INSTITUTE FOR MEDICAL EDUCATION

Eighteenth Annual EDUCATION RESEARCH DAY

Posters

TUESDAY, APRIL 27, 2021, 12:00 – 1:30PM
<table>
<thead>
<tr>
<th>Abstract</th>
<th>Title and Author</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>LEARNING THEMES WITH THE GREATEST IMPACT ON LEARNERS: A QUALITATIVE ANALYSIS</td>
<td>8</td>
</tr>
<tr>
<td></td>
<td>Elizabeth Yetter, Jacqueline Paulis, Laura Grunin, Kristin Carmody</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>ASSESSING RESIDENT PERCEIVED KNOWLEDGE AND INTEREST IN TOPICS IN HEALTH POLICY AND ADVOCACY</td>
<td>9</td>
</tr>
<tr>
<td></td>
<td>Sukhbir Kaur, Mayce Mansour, Andrew Coyle, Jennifer Weintraub, Cary Blum</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>BARRIERS TO TELEMEDICINE USAGE IN A RESIDENCY CLINIC</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>Pratyusha Nunna, Ines Robles Aponte, Dipal Patel</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>IMPLEMENTATION OF A MEDICAL STUDENT-LED MODEL FOR TELEPHONE-BASED OPIOID OVERDOSE EDUCATION AND NALOXONE DISTRIBUTION TO AT-RISK PATIENTS DURING THE COVID-19 PANDEMIC</td>
<td>11</td>
</tr>
<tr>
<td></td>
<td>Terence M. Hughes, Alexander Kalicki, Zina Huxley-Reicher, Wilma Torbino, Don Samuels, Jeffrey J. Weiss, Michael Herscher, Linda Wang</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>CREATING A HEALTH EQUITY RESOURCE COLLECTION FOR THE MOUNT SINAI HEALTH SYSTEM COMMUNITY</td>
<td>12</td>
</tr>
<tr>
<td></td>
<td>Nicole B. Ramsey, Betty Kolod, Kenneth Ashley, Alexander Boulos, Angie Butttigieg, Emily H. Hertzberg, Maria Maldonado, Edward Poliandro, Edgar Vargas, Barbara Warren, Brijen Shah, Sananda Moctezuma, Genevieve Tuveson</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>ANTI-RACIST READING AND DISCUSSION GROUPS FOR THE MOUNT SINAIHOSPITAL SYSTEM</td>
<td>13</td>
</tr>
<tr>
<td></td>
<td>Paloma C. Orozco Scott, Jessica D. Lee, Michelle A. Tran, Jerrel L. Catlett</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>CADAVERIC DISSECTION FOR ANESTHESIA TRAINING AUGMENTS PRACTICAL AND CLINICAL SKILLS</td>
<td>14</td>
</tr>
<tr>
<td></td>
<td>Patrick Maffucci, Chang Park, Jeffrey Laitman, Daniel Katz, Garrett Burnett</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>PEDIATRIC EMERGENCY MEDICINE (PEM) CORE PROCEDURE COMFORT LEVEL AMONG CURRENT AND INCOMING FELLOWS</td>
<td>15</td>
</tr>
<tr>
<td></td>
<td>Prakriti Gill, Michelle Marin, Lauren Zinns</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>IDENTIFYING THE OPTIMAL IMPLEMENTATION STRATEGY OF A WELLNESS CURRICULUM TO ENHANCE ATTENDANCE WHILE TRANSITIONING THE FORMAT DUE TO COVID-19 PANDEMIC IN A PULMONARY AND CRITICAL CARE MEDICINE FELLOWSHIP.</td>
<td>16</td>
</tr>
<tr>
<td></td>
<td>Rachel Potter, Sakshi Dua</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>DEVELOPMENT OF A NOVEL DIGITAL ONCOLOGY CURRICULUM FOR MEDICAL RESIDENTS AND ONCOLOGY FELLOWS</td>
<td>17</td>
</tr>
<tr>
<td></td>
<td>Shana Berwick</td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>IDENTIFYING RESIDENT BARRIERS IN RECOGNIZING AND ADDRESSING SOCIAL DETERMINANTS OF HEALTH (SDH)</td>
<td>18</td>
</tr>
<tr>
<td></td>
<td>Ines M. Robles Aponte, Shruti Anand, Pratyusha Nunna, Dipal Patel</td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>THE FLOOR PASSPORT: IMPROVING AND STANDARDIZING INPATIENT PEDIATRIC RESIDENT EDUCATION</td>
<td>19</td>
</tr>
<tr>
<td></td>
<td>Izumi Watanabe, Priya Rolfes, Jennifer Gillen</td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>DEVELOPMENT OF A WEBSITE TO FACILITATE GASTROENTEROLOGY/HEPATOLOGY LEARNING USING INTERACTIVE, CASE-BASED SCENARIOS: GISIM</td>
<td>20</td>
</tr>
<tr>
<td>Abstract</td>
<td>Title and Author</td>
<td>Page</td>
</tr>
<tr>
<td>----------</td>
<td>------------------</td>
<td>------</td>
</tr>
<tr>
<td>14</td>
<td>VIRTUAL GERITALK: CAN COMMUNICATION BETWEEN PHYSICIANS AND PATIENTS WITH SERIOUS ILLNESS BE IMPROVED THROUGH REMOTE LEARNING IN THE SETTING OF THE COVID-19 PANDEMIC?</td>
<td>21</td>
</tr>
<tr>
<td>15</td>
<td>IMPROVEMENT OF RESIDENT LEARNING ENVIRONMENT THROUGH CONFIDENTIAL MEETINGS AND MODIFIED DELPHI METHOD</td>
<td>22</td>
</tr>
<tr>
<td>16</td>
<td>THE EFFECT OF USING THE MEDCHALLENGER QUESTION BANK AND OTHER STUDY TOOLS ON OB/GYN RESIDENT IN-SERVICE EXAM PERFORMANCE</td>
<td>23</td>
</tr>
<tr>
<td>17</td>
<td>SINAI INTERNAL MEDICINE ULTRASOUND GROUP (SIM-U): A PRACTICAL, SELF-DIRECTED PULMONARY ULTRASOUND CURRICULUM FOR INTERNAL MEDICINE RESIDENTS</td>
<td>24</td>
</tr>
<tr>
<td>18</td>
<td>CARING FOR YOUNG ADULTS WITH DEVELOPMENTAL DISABILITIES: CAN WE IMPROVE KNOWLEDGE AND SKILLS AMONG PEDIATRIC AND INTERNAL MEDICINE RESIDENTS THROUGH A MULTIMODAL AMBULATORY CURRICULUM?</td>
<td>25</td>
</tr>
<tr>
<td>19</td>
<td>JUST-IN-TIME PHYSICAL EXAM VIDEOS TO IMPROVE EXAM PERFORMANCE AND DOCUMENTATION IN THE EMERGENCY DEPARTMENT</td>
<td>26</td>
</tr>
<tr>
<td>20</td>
<td>THE CREATION OF AN INTERGENERATIONAL LEGACY PROJECT THROUGH A VIRTUAL PLATFORM AS A TOOL TO DECONSTRUCT AGEIST ATTITUDES AMONG PRE-CLINICAL MEDICAL STUDENTS</td>
<td>27</td>
</tr>
<tr>
<td>21</td>
<td>SIMULATION BASED EDUCATION OF PATIENT EXPERIENCE TO EMERGENCY MEDICINE RESIDENTS</td>
<td>28</td>
</tr>
<tr>
<td>22</td>
<td>SCRUBBING SOAP: RETHINKING RESIDENT PRESENTATIONS IN THE OUTPATIENT SETTING</td>
<td>29</td>
</tr>
<tr>
<td>23</td>
<td>CULTURAL HUMILITY AND STRUCTURAL COMPETENCY IN MEDICAL PRACTICE: A LEARNING SESSION FOR TRAINEES ACROSS SPECIALTIES</td>
<td>30</td>
</tr>
</tbody>
</table>
# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Abstract</th>
<th>Title and Author</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>24</td>
<td>EFFECTIVE SCIENTIFIC COMMUNICATION- NEEDS ASSESSMENT SURVEY</td>
<td>31</td>
</tr>
<tr>
<td></td>
<td>Subrat Das, Nicole Littman, Georgina Osorio</td>
<td></td>
</tr>
<tr>
<td>25</td>
<td>IMPROVING DOCUMENTATION OF PEDIATRIC OVERWEIGHT AND OBESITY BY RESIDENT PHYSICIANS</td>
