligence

Robert Treat, PhD, William J. Hueston, MD, Kristina Kaljo, PhD, Jennifer Janowitz, MS, Matthew Tews, DO, Dawn Bragg, PhD

Background: The counterproductive feeling of student anxiety is related to their enduring traits of personality (Weigold and Robitschek, 2011). Since personality is well-developed in adults and unlikely to change significantly at that stage, it is imperative to examine any elements that mediate the effects of it on anxiety and are also subject to influence and change. Trait emotional intelligence is related to both personality (Petrides, 2007) and anxiety (Ahmadpanah et al, 2016) and subject to change which makes it a potential mediator. The purpose of this study is to analyze emotional intelligence as a mediator in the relationship between medical student personality and anxiety.

Methods: In fall 2015, 60 of 230 M-1 medical students voluntarily completed these self-reported electronic surveys: (1) 50-item Five Factor NEO PI-R Personality Inventory (scale:1=very inaccurate/5=very accurate), (2) 30-item Trait Emotional Intelligence (EI) (1=completely disagree/7=completely agree), and (3) 20-item Trait Anxiety (TA) Inventory for Adults (1=almost never/4=almost always). Pearson and Spearman correlations report relational strength between higher-order domains and lower-order survey items, respectively. Mediator models were established by stepwise multivariate linear regressions. IBM® SPSS® 21 was used for statistical analysis. This research was approved by the institution's IRB.

Results: TA correlated with neuroticism ($r=.8$, $p<.001$), extraversion ($r=-.3$, $p<.007$), and conscientiousness ($r=-.3$, $p<.008$), and the EI domains of well-being ($r=-.7$, $p<.001$), sociability ($r=-.3$, $p<.025$), and self-control ($r=-.7$, $p<.001$). Well-being correlated with conscientiousness ($r=.4$, $p<.003$), extraversion ($r=.5$, $p<.001$), and neuroticism ($r=-.6$, $p<.001$); sociability correlated with conscientiousness ($r=.3$, $p<.006$) and extraversion ($r=.4$, $p<.001$); self-control correlated with conscientiousness ($r=.5$, $p<.001$) and neuroticism ($r=-.6$, $p<.001$). Conscientiousness predicted TA (beta=-.3, $R^2=.10$, $p=.008$) and beta decreased to 0 when self-control or well-being was entered as a mediator variable.

Conclusions: These findings provide statistical evidence that medical student emotional intelligence mediates the effect of their personality traits of conscientiousness and extraversion on trait anxiety.

References: Ahmadpanah M, Keshavarz M, Haghighi M, Jahangard L, Bajoghli H, Sadeghi Bahmani D, Holsboer-Trachsler E, Brand S. (2016). Higher Emotional Intelligence is Related to Lower Test Anxiety among Students. Neuropsychiatric Disease and Treatment, 12, 133-136. Petrides KV, Pita R, Kokkinaki F. (2007). The Location of Trait Emotional Intelligence in Personality Factor Space. British Journal of Psychology, 98, 273-289. Weigold IK, Robitschek C. (2011). Agentic Personality Characteristics and Coping: Their Relation to Trait Anxiety in College Students, American Journal of Orthopsychiatry, 81 (2), 255-264.

P27 Analyzing the Relationship between Medical Student Burnout with Positive and Negative Affect across Three- and Four-Year Medical School Curricula

Robert Treat, PhD, Diane Brown, MS, Koenraad De Roo, Amy Prunuske, PhD, Kristina Kaljo, PhD, Jennifer Janowitz, MS, Dawn Bragg, PhD, William J. Hueston, MD

Background: MCW is completing its first year with two new regional campuses in Green Bay (GB) and Central Wisconsin (CW) using a 3-year medical school curriculum. The compressed timeline of the 3-year campuses compared to the traditional four-year Milwaukee (MK) campus suggests that medical student burnout could increase on the regional campuses and should be examined. [1] A key component of student burnout is increased feelings of emotional exhaustion (EE)[2] which will be associated with elements of positive and negative affect. The purpose of this study is to analyze medical student burnout due to EE and its association with positive and negative affect across the 3- and 4-year medical school curricula.

Methods: In spring 2017, 124 of 500 M-1/M-2 medical students voluntarily completed the 15-item Maslach Burnout Inventory - Student Survey (scale:1=never/7=every day) and the 60-item Positive and Negative Affect Schedule (PANAS-X) (1=very slightly/5=extremely). Pearson (r) and Spearman (rho) correlations report relational strength between EE and affect domains and items, respectively. Stepwise multivariate linear regression and univariate ANOVA were used to predict burnout from affect and campus type. Cohen's d calculated for effect size. Inter-item reliability determined with Cronbach alpha. IBM® SPSS® 24 was used to generate statistical analysis. This research was approved by the institution's IRB.

Results: EE mean scores were highest for CW (mean (sd)=25 (6)), followed by GB (24 (7)), and MK (21 (7)): while not significantly different ($p<.062$), effect size ranged from d=.42-.57. Significant correlations (all $p<.050$) were reported between EE (alpha=0.90) and 47 of 60 (78%) emotions, with the three strongest between EE and not being relaxed (rho=.52), not being calm (.51), and not concentrating (.49). Regression models indicate that predictive emotions of EE were different for each campus. Not being relaxed was the strongest significant predictor for MK students (R^2=.61, beta=.36), not being calm (R^2=.70, beta=.67) for GB students, and not being at ease (R^2=.66, beta=.59) for CW students.

Conclusions: Medical student emotional exhaustion was higher at the new three-year campuses then at the traditional four-year campus with a moderate effect size, which suggests monitoring emotional exhaustion for increases across campus over time. Many affective domains can predict emotional exhaustion, suggesting that student mood affects burnout. Finally, there are unique predictive affective elements for predicting burnout at each of the three campuses.

References: 1. Maslach C, Jackson SE. (1981). The Measurement of Experienced Burnout, Journal of Occupational Behaviour, 2 (2), 99-113 2. Yavuz G, Dogan N. (2014). Maslach Burnout Inventory-Student Survey (MBI-SS): A Validity Study, Procedia - Social and Behavioral Sciences, 116, 2453 - 2457.

P28 The Impact of Trait-Anxiety and Perceived Stress on Student Well-Being in a New Three-Year Medical Degree Curricula

Robert Treat, PhD, Diane Brown, MS, Matthew Tews, DO, Kristina Kaljo, PhD, Jennifer Janowitz, MS, Dawn Bragg, PhD, William J. Hueston, MD

Background: The first class of a new three-year medical degree program recently completed their first year of training. Student well-being in this accelerated program is a potential concern since students may have limited time to relax and decompress. Given the anticipated pressures and time constraints on these students, it is necessary to assess how anxiety and stress impact student well-being. The purpose of this study is to compare the relationships between student trait-anxiety, perceived stress, and well-being with a new three-year and a traditional four-year campus.