<td>32</td>
</tr>
<tr>
<td></td>
<td>Vickie Wu, Carolyn Rosen, Leora Mogilner</td>
<td></td>
</tr>
<tr>
<td>26</td>
<td>A NOVEL, VIDEO-BASED, OPHTHALMOLOGY SKILLS CURRICULUM FOR INCOMING OPHTHALMOLOGY RESIDENTS</td>
<td>33</td>
</tr>
<tr>
<td></td>
<td>Shravan Savant, Nisha Chadha, Douglas Fredrick, Harsha S. Reddy</td>
<td></td>
</tr>
<tr>
<td>27</td>
<td>NEUROSIM: NEUROLOGY CURRICULUM THROUGH WEB-BASED INTERACTIVE LEARNING</td>
<td>34</td>
</tr>
<tr>
<td></td>
<td>Daniel Santos, Samira Farouk, Laura Stein</td>
<td></td>
</tr>
<tr>
<td>29</td>
<td>ENGAGING PHYSICIAN TRAINEES THROUGH BEDSIDE ICU NARRATIVES</td>
<td>35</td>
</tr>
<tr>
<td></td>
<td>Christine Nguyen, Alexander Davidovich, Jonathan Stoever, Deep Patadia, Tal Shachi, Jessica Montanaro, Beverly Smith, Janet Shapiro, Mirna Mohanraj</td>
<td></td>
</tr>
<tr>
<td>30</td>
<td>“A NEW STUDENT-LED DIGITAL DRAWING COURSE: AN INITIATIVE TO BRIDGE PATIENT HEALTH LITERACY THROUGH MEDICAL ILLUSTRATIONS”</td>
<td>36</td>
</tr>
<tr>
<td></td>
<td>Rebecca L. Kellner, Alexandra Agathis, James Moon, Brian Coakley</td>
<td></td>
</tr>
<tr>
<td>31</td>
<td>MD++ SUPPORTING A NEW GENERATION OF PHYSICIAN-INNOVATORS</td>
<td>37</td>
</tr>
<tr>
<td></td>
<td>Sherman Leung, Brenton Fargnoli</td>
<td></td>
</tr>
<tr>
<td>32</td>
<td>DESIGN AND IMPACT OF A NOVEL OTOLARYNGOLOGY VIRTUAL SUB-INTERNSHIP IN THE TIME OF COVID-19</td>
<td>38</td>
</tr>
<tr>
<td></td>
<td>Aldo V. Londino, Benjamin M. Laitman</td>
<td></td>
</tr>
<tr>
<td>33</td>
<td>AN INNOVATIVE APPROACH TO DEMONSTRATING CLINICAL REASONING IN A VIRTUAL CLERKSHIP</td>
<td>39</td>
</tr>
<tr>
<td></td>
<td>Christopher Richardson, Jamie Edelstein, Jennifer Beck-Esmay, Felipe Serrano, Chris Hahn, Chen He</td>
<td></td>
</tr>
<tr>
<td>34</td>
<td>MEDICAL STUDENT ATTITUDES TOWARDS THE USE OF PEER PHYSICAL EXAM LEARNING FOR THE FUNDOSCOPIC EXAM</td>
<td>40</td>
</tr>
<tr>
<td></td>
<td>Daniel Henick, Margarita Labkovich, Jake Radell, Nitin Chopra, Nisha Chadha</td>
<td></td>
</tr>
<tr>
<td>35</td>
<td>STAR: STROKE, THROMBECTOMY, AND ACUTE REVASCULARIZATION, A REPORT ON A NEUROLOGY EXPOSURE PROJECT</td>
<td>41</td>
</tr>
<tr>
<td></td>
<td>Daniella C. Sisniega, Desiree M. Markatone, Emma Loebel, Michelle F. Fabian, Laura Stein</td>
<td></td>
</tr>
<tr>
<td>36</td>
<td>A NOVEL, ONLINE, CASE-BASED NEURO-OPHTHALMOLOGY WORKSHOP FOR NEUROLOGY CLERKSHIP STUDENTS</td>
<td>42</td>
</tr>
<tr>
<td></td>
<td>Emma Loebel, Laura Stein, Michael Fara, Samira Farouk, Nisha Chadha</td>
<td></td>
</tr>
<tr>
<td>37</td>
<td>VIRTUAL REVIEW SESSIONS IN THE STRUCTURES COURSE IN A LARGE-GROUP, INTERACTIVE FORMAT</td>
<td>43</td>
</tr>
<tr>
<td></td>
<td>Nicola Feldman, Mia Saade, Naoum Fares Marayati, Tyler Italiano, Daniella Curcio</td>
<td></td>
</tr>
<tr>
<td>Abstract</td>
<td>Title and Author</td>
<td>Page</td>
</tr>
<tr>
<td>----------</td>
<td>-----------------</td>
<td>------</td>
</tr>
<tr>
<td>38</td>
<td>OFFICE HOURS AS A METHOD FOR STUDENT SUPPORT DURING THE VIRTUAL SUMMER ENRICHMENT PROGRAM</td>
<td>44</td>
</tr>
<tr>
<td></td>
<td>Nicola Feldman, Gabrielle Hernaiz-De Jesus, David Bechhofer</td>
<td></td>
</tr>
<tr>
<td>39</td>
<td>ADVANCE CARE PLANNING TRAINING IN A STUDENT-RUN FREE CLINIC</td>
<td>45</td>
</tr>
<tr>
<td></td>
<td>Brittany Glassberg, Krsna Kothari, Emily Xu, Elizabeth C. Lindenberger, David Thomas, Yasmin Meah</td>
<td></td>
</tr>
<tr>
<td>40</td>
<td>BRIDGING THE DISPARITY IN SKIN COLOR REPRESENTATION IN PRECLINICAL MICROBIOLOGY EDUCATION</td>
<td>46</td>
</tr>
<tr>
<td></td>
<td>Madeline Kim, Kelsey Auyeung, Gabriel Santos Malave, Sidra Ibad, Eden David, Dante Dahabreh, Roberto Posada</td>
<td></td>
</tr>
<tr>
<td>41</td>
<td>ATTITUDES AND PERSPECTIVES OF NEUROLOGY FACULTY TOWARD NEUROLOGY RESIDENT WELL-BEING AND BURNOUT</td>
<td>47</td>
</tr>
<tr>
<td></td>
<td>Adina Wise, Vicki Shanker, David Lucido, Matthew Swan</td>
<td></td>
</tr>
<tr>
<td>42</td>
<td>THE UTILITY OF MOCK VIRTUAL RESIDENCY INTERVIEWS DURING THE COVID-19 PANDEMIC</td>
<td>48</td>
</tr>
<tr>
<td></td>
<td>Annie E. Arrighi-Allisan, Aldo V. Londino</td>
<td></td>
</tr>
<tr>
<td>43</td>
<td>TRAINING AND TRANSFORMATION OF THE PEDIATRIC HEALTHCARE ENVIRONMENT TO PROMOTE POSITIVE PARENTING</td>
<td>49</td>
</tr>
<tr>
<td></td>
<td>Aurora Lewis, Mariel Benjamin, Carrie Quinn, Aliza Pressman, Blair Hammond</td>
<td></td>
</tr>
<tr>
<td>44</td>
<td>POINT-OF-CARE ULTRASOUND SKILL ACQUISITION AND DECAY CURVES IN ATTENDING PHYSICIANS</td>
<td>50</td>
</tr>
<tr>
<td></td>
<td>Elizabeth Yetter</td>
<td></td>
</tr>
<tr>
<td>45</td>
<td>A COACHING AND APPRECIATION WORKSHOP FOR FACULTY LEADERS TO ENHANCE FACULTY WELL-BEING AND ENGAGEMENT</td>
<td>51</td>
</tr>
<tr>
<td></td>
<td>Lauren Peccoralo, Carly Kaplan, Lisa Bloom, Bijren Shah, Yaakov Klein, Stephen Fectaeu, Diane Adams, Alyssa Giannandrea, Corinne Johnson, Jonathan Ripp</td>
<td></td>
</tr>
<tr>
<td>46</td>
<td>THE THRIVE COVID-19 FELLOWSHIP: CREATING A FORUM FOR COLLABORATIVE TEAM SCIENCE AND INNOVATION DEVELOPMENT</td>
<td>52</td>
</tr>
<tr>
<td></td>
<td>Layla Fattah, Janice Gabrielove, Joseph Borrello, Holly Oemke, Turner Baker, Kevin D. Costa, David Putrino, Anthony Costa</td>
<td></td>
</tr>
<tr>
<td>48</td>
<td>OPHTHALMOLOGY EDUCATOR ATTITUDES TOWARDS GENDER-SPECIFIC MENTORSHIP</td>
<td>53</td>
</tr>
<tr>
<td></td>
<td>Megan E. Paul, Monica Dweck, Nisha Chadha</td>
<td></td>
</tr>
<tr>
<td>49</td>
<td>ADVANCE CARE PLANNING IN POST-ACUTE REHAB - A QUALITY IMPROVEMENT STUDY.</td>
<td>54</td>
</tr>
<tr>
<td></td>
<td>Caitlyn Kuwata, Kayleigh Sullivan, Rosmy Jimmy, AS Rivero-Gutierrez, Stephanie Le, Ruth Spinner</td>
<td></td>
</tr>
<tr>
<td>50</td>
<td>USE OF OFF-LABEL MEDICATIONS AND CLINICIAN UNCERTAINTY DURING THE COVID-19 PANDEMIC</td>
<td>55</td>
</tr>
<tr>
<td></td>
<td>Melissa Hill, Nikhil Shampant, Surafel Tsega, Max Mandelbaum, Michael Herscher</td>
<td></td>
</tr>
<tr>
<td>51</td>