Methods: In 2015/16, 60/230 first-year medical students voluntarily completed the following self-reported surveys: 40-item State-Trait Anxiety Inventory for Adults (1=not at all/4=very much so), 10-item Global Measure of Perceived Stress (1=never/5=very often), and 30-item Trait Emotional Intelligence Survey (1=completely disagree/7=completely agree). Independent t-tests and Cohen's *d* assessed mean score differences and effect sizes, respectively. Multivariate linear regression assessed relational strength between student trait-anxiety and stress with well-being scores. Analysis generated with IBM® SPSS® 24.0. This research was IRB approved.

Results: Lower scores in trait-anxiety (d=.33, p<.188), and stress (d=.29, p<.166); and higher scores of well-being (d=.43, p<.096) were reported for the three-year campus. Well-being was negatively correlated with trait-anxiety (r=-.74, p<.001) and stress (r=-.58, p<.001) for both campuses. Being calm is the best trait-anxiety predictor of well-being for the three-year campus (R^2=.54, p<.001), but being satisfied is for the four-year campus (R^2=.58, p<.001). Handling personal problems was the best stress predictor of well-being for the four-year campus (R^2=.42, p<.001). No stress predictors reported for the three-year campus.

Conclusions: Medical students are exposed to stresses like demanding course schedules, complex exams and varying teaching methodologies. This study shows that student well-being was more prevalent at the three-year campus and was associated with lower trait-anxiety and perceived stress. Calmness was the best trait-anxiety indicator of well-being for students in the accelerated three-year program.

Significance: Identifying specific sources of medical student anxiety and stress early in the curriculum can minimize their adverse impact on well-being.

P29 Focusing Student Preparation for Step 1: A Pilot Delivers Assessment Performance Analysis by Category

Sally Twining, PhD, Amy Bingenheimer, MLIS, Larry Roscoe, Diane Wilke-Zemanovic, MS

Problem Statement: The goal of this pilot was to provide a small group of students access to an online report showing quantitative information regarding their M1 and M2 exam questions. This information could guide their studying for the USMLE Step 1 exam.

Approach: MCW course directors coded exam questions relative to the USMLE content outline and competencies. We documented the ExamSoft process steps for students to 1) login, 2) access their individual exam information and then 3) run their own report with date ranges, specific courses and assessments. A one-page instructional handout was tested with a pilot cohort of six. We delivered this information in a hands-on instructional fashion and obtained immediate feedback from the students as to if and how they would use the Performance Analysis data.

Lessons Learned: The pilot student reactions ranged from extremely positive to an expressive fear of looking at the analysis by category. They agreed that this data could shape an M2's Step 1 study plan, concentrating on the categories marked as needing improvement (indicated on the report with a red check mark). Lessons Learned: 1) Start small. The pilot students had an opportunity to format their own data, get their questions answered and deliver feedback before we opened this process to the entire class. 2) Plan the rollout. After the pilot, we posted the instructional handout for the entire M2 class in our learning management system News. From feedback, a significant number of students investigated the ExamSoft Performance Analysis report and thought it was worthwhile. 3) Maintenance is ongoing. Coding questions in ExamSoft is a considerable task for our course directors. We need to audit each assess.

Significance: Learners have reported that they appreciate guidance when it comes to a self-study plan. When we begin to share the ExamSoft reporting framework for viewing individual strengths/ weaknesses with all M1s and M2s, we will have data to compare against the feedback literature.

References: Feedback for Learners in Medical Education: What Is Known? A Scoping Review. Bing-You, Robert MD, MEd, MBA; Hayes, Victoria MD; Varaklis, Kalli MD, MSEd; Trowbridge, Robert MD; Kemp, Heather MLIS; McKelvy, Dina MA, MLS Academic Medicine: February 7, 2017.

P30 Simulation for Interprofessional Education

Karen Van Beek, MSN, RN, CCNS, Joan Bedinghaus, MD, Mark Bake, MS, RTR, Kathie DeMuth, MS, RN, Stephanie Stewart, PhD, RN, JoAnn Swanson, MS, RN, Kim Udlis, PhD, RN, FNP, Sue Korek, MAED

Problem Statement: Interprofessional education proposes to prepare health professionals for team-based practice, in order to improve efficiency and outcomes. We were tasked with developing meaningful interprofessional learning experiences for the Green Bay regional campus.

Approach: Designed and implemented four half-day experiences involving students in medical, nursing and radiologic science programs. We used student feedback to continuously improve the sessions. This meant progressing from paper cases in the early sessions to simulation using manikins and standardized patients in the later sessions. We surveyed the students before and after on their team skills and their attitudes toward interprofessional learning.

Lessons Learned: Patient care simulations for interprofessional education are well-received by students and have some effectiveness in developing team skills. It is important to have clear objectives linked to IPE competencies and to set ground rules for respectful interaction. Incorporating students who have very different levels of training causes difficulties.

Significance: Though interprofessional simulations are frequently used at the resident and practice team level, the use of interprofessional simulation in undergraduate medical, nursing and radiology education is new. Our experience has revealed some effective strategies as well as pitfalls to avoid.

P31 Educational Benefits from Interprofessional Teaching with Nursing Students

Kathryn Wolff, Nancy Havas, MD, Sue Korek, MAED, Rebecca Bernstein, MD, Renee Wenzlaff, DNP, Nicole Corso, RN, Lisa Benson, BSN, Phil Allen

Research: Interprofessional Education (IPE) has been a recent theme because of the growing disconnect between healthcare professionals. Miscommunication can lead to mistakes, which can greatly impact patients. Research has proven that ineffective communication among healthcare professionals is a leading cause of medical errors and patient harm. In this project, nursing students will be given the opportunity to teach a basic clinical skill to medical students. Administering an influenza vaccine is typically a duty of the nursing staff, but it is important for physicians to possess this skill as well. This project will help bridge the gap between these future healthcare professionals.

Methods: A second-year Medical College of WI (MCW) medical student collaborated with two fourth-year MSOE School of Nursing (MSOE/SON) nursing students to design, develop, and deliver the M1 Foundations of Clinical Medicine (FCM) course immunization didactic session. Next, medical students worked in interdisciplinary small groups to administer and receive the required influenza vaccine. Nursing students used their educational expertise to provide guidance to the medical students, as well as offer tips and techniques for successful immunization. Following the activity, an IPE debrief was held that resulted in a rich large group discussion.

Results: The medical students found it helpful to have an experienced nursing student guide them through the immunization process. They also felt it alleviated any anxiety with regards to causing their fellow classmate any unnecessary pain or discomfort. Nursing students gained confidence in the leadership role and improved their techniques after educating the medical students. Both sets of students expressed a desire to continue and expand these IPE sessions.

Conclusions: The number of IPE sessions have been increased. This project has been expanded to include the M2 Bench to Bedside immunization session. A collaborative demonstration video was designed, developed, and filmed with another IPE nursing partner and second-year medical student. This video served as a pre-class requirement and included a follow up assessment. The second-year medical student has committed to delivering both M1 and M2 immunization sessions.

Significance: Medical students not only learned how to administer vaccines, but developed early relations and mutual respect for other healthcare professions with the goal of providing better patient care.

References: Lingard LS, Espin S, Whyte G, et al. Communication failures in the operating room: An observational classification of recurrent types and effects. Quality and Safety in Health Care 2004; 13: 330-334.

ORAL PRESENTATION ABSTRACTS

Innovations vs. Research Abstracts	
An **innovation** abstract is a report on a unique educational experience that has developed enough to provide valuable lessons and insight worth sharing with the medical education community. It is designed to foster scholarly dissemination of novel ideas, methods, or materials in medical education. The focus can be on curriculum, teaching, assessment, or any other aspect of medical training. An innovations abstract summarizes a problem statement, methodological approach, and lessons learned from the study.	A **research** abstract is a report on a completed empirical investigation that contributes to medical education research and practice, which can include pilot projects, exploratory studies, or even components of larger projects. A research abstract summarizes the major aspects of a project in a prescribed sequence that includes the overall purpose of the study, its basic design, major findings s a result of the analysis, and a summary of interpretations and conclusions.

OP1 Analyzing the Relationship of Medical Student Self-Direction and Achievement - Competing or Complimentary Values?

Robert Treat, PhD, Diane Brown, MS, Kristina Kaljo, PhD, Jennifer Janowitz, MS, Matthew Tews, DO, Dawn Bragg, PhD, William J. Hueston, MD

Background: Self-directed learners determine their own goals for learning, construct plans to achieve that learning, and take steps to execute those goals.[1] However, the independent thought and action required of medical student self-direction can conflict with academic achievement, which requires demonstrating competence according to established standards. Self-direction indicates personal motivation to follow emotional and intellectual interests in unpredictable and uncertain directions, while achievement requires learners to focus on their own personal interests even at the expense of others. The purpose of this study is to analyze the relationships of medical student self-direction and achievement.

Methods: In 2014-2016, 197 M-1/M-2 medical students voluntarily completed these self-reported surveys: (1) 50-item Five Factor NEO PI-R Personality Inventory (scale: 1=very inaccurate, 5=very accurate), (2) 30-item Trait Emotional Intelligence (1=completely disagree, 7=completely agree), (3) 56-item Schwartz's Value Inventory (0=not important, 7=supreme importance). Pearson (r) and Spearman correlations, and stepwise multivariate linear regressions determined significant associations with the data and were generated with IBM® SPSS® 24.0. This research was IRB approved.

Results: There was a significant correlation between self-direction and achievement ($r=.6$, $p<.001$). Self-direction and the personality domain openness to experience was significantly correlated ($r=.4$, $p<.001$) as was self-direction and the emotional intelligence domain self-control ($r=.3$, $p<.002$). Achievement and the personality domains of conscientiousness ($r=.2$, $p<.008$), extraversion ($r=.2$, $p<.004$), and neuroticism ($r=-.2$, $p<.012$) were significant. Achievement was correlated to self-control ($r=.3$, $p<.020$). A significant regression model ($R^2=.6$, $p<.001$) included these predictors of achievement: (a) four self-direction items, (b) three personality items, and (c) four emotional intelligence items.

Conclusions: Medical student self-direction and achievement values are moderately and positively associated which suggests they are complementary values. However, the associated domains of personality and trait emotional intelligence are completely different for each value. This suggests that different personal characteristics are required for self-direction and achievement and make the values compete with each other and could explain their moderate correlation. Self-control and being open to experience impact self-direction, while well-being and being conscientious, extroverted, and emotionally stable impact achievement.

Significance of study: Self-direction and achievement are complimentary values, but competing elements of personality and emotional intelligence will impact one value over the other.

References: 1. Long HB. (2000). Understanding Self-Direction in Learning. In H. B. Long & Associates (Eds.), Practice & Theory in Self-Directed Learning (pp.11-24). Schaumburg, IL: Motorola University Press. 2. Cazan A-M, Schiopca B-A. (2014). Self-Directed Learning, Personality Traits and Academic Achievement. Procedia - Social and Behavioral Sciences, 127, 640-644. 3. Radnitzer, K. D. (2010). Emotional Intelligence and Self-Directed Learning Readiness among College Students Participating in a Leadership Development Program. (Doctoral dissertation, University of Illinois at Urbana-Champaign).

OP2 Dear Program Director . . . Understanding Letters of Recommendation

Kris Saudek, MD, Peter J. Bartz, MD, Robert Treat, PhD, Rachel Weigert, MD, David Saudek, MD, Michael Weisgerber, MD

Background: The letter of recommendation (LoR) is a required part of applications for residency and fellowship programs. Literature describing program director (PD) perceptions of LoR features and the unwritten code behind the phrases letter writers use when describing an applicant is sparse. The purpose of this study was to analyze features of LoRs and discriminate between perceived levels of recommendation.

Methods: A cross-sectional, descriptive study of pediatric residency and fellowship program directors was performed. We asked PDs to rate commonly used phrases and characteristics of LoRs via online survey to the APPD listserv. PDs were asked to rate phrases using a five-point Likert-scale (5=very positively) and specific features (5=very important). Items were grouped using principal components analysis (PCA). Median (M) score differences were analyzed with Wilcoxon signed-ranks tests. Analyses generated with IBM® SPSS® 24.

Results: We had a 43% response rate (486/1079). Overall, 82% of respondents rated the LoR as important in shaping their impression of a candidate. "I give my highest recommendation" was rated the most positive phrase (M=5, interquartile range (IQR)=1) while "showed improvement" was rated most negative (M=2, IQR=1). PCA yielded three tiers of phrases which reflected different levels of perceived strength of recommendation. Tier 1 conveyed an outstanding applicant (M=4.5, IQR=0.8), tier 2 conveyed a solid applicant (M=3.3, IQR=0.7), and tier 3 conveyed a weaker applicant (M=2.7, IQR=0.7) with three significant (all $p<.001$) pairwise differences in medians.

Conclusions: Letters of recommendations are an important part of applications for training positions and affect program directors' impressions of candidates. Key elements of letters of recommendations include distinct phrases depicting tiers of strength and other important features.

Significance of Study: Features of medical student letters of recommendations can discriminate between perceived levels of recommendation for residency and fellowship programs.

OP3 "A Day in the Life of…": A Personal and Practical Health Professions' Pipeline Initiative for African American High School Students

Veneshia McKinney-Whitson, MD

Problem Statement: African Americans make up more than 13.3% of the U.S. population but only 4% of physicians in the US. Evidence has shown multiple benefits of a diverse physician workforce to serve a diverse population. This highlights the need for underrepresented AA physicians, especially with projected growth of minority populations. Increasing the percentage of AA health professionals is vital to improving health care and decreasing health disparities. The lagging growth of AA physicians has been linked to a deficient educational pipeline, leading to a low college graduate applicant pool and a low rate of medical school admission. One area of this pipeline that is especially important is personal exposure to AA role models who have successfully attained membership in a health profession.