<td>DO WE REALLY NEED THOSE LABS: A STUDENT-LED INVESTIGATION OF CROSS-DISCIPLINARY ATTITUDES ON DAILY LAB ORDERING IN ACADEMIC INPATIENT MEDICINE</td>
<td>56</td>
</tr>
<tr>
<td></td>
<td>Brandon Yeshoua, Jonathan Dullea, Joo Yeon Shin, Oluremi Konigbagbe, Victoria Staltare, Chip Bowman, Anne Linker, Surafel Tsega, Manan Shah</td>
<td></td>
</tr>
</tbody>
</table>
TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Abstract</th>
<th>Title and Author</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>52</td>
<td>ALL WE CAN BE: MILITARY VETERANS AND DIVERSITY IN MEDICAL SCHOOL ADMISSIONS</td>
<td>57</td>
</tr>
<tr>
<td></td>
<td>Christopher Bellaire, Thomas Fetherston, Jacquelyn Chudow, Jessica Maysonet, Jacob M. Appel, Valerie Parkas</td>
<td></td>
</tr>
<tr>
<td>53</td>
<td>GERIATIC SPECIFIC INPATIENT DIABETES MANAGEMENT: THE EFFECT OF AN EDUCATION INTERVENTION ON HEALTHCARE PROVIDERS' KNOWLEDGE LEVEL.</td>
<td>58</td>
</tr>
<tr>
<td></td>
<td>Francisco Diaz</td>
<td></td>
</tr>
<tr>
<td>54</td>
<td>IMPROVING HEALTH CARE VALUE WITH THE SOFI PROJECT: STANDARDIZATION OF IV FLUIDS IN INPATIENT SETTINGS</td>
<td>59</td>
</tr>
<tr>
<td></td>
<td>Sri Lalitha Garimella, Sireesha Aleti, Hina Fatima, Aishwarya Palorath, Kristen Roy, Lenny Shats, Kelly Reinhold, Jean Gordon, Joann Stuart, Ellen Heinrich, Jiliu Xu, Teresa Lemma, Kevin McDonough, Melissa Grageda</td>
<td></td>
</tr>
<tr>
<td>55</td>
<td>TRAINING 2ND YEAR FELLOWS AS QUALITY IMPROVEMENT (QI) MENTORS FOR A GERIATRICS AND PALLIATIVE FACULTY AND FELLOW QI CURRICULUM</td>
<td>60</td>
</tr>
<tr>
<td></td>
<td>Shivani Chopra, Stephanie Chow, Brijen Shah, William Hung, Helen Fernandez, Christine Chang</td>
<td></td>
</tr>
<tr>
<td>56</td>
<td>HALTED BY COVID: PANDEMIC IMPACT ON QUALITY IMPROVEMENT LEARNING FOR GERIATRIC AND PALLIATIVE MEDICINE FELLOWS</td>
<td>61</td>
</tr>
<tr>
<td></td>
<td>Christine Chang, Shivani Chopra, William Hung, Brijen Shah, Helen Fernandez</td>
<td></td>
</tr>
<tr>
<td>57</td>
<td>A MODEL TO INCREASE FACULTY COMPETENCY IN TEACHING QI TO GERIATRIC AND PALLIATIVE CARE FELLOWS</td>
<td>62</td>
</tr>
<tr>
<td></td>
<td>Christine Chang, Shivani Chopra, William Hung, Brijen Shah, Helen Fernandez, Kelly Cummings</td>
<td></td>
</tr>
<tr>
<td>58</td>
<td>DEVELOPMENT AND VALIDATION OF A QUALITY IMPROVEMENT TOOL FOR DOCUMENTATION AND CLINICAL CARE</td>
<td>63</td>
</tr>
<tr>
<td></td>
<td>Eric Legome, Heidi Baer, Daniel Satnick, Joshua McHugh</td>
<td></td>
</tr>
<tr>
<td>60</td>
<td>USE OF SIMULATION AS A ORIENTATION FOR OFF-SERVICE RESIDENTS IN THE EMERGENCY DEPARTMENT</td>
<td>64</td>
</tr>
<tr>
<td></td>
<td>Daniel Satnick, Heidi Baer, Joshua McHugh, Yasamin Soltanianzadeh, Steven J. Bolger, Catrina Cropano, Vikas Goswamy</td>
<td></td>
</tr>
<tr>
<td>61</td>
<td>COVID-19 RESURGENCE MASS CASUALTY INCIDENT SIMULATION</td>
<td>65</td>
</tr>
<tr>
<td></td>
<td>Steven J. Bolger, Daniel Weinick, Yasamin Soltanianzadeh, Heidi Baer, Joshua McHugh, Daniel Satnick, Edmund Hsu</td>
<td></td>
</tr>
<tr>
<td>62</td>
<td>VIRTUAL MASS-CASUALTY INCIDENT SIMULATION</td>
<td>66</td>
</tr>
<tr>
<td></td>
<td>Steven J. Bolger, Yasamin Soltanianzadeh, Heidi Baer, Joshua McHugh, Daniel Satnick, Sage Wexner, Julie Sayegh, Nubaha Elahi</td>
<td></td>
</tr>
<tr>
<td>63</td>
<td>BRACHIAL PLEXUS FORCES GENERATED DURING RESIDENT SIMULATIONS OF OPERATIVE VAGINAL DELIVERIES</td>
<td>67</td>
</tr>
<tr>
<td></td>
<td>G A. Trivette, Frederick Friedman, Ceyda Oner</td>
<td></td>
</tr>
<tr>
<td>Abstract</td>
<td>Title and Author</td>
<td>Page</td>
</tr>
<tr>
<td>----------</td>
<td>------------------</td>
<td>------</td>
</tr>
<tr>
<td>64</td>
<td><strong>A COST-EFFECTIVE, REUSABLE PERICARDIOCENTESIS SIMULATION MODEL WITH AN INTERCHANGEABLE MODEL HEART AND CHEST WALL</strong> Rishi Malik, Edmund Hsu, Daniel Weinick, Yasamin Soltanianzadeh, Steven Bolger, Heidi Baer, Joshua McHugh, Daniel Satnick</td>
<td>68</td>
</tr>
<tr>
<td>65</td>
<td><strong>STROKE CODE FROM EMS TO THROMBECTOMY: AN INTERDISCIPLINARY IN SITU SIMULATION FOR PROMPT MANAGEMENT OF ACUTE ISCHEMIC STROKE</strong> Nicola Feldman, Lorraine Boehm, Magda Zavala, Barbara Dilos, Mamie McIndoe, Latchmi Nagaswar, Katie Walker, Donnie Bell, Devorah Nazarian, Joseph Rabinovich, Stuart Kessler, Laura Lavicoli, Phillip Fairweather, Joseph Farraye, Hazem Shoarah, Suzanne Bentley</td>
<td>69</td>
</tr>
<tr>
<td>66</td>
<td><strong>UROLOGY RESIDENT EXPOSURE AND EXPERIENCE WITH ROBOTIC SURGERY AND SIMULATION IN NEW YORK CITY</strong> Andrew Tam, Eric Bortnick, Vannita Simma-Chiang, Ketan Badani</td>
<td>70</td>
</tr>
<tr>
<td>67</td>
<td><strong>IMPROVE INTUBATION EFFICACY OF CONTAMINATED AIRWAY USING SUCTION ASSISTED LARYNGOSCOPY ASSISTED DECONTAMINATION</strong> Yasamin Soltanianzadeh, Christopher Richardson, Daniel Satnick, Steven J. Bolger, Joshua McHugh, Heidi Baer</td>
<td>71</td>
</tr>
<tr>
<td>68</td>
<td><strong>PRECIPITOUS DELIVERY WITH SHOULDER DYSTOICIA AND POST-PARTUM HEMORRHAGE SIMULATION</strong> Steven J. Bolger, Yasamin Soltanianzadeh, Heidi Baer, Joshua McHugh, Daniel Satnick</td>
<td>72</td>
</tr>
</tbody>
</table>
INTRODUCTION: Assessment drives learning and is often investigated from the point of view of teachers and researchers, but little is known about the learners’ perspectives. Teachers may use assessments to identify knowledge gaps and change course to address them if formative assessments are used and there is opportunity to gauge course-correction effectiveness. Alternatively, there is the possibility that students will become disengaged or lose interest, forsaking areas that may interest them if they perceive the material tested to be more important. However, it is unclear if this is because they value what they have learned or because the material is more important as it is weighed more heavily (Wormold et al. 2009). No published research has investigated how and why assessments impact learners, providing an interesting area for further study.