Approach: We established an innovative pipeline program emphasizing personal exposure to a variety of AA health professionals and practical experience about their health care roles. A predominately AA high school in urban Milwaukee was selected for this initiative due to the students' interest in health sciences. A total of 19 AA students (9th through 11th grade) attended a half day event titled "A Day in the Life of..." AA physicians and staff members presented the educational path to become members of each profession. The day started with a case presentation and the students met every person (ie physician, RN etc.) that the patient would interact with at a typical primary care clinic. They later split in to group and rotated through 4 rooms- Cards/EKG, Pulm/Spirometry, MSK/OMT, HEENT. Students were also given the option to shadow any of the health professionals.

Lessons Learned: Twenty participating students each completed an anonymous comment sheet after the event. They were collected by the field trip teacher and sent unedited to the author. This innovative program resulted in anecdotal and descriptive data that implementing an educational pipeline program where African American high school students interact with African American physicians, learn about medicine and are provided shadowing opportunities anecdotally promotes the growth of AA health professionals. Of the six sheets returned by the students, comments included, "I can't wait to become a physician, so that I can help patients stay healthy" and "It was good to see how they operate from front desk to the doctor". Primary implementing challenges are: involving an entire clinic/staff members /physicians while they still have patients to care for and complete job task and collecting the feedback sheets.

Significance: The pilot program emphasized student interaction with professionals who look like them, using a practical case that prompted students to explore health careers fields. We learned lessons and challenges for strengthening this program to cultivate the interest AA students for health profession careers.

OP4 The Impact of Medical Student Resilience on the Relationship of Trait Anxiety with Happiness and Life Satisfaction

Koenraad De Roo, Diane Brown, MS, Robert Treat, PhD, Kristina Kaljo, PhD, Amy Prunuske, PhD, Jennifer Janowitz, MS, Dawn Bragg, PhD, William J. Hueston, MD

Background: Medical students experience significant pressures from challenging curricula, long hours of study, financial burdens, and high expectations[1] which can increase their levels of stress and anxiety.[2] Elevated levels of anxiety can have an adverse effect on academic performance, physical and mental health[3], and quality of life. Some students have a natural resilience which buffers the negative impact of anxiety on their well-being.[4] Research has reported a significant relationship between anxiety, well-being, and resilience.[5] This study will analyze the moderating effect of medical student resiliency on the relationship between trait anxiety and well-being.

Methods: In spring 2017, 124 of 500 M-1/M-2 medical students voluntarily completed three self-reported electronic surveys: (1) The 25-item RS-25 Resilience Scale; (2) 18-item Orientation to Happiness and Life Satisfaction (LS); and (3) 20-item Trait Anxiety (TA) Inventory for Adults. Pearson (r) correlations report relational strength between higher-order. Changes in correlation strength caused by splitting the sample by resilience level (low/high) indicate potential moderator models which are established by stepwise multivariate linear regressions. IBM® SPSS® 24 was used to generate statistical analysis. This research was IRB approved.

Results: Descriptive statistics: TA (mean (sd)=58 (8)) with a theoretical midline of 50 and LS (90 (12)) with a midline of 72 out of 100. A significant correlation was reported between overall TA and LS ($r=0.35$, $p<.001$). A significant regression model ($R^2=0.4$, $p<.001$) yielded three specific elements of TA that predicted LS: satisfied with myself (beta=-0.4), rested (-0.3), and can't put disappointments out of my mind (-0.2). Resilience level impacted the TA/LS relationship greatest with the resilience domain of perseverance (delta r=0.4), followed by equanimity (0.4), self-reliance (0.3), authenticity (0.2), and purpose (0.0). Higher levels of resilience always yielded smaller TA/LS correlations.

Conclusions: Our results suggest additional programming to target medical student resiliency in addition to stress and anxiety management would benefit the overall life satisfaction of M-1/M-2 medical students.

Significance of Study: Our results suggest additional programming to target medical student resiliency in addition to stress and anxiety management would benefit the overall life satisfaction of M-1/M-2 medical students.

References: [1] Karaoglu, N., & Seker, M. (2010). Anxiety and depression in medical students related to desire for and expectations from a medical career. West Indian Medical Journal, 196-202. [2] Dyrbye, L. N., Thomas, M. R., & Shanafelt, T. D. (2005). Medical Student Distress: Causes, Consequences, and Proposed Solutions. Mayo Clinic Proceedings, 1613-1622. [3] Bunevicius, A., Katkute, A., & Bunevicius, R. (2008). Symptoms of Anxiety and Depression in Medical Students and in Humanities Students: Relationship with Big-Five Personality Dimensions and Vulnerability to Stress. International Journal of Social Psychiatry, 494-501. [4] Shi, M., Wang, X., Bian, Y., & Wang, L. (2015). The mediating role of resilience in the relationship between stress and life satisfaction among Chinese medical students: a cross-sectional study. BMC Medical Education. [5] Gloria, C. T., & Steinhardt, M. A. (2014). Relationships Among Positive Emotions, Coping, Resilience and Mental Health. Stress & Health Journal, 145-156.

OP5 An Educational Intervention for Medical Students to Improve Firearm Injury Prevention Counseling

Jacky Kwong, Jennifer Gray, Marlene Melzer-Lange, MD

Background: Limiting children's access to firearms is a fundamental challenge to pediatric injury prevention. Studies examining patient attitudes indicate significant concern about firearm injuries and willingness to discuss prevention strategies in patients with children. Most physicians support counseling patients about firearm injury prevention (FIP) but infrequently do so due to discomfort and lack of training. Current initiatives examine extensive training modules for residents but rarely investigate the benefits of providing similar training to medical students.

Methods: 12-15 different third-year medical students received either a 20-minute intervention or control session on a monthly basis. The intervention consisted of two clinical vignettes, a brief discussion about the importance of FIP, and suggestions for clinical integration. Students also received gun locks and additional web-based resources. The control consisted of a standard lecture about pediatric ED cases. All students completed pre-intervention electronic assessments and those in the intervention group also completed post-intervention assessments. Assessments evaluate students' beliefs, self-efficacy, and knowledge of FIP counseling. Data was analyzed with a paired t-test.

Results: 41 students were enrolled in the intervention group and 23 in the control. After the intervention, students felt more confident (mean difference = 0.8, $p<0.001$) and better prepared (mean difference = 1.1, $p<0.001$) in FIP counseling. Students also showed improvements in FIP knowledge with mean assessment scores improving from 3.2 to 5.4 with a maximum score of 6 ($p<0.001$).