Several theories were reviewed to establish a framework which may fit how formal assessments or learning activities help a student learn from their perspective, including Ryan and Deci’s Self-Determination Theory and Saltz’s Deep vs Superficial Learning Theory (1976), and Miller’s Pyramid (Miller, 1990). Largely, no one theory or framework emerged as a perfect fit leading ultimately to an inductive analysis to look for themes.

METHODS:

Emergency Ultrasound is a non-ACGME Fellowship within the United States medical system. with fellows primarily having graduated from Emergency Medicine Residency (Schmid, 2018). While the fellowship varies between institutions, fellows usually work clinically for one week, participate in a weekly ultrasound conference, perform image review, and conduct ultrasound related research during their program. They are assessed in their ultrasound skills, teaching, and research among other areas by their program director and ultrasound faculty. The Society of Clinical Ultrasound Fellowships (SCUF) lists 123 programs across the United States, program directors, 95 current fellows, and 2 fellows who have graduated after 2018 via referral were invited to participate in the study. Using a constructivist design with an inductive thematic analysis, this qualitative study sought themes based on the collected data. Inductive thematic analysis methodology used in qualitative research to systematically identify, analyze, organize, describe and report themes from a data set (Nowell et al., 2017). This research study was divided into two parts. Part A surveyed fellowship directors on what types of learning activities they conducted with their fellows. Part B involved semi-structured interviews with fellows to gather data on the weekly ultrasound conference. In the first part, a survey was sent to program directors of the 123 programs listed in the Society of Clinical Ultrasound Fellowships database to investigate what assessments were administered to fellows. The results were used to design a semi-structured interview for the fellows in the second part. All interviews were transcribed via a transcription service. The first three transcripts were coded independently, followed by a meeting whereupon researchers reviewed the interview guide to expand formal assessments to learning activities due to the paucity of published literature on what kind of assessments were coded, settling upon a code book under which the remaining transcripts were coded to determine if thematic saturation was reached. Initial transcripts were modeled based on the finalized codebook for a total of ten coded interviews reaching saturation. Transcripts were then coded via inductive and collapsed into themes that addressed how and why a particular learning activity impacted a fellow’s learning.

RESULTS:

Part A

Program Director Survey Results The ultrasound education mainstreams of Image Acquisition, Image Interpretation, and Clinical Integration were assessed via several routes with SDOTs and SIM being the most common methods, respectively (Table 1). However, the most frequent assessments came under “Other”, with several listing Quality Analysis and reporting informal observation during scanning sessions as part of their assessments (Table 2).

Part B

The word cloud demonstrates the beginning emergence of certain codes (Figure 1) and an analysis with Dedoose (Figure 2), four themes emerged: (1) Role Modeling, (2) Deliberate Practice, (3) Experiential Learning, and (4) Professional Identity Development.

CONCLUSIONS:

1. Formal assessments and informal main sources of learning
2. Scan Shifts, Weekly Quality Analysis and Conferences main sources of learning
3. Using the four themes to design our assessments and learning activities would segment fellows’ learning
4. Educational assessment portfolio which touches upon the four themes
5. Regular meetings with a Mentor to monitor progress
6. Create lectures and workshops in passionate or weak areas as a form of Deliberate Practice
7. Build an Image Bank from interesting cases on scan shifts during Experiential Learning
8. Include reflections as an exercise toward Professional Identity.

REFERENCES:

1. Regular meetings with a Mentor to monitor progress
2. Create lectures and workshops in passionate or weak areas as a form of Deliberate Practice
3. Build an Image Bank from interesting cases on scan shifts during Experiential Learning
4. Include reflections as an exercise toward Professional Identity.
Assessing Resident Perceived Knowledge and Interest in Topics in Health Policy and Advocacy

Sukhbir Kaur MD, Mayce Mansour MD, Andrew Coyle MD, Jennifer Weintraub MD, Cary Blum MD, MPA
Division of General Internal Medicine, Department of Medicine, Icahn School of Medicine at Mount Sinai, New York

Results (continued)

Results

Seventy-two IM residents out of 152 IM residents (47.4%, n = 152) responded to our survey: 28 PGY1s (38.9%), 24 PGY2s (33.3%), 20 PGY3s (27.8%). Residents largely preferred in-person didactics (44.4%) or a combination of live and prerecorded didactics plus discussion sections (37.5%).

Residents rated their knowledge of the following topics as neutral:
- “How the US healthcare system differs from other countries in terms of spending” (average rating 3.13/5)
- “How the US healthcare system differs from other countries in terms of health outcomes (3.07/5)

Residents were less confident about the following topics:
- “Measuring productivity in healthcare” (1.77/5)
- “The role of legislative committees and the state public health apparatus in developing state health policy” (1.94/5)

Thirty residents were interested in participating in a health policy journal club and 20 residents were interested in a practicum advocacy experience.

Purpose

An understanding of a physician's role in the health care system is a core milestone set forth by the ACGME for Internal Medicine (IM) residents. Our needs assessment explores resident knowledge and interest in topics relating to health policy and advocacy in order to aid in curricular development that meets ACGME milestones.

Methods

A needs assessment survey was sent via email to all IM residents (n = 152) in the Mount Sinai Hospital program. Residents rated their perceived knowledge on core topics in the field of health policy and ranked their interest in a variety of supplemental topics. Responses were recorded on a 1-5 Likert scale with 1 = not knowledgeable and 5 = very knowledgeable. Residents were additionally polled on their preferred learning style. Residents who were interested in participating in supplementary activities such as a health policy journal club or practicum experience submitted their contact information.

Discussion

Overall, there appears to be high interest and low perceived knowledge of several core topics in health policy and advocacy. Based on these results, we will pursue a combination of flipped classroom and in-person didactics. Topics residents ranked as "least knowledgeable" may be best suited for a flipped classroom approach. This approach allows for basic knowledge to be reviewed prior to a discussion section, where it can then be applied and clarified. Topics residents ranked as "most knowledgeable" may be best suited for a traditional guest lecturer format, as residents could engage in real-time to experts in the field. We plan to assess changes in knowledge and attitudes related after our intervention with a post-curricular survey.
INTRODUCTION:

Telemedicine has allowed for access to medical care at a safe distance during the pandemic. Yet the way telemedicine is utilized in an underserved population is not well-defined. With this study, we analyzed the trends in the adoption and use of telemedicine services and identified perceived and actual barriers.

METHODS:

- Location of project: Ryan Health Adair, a Federally Qualified Health Center, training site for internal medicine residents.
- 58% of patients live below 100% of the federal poverty level.
- Study population - all patients with a televisit encounter from the months of March to August 2020.

RESULTS:

- Total televisit encounters from March to August 2020 = 2898.
- Majority of the televisit encounters were voice.
- Age group > 65 years had the lowest visit numbers overall (n=557).
- 36% average decline in televisit encounters was seen post surge (with the greatest decline among the elderly).

CONCLUSIONS:

- Among our structurally vulnerable population, the majority of televisit encounters were conducted via phone rather than video.
- An overall decrease in the number of televisit encounters was seen post surge (June to August).
- The major resident-perceived barrier for telehealth use among our population was patient access to technology and low health literacy.

FUTURE DIRECTIONS:

- The cause of the low usage of televisits among the elderly should be sought via patient survey of barriers.
- Preceptor and staff feedback can elucidate the reason for patient visit type choice post-surge.
- To determine if resident-perceived barriers are accurate, further information from patients should be sought about comfort with, and access to, technology.
OBJECTIVES
1. To increase access to OEND for patients at risk for opioid overdose
2. To provide an impactful and educational opportunity for medical students interested in working with people who use drugs (PWUD)

INTRODUCTION
- Temporary clinic closures and social isolation endangered PWUD during the COVID-19 pandemic, particularly in the early months when care access was most compromised (e.g. through decreased access to OEND)
- Prior to the pandemic, all student-led OEND was performed in-person at REACH, a primary care program for PWUD at MSH. To our knowledge, telephone-based OEND provided by medical students has never been documented in the literature

RESULTS
- Over a 7.5-week period starting in May 2020, eight medical students spent a total of 208 hours making OEND calls
- OEND provided by telephone was broadly acceptable: 55% of patients reached by phone accepted training, and 93% of trained patients accepted take-home naloxone
- Patient identification, outreach, and OEND acceptance is detailed below:

METHODS
- Medical student volunteers were identified through the ISMMS COVID-19 Student Workforce and trained to provide OEND
- Students called patients and offered opioid overdose education to two populations: (1) all REACH patients, and (2) MSH patients presenting with OUD or a history of opioid overdose
- Patients who accepted opioid overdose education received a naloxone kit either by mail or at hospital discharge

CONCLUSIONS
- We present a scalable, adaptable model by which clinics and health systems with an affiliated medical school can provide OEND by telephone when access to on-site care is otherwise compromised
- Medical student-driven, telephone-based OEND efforts can effectively reach at-risk patients remotely, and potentially increase naloxone access by serving as an adjunct to traditional in-person training
- Further study is needed to understand the impact of direct, patient-facing OEND provision on medical student attitudes toward PWUD

ACKNOWLEDGEMENTS
- NYC Department of Health and Mental Hygiene for their funding and provision of naloxone kits
- The Fund for Public Health in New York, Inc. which partially funds Wilma Torbino, MD.
Creating a Health Equity Resource Collection for the MSHS Community

Nicole B Ramsey, MD, Alexander Boulus, MD, Angie Buttigieg, MD, Betty Kolod, MD, Kenneth Ashley, MD, Emily Hertzberg, MD, Haoli Jin MD, PhD, Maria Maldonado, MD, Sananda Moczezuma, MD, Edward Poliandro, PhD, Genevieve Tuveson, MD, Edgar Vargas, MPH, LMSW, Barbara Warren, PsyD, Brijen Shah, MD

Introduction

Purpose: To disseminate a curated collection of health equity educational resources to the Mount Sinai community.

Background: There is a growing interest in incorporating health equity and health care disparities education into graduate medical education. The ACGME asks programs and institutions to teach this topic connected to quality improvement. While resources such as MedEdPortal exist with equity and antiracism resources, there are no resources that bring together topics of systems-based practice, equity, and healthcare disparities. We aim to create a curated collection of health equity educational resources for the Mount Sinai community.

Methods: The Mount Sinai Health Equity Resource Collection (HERC) is an output of the American College of Graduate Medical Education-sponsored Health Disparities Collaborative. The HERC was created to highlight high-quality literature, curricula, and resources on common themes in the health equity space, organized by theme and audience. The HERC is housed on the password-protected Sharepoint interface, and accessible to anyone with an MSHS login at http://bit.ly/msherc.

Current State

Currently, the HERC contains four media libraries—documents, links, podcasts, and videos. Within the document library, there are 11 theme folders containing 171 documents; other libraries contain 18 videos, 14 podcasts, and 10 links to other health equity resources and collections. Document topics include COVID-19 health inequities, racism and discrimination by ethnicity, cultural humility and limited English proficiency, discrimination on the basis of disability, equitable patient-centered communication, LGBTQI health inequities, refugee health, religious discrimination, social and structural determinants of health, implicit bias, and quality improvement. Each resource is annotated with a brief description, type, and audience and is vetted by health equity experts prior to being uploaded to the HERC. The HERC is updated biannually.

Resources can be used as part of workshops and/or curriculum. The HERC also includes an embedded health equity-focused Twitter feed.

HERC Usage

- 393 site visits in the last 90 days
- 25 unique viewers within the last 30 days
- Majority of site visits via desktop device
- Peaks in visits correlate with large group ACGME Health Disparities Collaborative meetings

Challenges

- Currently, HERC is updated manually by Education Committee members
- HERC can be difficult to navigate, especially on small laptop devices and mobile devices
- Site visits limited, little traffic on days without large meetings

Future Plans

- Set up automated searches through Levy Library in order to keep HERC updated
- Create key resource designation for select resources within folders
- Graphic design update
- Develop strategic dissemination plan to increase awareness and use of HERC
- Expansion of HERC to include drug user health documents, quality and patient safety data, and incorporation of a user-friendly feedback area
ABSTRACT:

Introduction: In response to protests for racial justice during the summer of 2020, student leaders of Mount Sinai racial affinity groups organized anti-racist reading groups to create community and education around the urgent issue of racism.

Method: Student racial affinity group leaders were surveyed to assemble a list of recommended books, articles, and podcasts discussing racism.

Result: The majority of surveyed participants agreed their discussion groups changed the way they conduct themselves in their personal and professional lives.

Conclusion: This initiative created alternative spaces within Medical Education for people of different disciplines to discuss race, systemic racism, and racial bias in medicine and healthcare.

INTRODUCTION:

Promoting anti-racist change within an institution requires a multifaceted approach. In a “Becoming Anti-Racist” framework proposed by the Washington University School of Medicine, individuals who participate in initiatives encouraging education on racial justice and systemic racism are expected to have a diverse set of reactions and experiences during their program as they progress toward becoming anti-racist. (Fig. 1)

These experiences are distributed between a Fear Zone, Learning Zone, and Growth Zone that progress with level of comfortability toward taking action against racism.

METHODS:

1. Determining Reading Selections: Mount Sinai student affinity groups (JANAMS, APIMSA, LMSA, SAMIS, SEOS, SEIS, SNMA, Stonewall Alliance) leaders were surveyed three times to select and rank their top suggestions for books, articles, and podcasts discussing racism.

2. Purchasing and Distributing Books: Books were purchased from 14 independent bookstores. $1,357 was spent on these materials. Students received their personal copy at Aron Hall or were mailed one.

3. Recruiting Facilitators and Participants: An invitation to participate in these reading groups and apply to be a facilitator was emailed to all medical and graduate students, post-doctoral fellows, faculty, and staff affiliated with the Mount Sinai Health System. 16 groups were formed according to reading preferences and availability.

4. Training Facilitators: Facilitators received a guide and 30 minute training session over Zoom.

5. Meeting of reading groups: All groups met virtually for at least three times from August through October 2020 to discuss their reading selections.

6. Surveying participants and facilitators: A voluntary, anonymous exit survey was sent to all participants.

Survey Question | Yes | No | Maybe | Total number of respondents (n)
---|---|---|---|---
Did you learn something new about racism from these groups? | 39 (92.8%) | 2 (4.8%) | 1 (2.4%) | 42
Did you learn something new about the role of racism in medicine and healthcare? | 31 (75.6%) | 6 (14.6%) | 4 (9.8%) | 41
Was a thought you previously held challenged or changed in your reading group? | 23 (54.8%) | 9 (21.4%) | 10 (23.8%) | 42
Do you ever bring up your reading to others and/or speak with others outside of your group about what you read? | 37 (88.1%) | 4 (9.5%) | 1 (2.4%) | 42
Has the reading group changed your PROFESSIONAL practice? In other words, did the reading change how you think or act in your professional life? | 24 (58.5%) | 10 (24.4%) | 7 (17.1%) | 41
Has the reading group changed your PERSONAL practice? In other words, did the reading change how you think or act in your personal life? | 36 (87.8%) | 4 (9.8%) | 1 (2.4%) | 41
Have you made any new commitments to anti-racism since your reading groups? | 27 (64.3%) | 11 (26.2%) | 4 (9.5%) | 42
Would you join an anti-racist reading group again? | 38 (88.4%) | 1 (2.3%) | 4 (9.3%) | 43
Would you recommend your program to institute a first-reading for incoming classes to share around the topic of racism in science and healthcare? | 38 (88.4%) | 1 (2.3%) | 4 (9.3%) | 43

Table 1. Anonymized survey responses from reading group participants following their final group meeting.

OBJECTIVE:

These reading groups aimed to help all participants grapple with, identify, and articulate the role of systemic racism in their lives and careers and empower them to action within the Mount Sinai Health System. Our goal was to provide opportunities to educate ourselves about race and structural racism, to be vulnerable about our own biases and knowledge gaps, and sit with and learn from our discomfort.

RESULTS:

There were 164 total participants who identified as Mount Sinai medical and/or graduate students, post-doctoral fellows, staff, faculty, and administration. 21 of these volunteered to be group facilitators. There were 16 discussion groups that met three times each. Out of 42 participants who responded to the feedback survey, 75.6% agreed they learned something new about the role of racism in medicine and healthcare, 88.1% agreed their reading outside their group, and 58.5% agreed the reading changed how they thought or acted in their professional life. 88.1% of the respondents would recommend their respective programs institute a first-reading for incoming classes on the topic of racism in science and healthcare.

CONCLUSIONS:

1. This initiative created alternative spaces within Medical Education for people of different disciplines to discuss about race and racism.
2. The majority of surveyed participants agreed their experiences in this program taught them something new about the role of racism in healthcare and changed the way they conduct themselves in their personal and professional lives.
3. As a result of positive feedback and interest in continuing these discussion groups, we are confident that the institutionalization of initiatives such as this will foster continued education on race, systemic racism, and racial bias in medicine and healthcare.
4. Institutional support of anti-racism programming would continue to strengthen Mount Sinai Health System’s position as a leader in healthcare education and provision by encouraging community conversations on these important topics.
**INTRODUCTION:**

- Anatomy is ingrained in the practice of anesthesia. From basic to complex procedures, success relies on a proficient understanding of anatomical structures.
- Cadavers have been shown to be effective research and teaching tools within anesthesia, especially during procedural learning and for ultrasound-based anesthesia.
- Human cadavers have been shown to be superior to manikins for teaching of facemask ventilation, direct laryngoscopy, and fiberoptic-guided tracheal intubation.
- No prior studies have created a comprehensive cadaver-based anesthesia course which utilizes novel embalming techniques that allow ultrasound scanning and offers full dissections.
- Our aim was to design and implement such a course available to trainees and faculty that utilizes human cadavers to teach anatomy for clinical anesthesia practice.