Conclusions: A 20-minute educational intervention improves third-year medical students' short-term knowledge and self-efficacy in FIP counseling and provides an efficient and streamlined approach to develop early injury prevention counseling skills. The study will examine 150 different third-year medical students (75 for the intervention and 75 for the control). 6-month follow-up assessments will also be completed by all students to evaluate long-term effects of the intervention.

Significance of Study: Providing even a brief training module can promote open conversations about sensitive topics between providers and patients and potentially reduce children's access to firearms.

OP6 Round 2: Comparing Medical Student Performance between Two New Three-Year Medical School Regional Campuses and a Four-Year Traditional Campus

William J. Hueston, MD, Robert Treat, PhD

Background: The Medical College of Wisconsin has created a three-year medical school program for two new regional campuses in Green Bay and Central Wisconsin, while continuing the four-year traditional campus in Milwaukee.[1] The medical students at the two regional campuses participate in all basic science lecture sessions through interactive distance video which allow them synchronous exposure to learning material with the ability to ask real-time questions. Students at the Milwaukee campus access the same sessions in person. The purpose of this study was to compare campus basic science exam scores to determine if the distance presentation results in significant differences in learning and retention.

Methods: During the fall semester of the 2016/17 academic year, 267 cumulative student examination percentage scores in three M-1 basic science courses were compared between the Green Bay (N=32), Central Wisconsin (N=26) and Milwaukee (N=209) campuses using univariate analysis-of-variance and Cohen's *d* effect sizes. Two M-2 basic science courses were compared between the Green Bay (N=22) and Milwaukee (N=201) campuses. Homogeneity of variance was assessed with Levene's test. Relational measures determined with Pearson correlations (r). Data was analyzed with IBM® SPSS® 24. The study was IRB approved.

Results: There were no statistically significant differences ($p<.050$) for any of the M-1 or M-2 cumulative examination scores when split by campus. Mean score differences ranged from 0.0 to 2.1%. Effect sizes ranged from d=0.00-0.39. All Levene's test were not statistically significant ($p<.050$). M-1 cumulative exam scores were all significantly correlated (r=.7-.8, all $p<.001$). M-2 cumulative exam scores were all significantly correlated (r=.6-.8, all $p<.001$).

Conclusions: M-1 and M-2 medical student scores in five basic science courses at all three campuses report no statistically significant differences in cumulative examination scores for the first year that all three campuses are in operation. Based on current mean score differences and high correlations between M-1 and M-2 examination scores, trends are expected to continue throughout the year.

Significance of Study: The results suggests that student learning and retention of medical school basic science content presented via distance educational technology was not different from live presentations.

References: 1. Cangiarella J, Fancher T, Jones B, Dodson L, Leong SL, Hunsaker M, Pallay R, Whyte R, Holthouser A, Abramson SB. (2016). Three-Year MD Programs: Perspectives from the Consortium of Accelerated Medical Pathway Programs (CAMPP). Academic Medicine. Advance online publication. DOI: 10.1097/ACM.0000000000001465.

OP7 Evaluation of an Interdisciplinary Program Designed to Promote the Self Efficacy of Medical Students Underrepresented in Medicine

Amy Prunuske, PhD, Anna Wirta Kosobuski, Abigail Whitney, BS, Andrew Skildum, PhD

Background: A four-week interdisciplinary per-matriculation program for Native American and rural medical students was created at a regional medical school campus and its impact on students' transition to medical school was assessed. The program extends the goals of many per-matriculation programs by aiming to increase not only students' basic science knowledge, but also to develop student self-efficacy through in-person practice with medical school curricular elements. The program was also expanded to support students repeating their first year in medical school.

Methods: A mixed method evaluation was used to determine whether the goals of the program were achieved. Student knowledge gains and retention of the microbiology content were assessed using a microbiology concept inventory. Students and peer mentors participated in focus groups after the first semester of medical school to identify the benefits of participating in the program. A social network analysis was used to track the development of student academic and social networks.

Results: Program participants showed significant learning gains in microbiology content and reported improved study and time management skills. Both new matriculants and repeating students entered into the first semester with increased confidence about the overall medical school experience and with strong support networks. Several new curricular elements have been developed through the inclusion of peer mentors in the curriculum development process and participants reported a reinforcement of their desire to serve rural and Native American populations.

Conclusions: By nurturing self-efficacy, participation in a per-matriculation program supported medical students from Native American and rural backgrounds during their transition to medical school at a regional medical school.

Significance of Study: Regional medical campuses often have missions focused on training students from under-represented in medicine backgrounds and support programs can secure their success in medical school.

References: Wirta-Kosobuski, A, Whitney, A, Skildum, A, and Prunuske, AJ. Development of an Interdisciplinary Pre--Matriculation Program Designed to Promote Medical Students' Self Efficacy Medical Education in press

OP8 Bite-Sized (Beast Mode) Teaching on the Internal Medicine Clerkship

Martin Muntz, MD, Kerrie Quirk, MEd, Bipin Thapa, MD, MaryAnn Gilligan, MD

Problem Statement: Self-directed learning is vital to clinical learning and competency in personal and professional development. Additionally, it is increasingly difficult to provide learning opportunities for the ever-expanding breadth of medical knowledge and other key competencies of internal medicine during an eight-week clerkship. Anecdotal feedback from our residents and faculty indicated that student presentations on topics to the teams were often excellent; this suggested there would be value in expanding the audience of these presentations to the entire clerkship cohort. Inspired by the success of a similar innovation in one residency program, we devoted two of our eight academic half-day sessions.

Approach: Bite-Sized Teaching (BST) Mode sessions are a peer teaching activity in which medical students serve as teachers for their peers with faculty moderation. These high-level, evidence-based lectures are five to seven minutes in length, with two to three minutes reserved for questions and answers following each presentation. Each student selects a defined topic from a list of options based on the CDIM Core Clerkship Curriculum. Student presentation materials are placed in the learning management system to create an educational library for the entire class.

Lessons Learned: Approximately 97% of students Strongly Agreed or Agreed the sessions helped them to provide better patient care, with 95% Strongly Agreeing or Agreeing they benefited their preparation for the NBME subject examination. Qualitative feedback suggests strong support for including faculty facilitation and feedback throughout the sessions, and indicates focus and retention would be better served if the sessions were shortened and conducted more frequently than twice during the clerkship. Faculty moderators have thoroughly enjoyed the sessions and have been impressed with the quality of the presentations.

Significance: These highly-regarded BST Mode sessions have been a welcome addition to the clerkship curriculum based on both student and faculty feedback. Next steps already underway include the development of best practices for student presentations, analysis of the topics over time to ensure CDIM Curriculum coverage, and providing specific student feedback on presentation skills/quality. We will consider "sprinkling" these presentations throughout the clerkship to help break the monotony of the other academic half-day sessions as well as circulating a "take-home points" communication after the sessions.