**AIM:**

- Our aim was to design and implement such a course available to trainees and faculty that utilizes human cadavers to teach anatomy for clinical anesthesia practice.

**METHODS:**

- Six cadavers were obtained for the Anatomy for Anesthesiologists course in collaboration with the Center for Anatomy and Functional Morphology for use in our course in March 2020.
- Eight residents per day participated in group discussions focused on relevant anatomy.
- Using “freedom embalmed” cadavers, residents were able to utilize ultrasound to visualize anatomy (Figure 1) and perform regional and neuraxial blocks, and then dissect these structures to observe the effectiveness of these techniques.
- Residents completed anonymous pre- and post-course multiple assessments on anatomic and anesthetic knowledge.

**RESULTS:**

- Of all participants, 96% strongly agreed that it was beneficial to use cadavers to review anatomy for anesthesia.
- Residents reported a subjective improvement in their understanding of the anatomic basis for neuraxial techniques and peripheral nerve blocks (Figure 2) and found that the use of ultrasound on cadavers was extremely helpful.
- Narrative comments positively emphasized the course’s organization and clinical relevance.
- Residents demonstrated an improvement in assessment scores after participation in the course (pre- and post-assessment means: 59 & 83, respectively), and this remained true when stratifying the scores based on training level (Figure 3).

**CONCLUSIONS:**

- The Anatomy for Anesthesiologists course was well-received, with both subjective and objective indicators of practical and clinical utility for our residents.
- We completed the second iteration of our course this March (2021), with preliminary data confirming the utility and benefits of the course.

**References**


---

**Figure 1:** Proximal nerve block with spread of anesthetic around branching of sciatic nerve into the common peroneal nerve (CPN) and tibial nerve (TN). TNs: tibial nerves; TNm: femoral nerve muscul; TNn: semimembranosus muscle; Mm: medial scapular muscle; Red Al: proximal artery; Red dashed line: needle.

**Figure 2:** Self-assessment of understanding of the anatomic basis for peripheral nerve blocks before and after the course: n=28

**Figure 3:** Comparison of Pre- and Post-Course Assessment Scores, stratified by training level. (Clinical Anesthesia (CA) Year 0 through 3 vs PGY1 through PGY4)
**INTRODUCTION:**

- PEM fellowship trainees complete residency training in either pediatrics or emergency medicine.
- Although there are core procedures outlined by the Accreditation Council for Graduate Medical Education (ACGME) for all medical specialties, physicians experience some discomfort with them.
- Some procedures are not encountered often and many PEM physicians experience some discomfort with them.
- There are no standardized procedural education programs that all incoming PEM fellows complete prior to the start of fellowship.

**AIM:**

- To create a survey assessing the comfort levels of all current and incoming PEM fellows (defined as 3rd-year pediatrics-trained PEM fellows with procedures commonly performed in the pediatric emergency department (PED) to determine if certain PED procedures require special educational attention.

**METHODS:**

A. Literature Review

- PEM practitioners and trainees are uncomfortable with certain life-saving procedures.
- PEM fellowship training in pediatric critical care medicine is varied and requires further efforts to be standardized.
- PEM online curriculum improves pediatric resident knowledge.
- Simulation improves pediatric resident comfort with management of critically ill emergency department patients.
- No studies evaluating procedure comfort levels of PEM fellowship trainees to whom they sent the survey.

B. IRB Approval

- IRB approval obtained: study exempt

C. Survey Design

- Selection of procedures:
  - Comparison of ACGME procedure lists for pediatrics residency and PEM fellowship.

**RESULTS:**

- Total number of responses: 227
- Survey response rate: 49.5%
- Total number of responses: 227

**A. Core Procedure Comfort Level Among Current and Incoming PEM Fellows**

**B. IRB Approval**

- IRB approval obtained: study exempt

**C. Survey Design**

- Selection of procedures:
  - Comparison of ACGME procedure lists for pediatrics residency and PEM fellowship.

**D. Survey Distribution**

- Approval by PEM Program Directors (PDs) Survey Committee.
- Surveys distributed by PEM PDs to all incoming and current PEM fellows.

**E. Survey for Program Directors**

- Survey on SurveyMonkey for PDs to complete indicating total number of trainees to whom they sent the survey.

**Figure 2:** Survey Design on REDCap

**Figure 3:** The responses on the Likert scale for procedural sedation show a positive correlation between increasing level of comfort with procedural sedation with increasing level of training

<table>
<thead>
<tr>
<th>Procedure</th>
<th>Comfortable</th>
<th>Very Comfortable</th>
<th>Uncomfortable</th>
<th>Very Uncomfortable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Simple laceration repair</td>
<td>79%</td>
<td>18%</td>
<td>12%</td>
<td>1%</td>
</tr>
<tr>
<td>Abscess incision and drainage</td>
<td>79%</td>
<td>18%</td>
<td>12%</td>
<td>1%</td>
</tr>
<tr>
<td>Chest tube placement</td>
<td>58%</td>
<td>33%</td>
<td>29%</td>
<td>1%</td>
</tr>
<tr>
<td>Lumbar puncture</td>
<td>64%</td>
<td>29%</td>
<td>18%</td>
<td>1%</td>
</tr>
</tbody>
</table>

**Figure 4:** Least uncomfortable procedures: These graphs demonstrate absence of a reliable correlation between increasing level of comfort with central line placement and chest tube placement with increasing level of training.

**CONCLUSIONS:**

- Overall, there is a positive correlation between increasing level of comfort with common PEM procedures as trainees progress in their level of training from 3rd-year pediatrics residents matched into PEM fellowship to 3rd-year PEM fellows.
- Most trainees express comfort with procedures such as chest tube placement and central line placement, which fall into the trauma/medical resuscitation category.
- These results identify procedures that could be focused on in a standardized procedural education curriculum for all PEM fellows.

**FUTURE DIRECTION:**

- Follow-up survey to understand which modes of education are preferred by trainees for the procedural education curriculum.
- Work with other PEM departments for development and implementation of educational modules with increased attention on procedures with higher discomfort.

**ACKNOWLEDGMENTS:**

- George Loo, PhD
- Robert Fallar, PhD

**Figure 5:** Most comfortable procedures: The graphs for simple laceration, abscess incision and drainage and lumbar puncture demonstrate a high level of comfort among trainees at all levels of training.
METHODS

• Pre-pandemic, a clinical social worker (SW) developed a wellness curriculum (WC) consisting of a variety of topics to address the components of burnout: emotional exhaustion, depersonalization, and reduced sense of personal achievement.

• Over a 4-year period, a WC of 1-hour facilitated discussions was established and trialed at different times, different days of the week, and frequencies (weekly vs biweekly vs monthly) within the PCCM fellowship program at a single institution based on constant fellow feedback.

• These meetings were all held indoors in-person (IIP) pre-pandemic.

• As a result of COVID-19 pandemic, the WC was transitioned by switching the physical setting from IIP gatherings to either socially distant outdoor in-person (OIP) - weather permitting or virtual online (VO) meetings.

• Attendance was tracked for each wellness session.

BACKGROUND

• Burnout is a growing area of concern impacting Pulmonary and Critical Care Medicine (PCCM) physicians.

• Junior physicians, including medical fellows, have been identified as a population more at risk of developing burnout due to the stress and demands associated with training.

• Fellowship training presents an ideal opportunity to provide wellness education and facilitate development of adaptive behaviors to cope with stress and decrease burnout.

• This need has been further emphasized as our trainees worked through a global pandemic which added a new set of stressors.

DISCUSSION

• Over a 4 year period, pre-pandemic, a WC was delivered and adjusted based on the needs of PCCM fellows by soliciting constant feedback.

• We determined that the optimal time, day and frequency of a WC was a monthly lunch hour, after fellows’ continuity clinic (Fig 1).

• However while transitioning the format due to COVID-19 pandemic we noted a sharp decline in overall attendance for virtual online (VO) meetings compared to the pre-pandemic indoors in-person (IIP) format (Fig2).

• Within the new adjustments, we did note a much better attendance at socially distant outdoor in-person (OIP) meetings compared to VO (Fig 3).

• Further work will be needed to determine the optimal strategy to enhance fellow attendance of wellness sessions in the "new normal" if IIP is no longer a long-term viable option.

CONCLUSIONS

The time of the day, the day of the week, frequency, and format of wellness sessions should be customized to the structure and schedule of a specific training program in order to reach the largest possible number of trainees.

RESULTS

• Over a 4 year period, pre-pandemic, a WC was delivered and adjusted based on the needs of PCCM fellows by soliciting constant feedback.

• We determined that the optimal time, day and frequency of a WC was a monthly lunch hour, after fellows’ continuity clinic (Fig 1).

• However while transitioning the format due to COVID-19 pandemic we noted a sharp decline in overall attendance for virtual online (VO) meetings compared to the pre-pandemic indoors in-person (IIP) format (Fig2).

• Within the new adjustments, we did note a much better attendance at socially distant outdoor in-person (OIP) meetings compared to VO (Fig 3).

• Further work will be needed to determine the optimal strategy to enhance fellow attendance of wellness sessions in the "new normal" if IIP is no longer a long-term viable option.
ABSTRACT:

This curriculum is geared toward engaging medical residents and fellows. Lectures create scheduling challenges for busy residents and fellows, while available digital resources, such as UpToDate, are exhaustively detailed but less useful for initial learning. In the apprentice-model, residents are overexposed to initial work up and standard management practices, leaving them ill-equipped to manage oncologic patients. Current oncology curricula consist mostly of ad-hoc, research-focused lectures without providing foundational clinical frameworks necessary for learning basic diagnosis and therapy.

METHODS:

The core of the curriculum consists of clinically-applicable introductory overview learning modules paired with point-of-care reference sheets.

CURRICULUM CONTENT:

• Introductory overview learning modules: Review of basic information on diagnosis, prognosis and clinical management for major oncologic topics (e.g. Lung Cancer 101)
• Point-of-care reference sheets: Easy-to-use charts summarizing essential, take-away material

CURRICULUM GOALS:

1. Clinically Useful
   Easily referenced both for learning and for active patient management on the inpatient wards.
2. Quick & Easily Accessible
   More concise than comparable UpToDate articles. Accommodates residents’ and fellows’ irregular inpatient and outpatient schedules.

RESULTS:

This digital curriculum is currently in final development. Design elements are undergoing revision with the Mount Sinai Hospital Instructional Design Team. Implementation targeted for the summer 2021 class of internal medicine residents and oncology fellows. The curriculum spans over 20 topics on both solid oncologic and malignant hematologic cancers, as listed below:

<table>
<thead>
<tr>
<th>Solid Oncology Topics</th>
<th>Malignant Hematology Topics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Breast Cancer</td>
<td>Acute Myeloid Leukemia</td>
</tr>
<tr>
<td>Lung Cancer</td>
<td>Acute lymphoid leukemia</td>
</tr>
<tr>
<td>Prostate Cancer</td>
<td>Chronic lymphoid leukemia</td>
</tr>
<tr>
<td>Renal Cell Cancer</td>
<td>Myelodysplastic leukemia</td>
</tr>
<tr>
<td>Bladder Cancer</td>
<td>Myelodysplastic syndrome</td>
</tr>
<tr>
<td>Testicular Cancer</td>
<td>MyeloidosisNeoplasia</td>
</tr>
<tr>
<td>Gastroesophageal Cancer</td>
<td>Multiple Myeloma</td>
</tr>
<tr>
<td>Colorectal Cancer</td>
<td></td>
</tr>
<tr>
<td>Pancreatic Cancer</td>
<td></td>
</tr>
<tr>
<td>Hepatobiliary Cancer</td>
<td>Infectious</td>
</tr>
<tr>
<td>Head and Neck Cancer</td>
<td>Gastrointestinal</td>
</tr>
<tr>
<td>Sarcoma</td>
<td>Peritoneal</td>
</tr>
<tr>
<td>Melanoma</td>
<td>Lymphoma</td>
</tr>
<tr>
<td>Gynecologic Cancer</td>
<td></td>
</tr>
</tbody>
</table>

In the digital age of medical practice, the effectiveness of this curricular tool can best be measured by its usefulness via surveying quantitative usage data over time rather than by surveying unaided knowledge retention.

CONCLUSIONS:

While UpToDate is an incredibly rich resource, it can be difficult to extract concise overview information. Users are often limited by needing to know what they are looking for in advance.

There is an educational gap that needs to be filled between the ad-hoc lecture on a series of clinical trials for lung cancer and multiple densely detailed UpToDate chapters on lung cancer.

Medical residents and fellows need a clinically relevant, easy-to-access resource that summarizes oncologic diagnostic and management frameworks and serves as a tool for both adult learning and point-of-care patient management.

This practical resource will improve upon the existing format of lecture-based learning by providing a clinically-oriented, cohesive learning experience.

Future Directions:

• Refinement & launch of the curriculum
• Focus group and survey feedback
• Evaluation of usage data
• Development of a paired case library

REFERENCES:

Identifying Resident Barriers in Recognizing and Addressing Social Determinants of Health

Ines Robles Aponte1, Shruti Anand1, Sananda Moctezuma1, Pratyusha Nunna1, Dipal Patel1, Tamara Goldberg1
1Mount Sinai Morningside-West, Icahn School of Medicine at Mount Sinai, New York, NY, United States

Background:
Social determinants of health (SDH) are important predictors of health outcomes. The World Health Organization defined SDH as “conditions in which people are born, grow, live, work and age.”

Since 2016, our internal medicine classroom-based ambulatory curriculum has introduced residents to principles of how SDH impact the health outcomes of our patients.

This study examines the impact of the curriculum on resident knowledge and practice habits as they relate to SDH and health disparities.

Methods:
Phase 1: Resident Survey
All internal medicine residents at our large urban internal medicine program were invited to complete an online survey in the Fall of 2020. Through this survey, we isolated potential knowledge gaps, attitudes, and barriers.

Phase 2: Peer to Peer Intervention
In the Spring of 2021, we will begin peer to peer resident education on screening for SDH, documenting assessments (Z-codes) and providing social prescriptions (referring patients to a range of local, non-clinical services).

Phase 3: Evaluation:
To assess the effect of these interventions, we will measure changes in the use of EMR-based SDH screening tools, Z-codes assessments, and utilization of social prescriptions. To assess resident knowledge and attitudes we will administer a post-intervention survey.

Results:
Of 126 potential subjects, 65 (52%) completed the survey. While 98.5% of respondents recognized the importance of SDH on health outcomes, only 7.7% use the screening tool in the clinic EMR and only 3.1% knew to document SDH as an assessment. 31.3% noted lack of knowledge about what SDH are as a major barrier. Other barriers included lack of appropriate time in clinic and uncertainty in available resources once SDH was identified. Most (84%) did consider it to be a physician’s responsibility to address SDH.

Conclusions:
• Our survey identified numerous barriers to recognizing and addressing SDH in our residency clinic.
• Classroom-based didactics alone do not result in effective behavior change in addressing SDH in the clinical setting.
• Peer to peer interventions have potential to reduce these knowledge gaps.
• Novel educational strategies are needed which are attuned to the application of SDH knowledge and skills within the reality of the clinical practice setting.

References:
The Floor Passport: Improving and Standardizing Inpatient Pediatric Resident Education

Izumi Watanabe MD, Priya Rolfes MD, Jennifer Gillen MD
Department of Pediatrics, Icahn School of Medicine at Mount Sinai

INTRODUCTION:

- Pediatric residents spend the largest proportion of their training on inpatient floor units.
- Due to variability of inpatient census and the seasonality of certain pathologies, residents' exposure to important inpatient general pediatrics topics vary even within the same institution.
- There is currently already an intervention in place in our PICU to help mitigate these differences and ensure that residents experience a more standardized exposure to important critical care topics during their PICU rotation.
- Similarly, we aim to standardize resident education during inpatient floor rotations to cover topics essential for a general pediatrician.

OBJECTIVES:

- To implement a “Floor Passport” that aims to:
  - Improve resident education on the inpatient floor by targeting specific topics to be taught during these rotations to better standardize residents’ exposure to high yield inpatient general pediatrics topics.
  - Empower residents to request teaching from faculty and fellows.
  - Assist faculty and fellows in providing effective and efficient teaching appropriate to residents’ needs.

METHODS:

- Teaching topics for each inpatient subspecialty field were selected based on the American Board of Pediatrics content outline for the General Pediatrics certification examination, along with input from faculty and fellows in each field. Each topic was designed to be covered in 15-20 minute teaching sessions by faculty and fellows. Required procedures were also included.
- Topics were presented in an electronic “Floor Passport” format for residents to check off topics as they received teaching sessions, with goal minimums per block and by the end of residency.
- Passports were checked before and after each block to determine topic completion, as well as at the end of each year.
- A pre-survey was distributed to the 68 PGY1-3 pediatric residents in our program, to assess baseline resident attitudes regarding satisfaction of current teaching on the inpatient floor, and ability to request teaching sessions. Post-surveys will be distributed 6 months and a year after implementation of the Floor Passport.

RESULTS:

- 45 residents completed the pre-survey, for a response rate of 66%.
- Prior to implementation of the Floor Passport:
  - There were disparities in satisfaction with teaching between floor teams: residents reported being more satisfied with teaching on the Hospitalist Medicine team (Figure 1), while more residents reported being dissatisfied with teaching on the Subspecialty teams (Figure 2, 3).
  - When asked to recall whether they received teaching on a given list of select topics, more residents recalled learning about Hospitalist Medicine topics than Subspecialty topics.
  - On a 2-week floor block, most residents reported receiving active teaching <3 times (44.4%) and 3-5 times (40%). On a 4-week floor block, most residents reported receiving active teaching 3-5 times (35.6%) and 5-7 times (35.6%) (Figure 4).
  - Most residents report feeling neutral to very comfortable requesting teaching sessions from faculty and fellows.
  - The two most commonly cited barriers to teaching on inpatient floor rotations were that residents were too busy with clinical duties (84.4% of respondents), and that faculty/fellows were unavailable or too busy to teach (82.2% of respondents).