OP9 Evaluating Early Predictors of Overall Resident Performance

Kris Saudek, MD, Amanda Rogers, MD, Robert Treat, PhD, Bethany Auble, MD, Caitlin Pilon, Michael Weisgerber, MD

Background: Residency programs want to select medical students who will be successful residents. Few clear predictors have been identified in the literature. The pediatric residency program directors at our institution developed a Global Director Rating (GDR) to assess residents in our program at the end of each academic year. The GDR is a 1-9 Likert scale rating their ability to be a role model, build morale, demonstrate trustworthiness, and contribute to the overall health of the residency program. The primary objective was to identify factors associated with resident performance assessed by GDR.

Methods: We conducted a longitudinal cohort study of pediatric residents during the 2014-2016 academic years. Predictor variables identified from their application and interviews in our program included: USMLE/COMLEX scores, academic points (points for clerkship grades and select items from medical school training), and interview scores. Predictor variables identified after starting residency included: learning style, simulated patient encounter ratings (SIPPS), in-training exam scores (ITE), and the Clinical Competency Committee 's semiannual milestone level assessments. The Pearson Correlation Coefficient between GDR and each predictor variable was calculated.

Results: Data was analyzed for 135 pediatric residents. Predictor variables identified prior to starting residency that were moderately correlated with GDR ($r=0.3\text{-}0.6$, $p<0.05$) were academic points and interview scores. USMLE/COMLEX scores were not correlated with GDR. Predictor variables identified after starting residency that were moderately correlated with GDR were milestone ratings for the competencies Patient Care, Practice-based Learning and Improvement, and Interpersonal and Communication Skills. Learning style, SIPPS, ITE, and milestone ratings for the competencies Medical Knowledge, Professionalism, and Systems-based Practice were not correlated with GDR.

Conclusions: Clerkship grades, interview scores, and select resident milestone ratings may be more useful in gaining insights into overall resident performance assessed by GDR than USMLE/COMLEX and ITE scores.

Significance of Study: A new global director rating helps resident programs select medical students who will be successful residents.

OP10 Bridging the Gap: Identifying Needs to Integrate Behavioral Health and Ob-Gyn

Abbey Kruper, PsyD, Kristina Kaljo, PhD

Problem Statement: One-third of medical visits for women age 18-45 are with an Obstetrician-Gynecologist (Ob-Gyn) and many women utilize their Ob-Gyn as their primary care provider. Ob-Gyn is a consistent point of contact for women during key transitions involving behavioral health concerns. Of patients seen weekly, it is suggested that 17% will have clinical depression and upwards of 50% will have emotional disturbance. American Congress of Obstetricians and Gynecologists (ACOG) guidelines include assessment of psychosocial areas (depression, intimate partner violence, smoking, and substance use). Despite this, multiple barriers exist impacting physicians from identifying mental health concerns.

Approach: The purpose of this educational study is to determine what gaps exist in Ob-Gyn resident behavioral health training and to assess the efficacy of a behavioral health curriculum. This study engages participants to critically assess their practice as it relates to behavioral health and Ob-Gyn. Beginning with an anonymous pre-survey, participants identified knowledge, confidence, and interest across behavioral health areas. The survey results informed the first of five workshops to promote increased resident and physician training in behavioral health. Throughout the academic year, each workshop will follow a problem-based learning (PBL) design emphasizing interactive and reflective learning.

Lessons Learned: Survey results indicate deficits related to behavioral health knowledge and confidence in clinical practice. Training during residency was limited (54%) and neutral (27%). Majority felt most confident addressing patient risk, yet knowledge of mental health diagnostic criteria was limited (46%). The majority (77%) indicated "interested" or "extremely interested" for additional training, such as working with challenging patients (72%), understanding adherence (64%), mental health diagnostic criteria (56%), psychological interventions (56%), and psychotropic medication management (56%). Residents also identified need to develop professional awareness and skills for their own emotional health.

Significance: Ob/Gyn residents are not receiving training to address patient mental health needs. This study supports the need to integrate behavioral health with clinical practice from medical school through residency.

References: 1. Scholle SH, Chang JC, Harman J, McNeil M. Trends in women's health services by type of physician seen: data from the 1985 to 1997-1998 NAMCS. Women's health issues: Jacobs Institute of Women's Health. 2002; 12: 165-177. 2. Poleshuk EL, Woods J. Psychologists partnering with obstetricians and gynecologists. American Psychologist. 2014; 69(4): 344-354. doi:10.1037/a0036044. 3. Cassidy JM, Boyle VA, Lawrence HC. Behavioral health care integration in obstetrics and gynecology. Medscape. 2003. http://www.medscape.com/viewarticle/453592_6. Accessed July 13, 2016. 4. Committee Opinions. American Congress of Obstetricians and Gynecologists. http://www.acog. org /Resources-And-Publications/Committee-Opinions?Keyword =psych. Accessed October 6, 2016.

OP11 Tricks for FRICS (Faculty of Remediation in Clinical Skills): Our 4 Year Story at Chicago Medical School to Prepare Students for the USMLE Step 2 Clinical Skills Exam

Laurie Broutman, MD, Ariel Katz, MD, MPH, Anthony Purgianto, PhD, Olsi Gjyshi, PhD

Problem Statement: Per the National Board of Medical Examiners, 97% of Examinees from U.S. & Canadian Medical Schools passed the USMLE Step 2 Clinical Skills (CS) exam on their first attempt in the 2015-16 academic year. Students who fail the exam on their first attempt face significant yet avoidable financial, emotional and career burdens. At the Chicago Medical School, for example, in 2016 two of the five students who failed CS on their first attempt were unable to gain a residency spot through the Supplemental Offer and Acceptance Program (SOAP). One of the five students has still not entered a residency program as of February 2017. Most schools offer remediation after failure or borderline third year Objective Structured Clinical Examination (M3 OSCE) performance. However, there is variability in OSCE structure, identification of struggling students, and specific remediation interventions.

Approach: In 2014, we made the changes below to our remediation process: OSCE structure: • Broadened the case selection for the OSCE stations to include more of the M3 year experience • Added a challenging question or emotionally charged statement to 2 of the 5 OSCE stations Identification of struggling students: • Increased the OSCE minimal pass rate • Identified M3s who failed either component (clinical reasoning or communication) of the M3 OSCE Specific remediation interventions: • Reviewed the video of the failed M3 OSCE with the student • Practiced with a Standardized Patient (SP) for students who failed communication skills • Required all M3s who did not pass the M3 OSCE to pass a new OSCE • Created a CS prep document.

Lessons Learned: The percentage of our examinees that passed CS on their 1st attempt rose from 94% in the 2013-2014 academic year to 97% in the 2015-2016 academic year. On a yearly basis, only 1 of the 30 students identified to remediate the exam fails CS. It is best for the student to develop a systematic approach for the encounter and the note. We discovered the importance of balancing the student's focus on both exam subcomponents of CS that students fail. Financial buy-in from administration and the SP program is critical to the success of the program.

Significance: While most U.S. and Canadian Medical Schools have OSCE remediation programs, little is published on content of these programs. We present the findings of our program to broaden the discussion with other medical schools and develop best practices for remediation.

References: Dong M, Swygert KA, Durning SJ, et al. Validity Evidence for Medical School OSCEs: Associations With USMLE® Step Assessments. Teach Learn Med 2014;26:379-86. White CB, Ross PT, Gruppen LD. Remediating Students' Failed OSCE Performances at One School: The Effects of Self-Assessment, Reflection and Feedback. Acad Med 2009;84:651-4.

OP12 Novel Evaluation Tool Demonstrates That Residents Underrate Their Code Team Leadership Skills

Cailyn Rood, MD, Amanda Rogers, MD, Abigail Schuh, MD, Robert Treat, PhD, Michael Weisgerber, MD

Background: Learning to function as a leader on an inter-professional code team is an important component of residency training. Baseline data demonstrated residents in our program often did not assume this role because they lacked self-confidence in their code leadership ability. A literature search and local content expert input identified eight elements pertinent to code leadership: role identification, communication, knowledge sharing, delegation, reevaluation, crowd control, assessment, and management. We therefore developed a Resident Code Team Leadership Evaluation Tool (RCTLET) to compare resident perception to facilitator assessment of their performance in these eight areas.

Methods: The RCTLET rated each element on a 5-point Likert scale, with descriptors outlining low, medium, and high performance. Following mock codes, residents completed the RCTLET as a self-assessment, and two facilitators completed the RCTLET based on direct observation. We compared resident and facilitator assessments. Mean and median scores were compared with univariate and Kruskal-Wallis ANOVA, respectively. Pairwise comparisons were made with Mann-Whitney *U*-tests and independent t-tests. Effect size was calculated with Cohen's *d*. Inter-item reliability was assessed with Cronbach alpha. Inter-rater reliability was determined by intraclass correlation coefficient.

Results: We compared resident and facilitator assessments for 29 events. There was a statistically significant difference (d=0.8, $p<.015$) in the overall RCTLET average between facilitators (M (SD)=4.0 (.6)) and residents (3.6(.5)). Significant differences (all $p<.05$) were reported for delegation, crowd control, assessment, and management, with facilitators scoring residents higher than resident self-assessment. The inter-item reliability for the eight RCTLET elements was alpha=0.84. The intraclass correlation between residents and facilitators for the RCTLET average was ICC (2,1)=0.52 ($p<.001$).

Conclusions: Facilitators rated resident code leadership performance higher than residents rated themselves. The RCTLET provided reliable data that can be used to provide formative feedback to residents aimed at improving their confidence and code team leadership skills.

Significance of Study: Leading an inter-professional team is a key element of residency training. The RCTLET provides a reliable method to assess this skill.

OP13 The Good, the Bad, and the Worthy: A Pilot e-Professionalism Curriculum for General Psychiatry Residents

Marika Wrzosek, MD

Problem Statement: The use of social media has become common place across the professional lifespan. Trainees, often "digital natives," are faced with navigating this increasingly public and accessible world while respecting the traditional guidelines of professional behavior. Despite the ACGME mandating residents are skilled in navigating online interactions, there is little literature demonstrating effective curricula to teach these skills. The author presents a pilot curriculum, administered at the University of IL College of Medicine – Peoria (UICOMP), that addresses the lack of formal curricula targeting e-professionalism. This curriculum was designed to arm trainees with the tools necessary to navigate online professionalism in an appropriate manner. This pilot illustrates one model of teaching e-professionalism that can in turn be adapted to learners in medical school, or to other GME programs.

Approach: In the 2015-16 academic year, all psychiatry residents at UICOMP (N = 16) were required to participate in a pilot course on professionalism in the digital sphere ("e-professionalism"). Goals of the course included teaching learners the key tenets of professionalism and how to apply them to online presence and interactions. Each of the 9 sessions was held as part of regular didactics. Each 90-minute session consisted of a highly interactive workshop-style didactic with components of pre-reading, mini-lecture, small group discussion, large group discussion, and reflection. Pre-post surveys were completed by participants and focused on the effectiveness of a given session. The overall course was evaluated at the end with a mix of structured open-ended questions.

Lessons Learned: Overall, the course was well received and received positive feedback. Learners gained an increased awareness of their "digital footprint" and a broader understanding of how classic ideas of professionalism integrate with Internet presence. Participants advocated for this course to be incorporated into the standard curriculum with a quarterly frequency.

Significance: This pilot curriculum bridges trainee's behavior online with established guidelines of professionalism. It demonstrates the feasibility and effectiveness of an interactive, recurring, discussion-based approach to teaching e-professionalism principles to learners at various levels of training.

References: ACGME and ABPN. The Psychiatry Milestone Project. July 2015. Laothavorn, J., Wrzosek, M., Finkenbine, R., Jojic, M., Zalpuri, I. "The Professionalism e-Frontier: How Are We Teaching Psychiatry Resident to Navigate Pitfalls and Privileges of Online Presence?" Poster presented at the Association for Academic Psychiatry (AAP) Annual Meeting, San Antonio, TX, September, 2015.

OP14 Using Likelihood Ratios to Improve the Quality of Resident Medical Education

Justin Adams, MD

Problem Statement: Despite their utility in interpreting a variety of findings, likelihood ratios (LR) are used infrequently by physicians. This might be changing with time since the incorporation of LR into medical education has been growing in recent years. This has become especially easy recently with the increased access to likelihood ratio databases online with associated references. We wanted to see if we could increase the knowledge about LR and their clinical usefulness within an internal medicine residency program. Therefore, we created a quality improvement project focused on educating the residents about LR and we followed their comfort in using LR, as well as their clinical application over time.

Approach: This project involved 126 internal medicine residents at a large Midwest academic medical center. To help guide baseline knowledge and attitudes about LRs, the residents were given an 11-item pre-survey which evaluated the knowledge required to calculate LRs, the skill to apply them clinically, and the current attitude toward the clinical utility of LR. After the pre-test, the residents received a monthly intervention for the next five consecutive months. At the end of each month, the residents completed a short 5 point survey evaluating their sentiment toward the utility of LRs and how frequently they used LRs in the last month. At the end of the fifth month, the residents were given the same 11 item post-survey.

Lessons Learned: 73 of 126 residents completed the pre-test for a 58% overall response rate. 86% of residents thought LRs were either very useful or somewhat useful to their clinical practice, however only 32% of residents were comfortable with using LRs. Over the first three months, the percentage of residents who were comfortable or very comfortable using LRs increased from 32% to 87%. The percentage of residents using LR 1) to calculate post-test probability after a test was ordered increased fro m 8% to 40%, 2) to determine the utility of a test before ordering it increased from 15% to 35% and 3) to help teach diagnostic reasoning to medical students increased from 10% to 17%.

Significance: Over the initial course of our quality improvement project, we have found that by exposing internal medicine residents to the basic concepts regarding LRs can help inform diagnostic reasoning and improve the education of medical students. Hopefully, the increased use of LR will contribute to a decrease in ordering of unnecessary tests over time.

OP15 Disasters Waiting to Happen: Training Students and Residents to Identify Unsafe Patient Situations

Theresa Maatman, MD, Kathlyn E Fletcher, MD, MA

Problem Statement: Medical students and residents are trained about prevention of medical errors, but little education occurs on prevention of patient injury in the hospital. Fall prevention and injury prevention are a responsibility of all members of the team, though often they fall to the nursing staff. Trainees can be valuable in identifying safety issues and in leaving patients in a safe situation after performing their evaluations. Patient simulation rooms have been used to help students identify safety topics such as restraints, catheters, hand hygiene and patient identification. Simulators, however, can be time-consuming and resource intensive.

Approach: Residents with their students from all departments were invited to one of two open houses that took place during Patient Safety Awareness Week. The cornerstone of the open house was a custom designed comic depicting multiple patient safety hazards which participants were asked to identify. The comic contained 13 different patient safety hazards: Call light on the floor, oxygen tubing inappropriately placed, restraints on the patient, bed brake turned off, urinary catheter in place, all bedside railings up, ID band off the patient, water on the floor, a sharp on the counter, no soap for washing, wrong medication hanging, IV stand and cord in walking space and delirium in the patient.

Lessons Learned: Nineteen attendees completed the exercise. Of the 13 risks that were depicted in the comic trainees identified an average of 9.6. The highest score was a 12, and the lowest score was an 8. While some of the safety hazards were easily identified others were less easily identified. An absence of an object or a small detail seemed to be more difficult to identify. Also, abstract concepts, like delirium, are difficult to represent in a comic medium. Additionally, there is some overlap between patient modesty and safety as 11 of the participants identified the gown falling off the patient as a safety concern. Lastly, the comic was easy to implement due to short time period needed.

Significance: Despite lack of formal education the comic showed that some safety concepts are well known by trainees. However, the bed rails being elevated was the least recognized and suggest a lack of knowledge about how that could contribute to the patient's safety. The use of a comic was successful and identifying trainee knowledge and deficits. Future directions include more involved safety story that challenges readers to continuously thing about what contributes to all aspects of patient safety.

References: Farnan JM, Gaffney S, Poston JT, et al. Patient safety room of horrors: a novel method to assess medical students and entering residents' ability to identify hazards of hospitalization. BMJ Qual Saf Published Online First: 30 November 2015. doi: 10.1136/bmjqs-2015-004621

OP16 It's time to play… Respiratory Feud!: Using a Family Feud Game Show Format as an Innovative Approach to Teach Medical Students About Common Pediatric Respiratory Disorders

Brandon L. Palmer, MD, Erica Y. Chou, MD, Sara M Lauck, MD, Robert Treat, PhD

Problem Statement: Teaching medical students during clinical rotations in the M3 year is a vital part of preparing students for structured national examinations, and for clinical practice. It has been well documented that students learn best via active learning, with learning strategies that are engaging, collaborative and interactive. Game-based learning (GBL) has been incorporated into adult learning in a variety of heath professional fields. While GBL has been well studied in the nursing and pharmacy literature, there is limited information about the impact of GBL on medical student knowledge acquisition, retention and learner satisfaction. We hypothesized that teaching medical students about common pediatric respiratory disorders using a game-based format would lead to acquisition in medical knowledge, help prepare students for structured national examinations, and be preferred to didactic lectures.

Approach: From April-December 2016, 81 M3 medical students in their pediatrics clerkship participated in a GBL session using the Family Feud game show format to learn about common pediatric respiratory disorders. We independently created an interactive template in PowerPoint using elements from the game show, Family Feud. The authors independently created all questions, and answers were referenced using established pediatric medical literature. In each clinical rotation block, 10-15 M3 students participated in the session, facilitated by authors of this study. Students completed pretest and posttest questions, as well as survey questions related to the session topic immediately before and after the session.

Lessons Learned: Our results showed that GBL sessions could be used during the pediatric clinical clerkship to teach medical students about common pediatric disorders, leading to statistically significant improvement in immediate posttest knowledge acquisition. GBL sessions seem to be preferred to didactic lectures, and can be used to help prepare medical students for national examinations. Jeopardy is the most common game used in medical education due to its popularity and ease of game-play. However, we found that a Family Feud format promoted more team interaction and discussion, while also providing an opportunity for each student to participate and speak. This also allowed the facilitators to assess individual knowledge gaps in order to individualize the learning session. Furthermore, using the Family Feud format encouraged students to use higher cognitive skills such as application and analysis.

Significance: GBL sessions are innovative alternatives to traditional didactic lectures in medical education. We have shown they can be used effectively during clinical clerkships to teach medical students about common disorders, leading to statistically significant improvement in immediate knowledge acquisition.

OP17 Discharge Readiness: An Educational Innovation to Guide Residents in Patient Discharge Preparation and Improve Discharge Efficiency

Sara Koller, DO, Kory Koerner, MD, Laura Michaelis, MD

Problem Statement: In March 2016, Milwaukee County implemented a no divert policy in which hospitals were unable to divert ambulances because of high Emergency Department patient volumes. Prior to this policy, hospitals could divert ambulances elsewhere when Emergency Department were full and patients who were critically ill may need to be transported further in order to get care. The new no divert policy significantly increased Emergency Department volumes and created a shortage of ICU and inpatient medicine beds. Managing hospital capacity requires a safe and efficient admission and discharge process. The focus of our project was to improve discharge efficacy on house staff medicine teams through educational tools and sessions.

Approach: We first created a discharge readiness checklist focusing on 6 key areas of discharge: communication, follow up appointments, medication, home health care, transportation and documentations. In collaboration with pharmacy, we developed a chart of medications that often required prior authorization. We then held monthly educational sessions for house staff on Froedtert wards from September to November 2016 in which we discussed the goals of the study, educated the teams on the discharge readiness tools and provided them with handouts. Additionally, we used a pre and post intervention survey to evaluate the efficacy of the education intervention.

Lessons Learned: From our initial intervention, we learned that residents used the discharge readiness tools and were more comfortable with the discharge process. From the survey data, we found they began preparing for discharge at least a day in advanced more often, were able to identify key areas of discharge and were more comfortable with the discharge process. Despite the improvements in education, we did not find a significant change in time to discharge of patients, time of discharge orders and number of discharges before noon. Therefore, we completed an additional cycle in February 2017 focusing on discharge rounds at 8am prior to traditional attending rounds. With this intervention, average time to discharge decreased by 30 minutes, average time from discharge order to discharge also decreased by 30 minutes and discharges before noon increasing from 6% to 9%.

Significance: There are several studies on the importance of discharge planning in order to provide a safe and efficient process. Our discharge readiness tools will help residents and other providers in the hospital identify areas that should be addressed in advanced in order to improve discharge times.

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