CONCLUSIONS AND NEXT STEPS:

- The Floor Passport is currently being implemented.
- The current number of inpatient teaching sessions that residents recall should be improved; the Floor Passport aims to facilitate teaching by providing a set list of topics.
- Teaching can vary between different floor teams likely due to various factors, including admitted patient census and diagnoses, availability of faculty/fellows given demands of other clinical obligations, and time available for teaching during or after rounds. A secondary measure should also assess the length of inpatient rounds.
- Most residents report being comfortable requesting teaching from faculty/fellows, and cite time constraints as the main barrier to teaching; in addition to further empowering residents to request teaching, the Floor Passport aims to help prioritize teaching on a busy service without compromising patient care.
- Future directions include investigating performance on In-Training Exam scores pertaining to essential inpatient topics.

REFERENCES:

Introduction:

Most online educational resources (question banks, seminars) focus heavily on knowledge recall, with limited opportunities for learning by application. Clinical cases, as an instructional tool, serve as key anchors for learners to apply medical knowledge. A free open access medical education (FOAMed) website dedicated to nephrology, NephSIM, created by our collaborator provides an innovative platform for case-based learning with infographics. We sought to create a mobile optimized, FOAMed website dedicated to gastroenterology (GI)/hepatology (hep) containing a collection of interactive case journeys designed to teach pathophysiology and disease management. We sought to create a mobile optimized, FOAMed website dedicated to gastroenterology (GI)/hepatology (hep) containing a collection of interactive case journeys designed to teach pathophysiology and disease management, and to support the development of clinical reasoning and data synthesis skills in trainees (Fig 1).

Methods:

- GiSIM website was created on Wordpress and modeled after NephSIM.
- Hypothetical cases were drafted by Mount Sinai IM residents and GI/hep fellows and reviewed by clinical GI/hep faculty.
- Each case is presented as a sequence of history and examination details, laboratory and imaging findings, endoscopy and pathology results, leading to a final diagnosis.
- At each step, questions encourage users to develop a differential diagnosis and select the next best steps in assessment and treatment, in keeping with the principles of appropriate clinical reasoning, cost conscious high-value care and guideline driven practice (Fig 2).
- Real-time feedback is provided on their choices.
- A Google Forms based survey is embedded into GiSIM to collect data on user demographics and solicit feedback using a Likert scale on website usability, content quality, difficulty level, and perceived educational value.

Results:

- GiSIM was created and launched with 4 GI/hep peer reviewed cases in January 2021 (Fig 3-5).
- Website is being disseminated via email within the Mount Sinai system and with the Twitter handle @Gisim_website.
- Thus far, respondents include 4 attendings, 11 fellows, and 11 residents (Fig 6).
- Survey feedback was overwhelmingly positive (Fig 8); the majority of respondents believe that the website is easy to use, the cases are interactive, enhance their understanding of the topic, that the difficulty level is appropriate and improves their confidence in the subject area.
- All respondents agreed or somewhat agreed that they will use this resource in the future and recommend it to colleagues.

Conclusions:

- We have created a new GI/hep dedicated FOAMed website for medical trainees.
- Preliminary results demonstrate ease of use, a perceived enhancement in medical knowledge, and a majority of users are inclined to continue use and recommend it to others.
- Future efforts include creating additional case content in GiSIM, further dissemination, studies to measure the impact of GiSIM on clinical reasoning skills, and to ascertain effective strategies for integrating its use with traditional didactic formats.
ABSTRACT:

Background: High quality serious illness communication is essential to older adults' medical decision-making, quality of life, and adjustment to serious illness. Designed specifically for geriatric and palliative medicine fellows, Geritalk is a course that uses telecommunication skills intervention using didactics, skill practice, and reflection over 2 days in-person. Due to the COVID-19 pandemic, Geritalk was adapted to a virtual format as 1.5 hours/day for 5 days, complemented by asynchronous online learning modules. Our study evaluated the self-assessed preparedness of trainees for serious illness communication before and after the course, and compared these findings to a historical control from the in-person course.

Methods: In July 2020, Geriatric and Palliative Medicine fellows from Mount Sinai participated in the virtual Geritalk course. Fellows were asked to complete anonymous pre- and post-self-assessments of preparedness for serious illness communication with patients and families, using survey items with responses on a five-point Likert scale. De-identified and anonymous survey data was collected using REDCap.

Results: Of the 20 Geritalk participants, 17 (85%) completed the pre-course assessment, and 14 (70%) completed the post-course assessment. After the course, 10 (71%) respondents had a “positive/very positive” attitude toward remote learning, as compared to 6 (35%) before the course. Overall, 13 (93%) rated the educational quality of the course as “excellent” and “strongly agreed” that they would recommend the training to others.

Compared to in-person Geritalk, virtual Geritalk led to comparable improvements in mean self-reported preparedness across all surveyed communication skills: giving bad news (virtual pre-course 3.1 improved to post-course 4.5, in-person pre-course 3.4 improved to post-course 4.5); conducting a family conference (virtual 2.9 to 4.1, in-person 3.1 to 4.4); discontinuing life-sustaining treatments (virtual 2.8 to 3.9, in-person 2.9 to 4.3); discussing religious/spiritual issues (virtual 2.8 to 4.0, in-person 2.7 to 3.7); eliciting concerns at the end of life (virtual 3.3 to 4.7, in-person 3.2 to 4.4); expressing empathy (virtual 4.2 to 4.9, in-person 3.7 to 4.6); and discussing treatment options, including comfort-focused care (virtual 3.2 to 4.1, in-person 3.2 to 4.4).

Conclusions: Virtual Geritalk trainees reported comparable increases in self-assessed preparedness for serious illness communication in in-person trainees, yet the course format required fewer resources (e.g., participant and facilitator time, space, travel, and catering costs). Furthermore, the course was highly rated by participants and, after the course, attitudes toward remote learning improved. Future work will examine the course’s efficacy in increasing use of communication skills through real-time clinical evaluation of trainees.

INTRODUCTION:

- High quality serious illness communication is essential to patients' medical decision-making, quality of life, and adjustment to serious illness.
- Prior to 2020, the Geritalk course was an intensive in-person 2-day communication skills intervention for Geriatrics and Hospice & Palliative Medicine Fellows.
- Due to the COVID-19 pandemic, Geritalk was adapted to a virtual format with synchronous sessions (1.5 hours/day for 5 days) and asynchronous online learning modules.

METHODS:

Using pre-course and post-course surveys, we compared learner responses from in-person and virtual courses regarding:

1. Learner satisfaction
2. Self-assessed preparedness for serious illness communication

RESULTS:

RESULTS: SELF-ASSESSED PREPAREDNESS

How well prepared do you feel you are to:

- Give bad news to a patient/family about their loved one’s illness?
- Conduct a family conference?
- Express empathy?
- Discuss various treatment options, including comfort care, with seriously ill patients or their families?
- Discuss discontinuing life-sustaining treatments with a family?
- Discuss religious or spiritual issues with patients/families?
- Elicit a patient’s/family’s concerns at the end of a patient’s life?

Summary Scores (means)

- 1 - Not at all prepared
- 3 - Somewhat prepared
- 5 - Very well prepared

RESULTS: LEARNER QUOTES

- “I think this was really great for us to experience especially because so many of our family meetings are being held over the phone or video visit right now.”
- “The patient interactions felt very real, just like telemedicine, you could see them in their homes, and...they're the only person in your field of vision, so it’s easy to forget everyone else is there.”
- “Overall, I was very impressed with the facilitators and how relatively seamless and effective the training was for being virtual.”

RESULTS: LEARNER SATISFACTION

- Of the 20 virtual Geritalk participants, 17 (85%) completed the pre-course assessment, and 14 (70%) completed the post-course assessment.
- Learner satisfaction was comparable between the in-person course and the virtual course:
  - 13 (93%) virtual and 17 (89%) in-person rated the educational quality of the course as “excellent.”
  - 13 (93%) virtual and 18 (95%) in-person “strongly agreed” that they would recommend the training to others.

CONCLUSIONS:

- Virtual Geritalk trainees reported comparable increases in self-assessed preparedness for serious illness communication to in-person trainees.
- The course format required fewer resources (e.g., participant and facilitator time, space, travel, and catering costs).
- The course was highly rated by participants and, after the course, attitudes toward remote learning improved.
- Future work will examine the course’s efficacy in increasing use of communication skills through real-time clinical evaluation of trainees and compare use of communication skills between those who participated in in-person and virtual courses.
ABSTRACT:

Introduction: Self-determination theory, a school of thought within social psychology that describes foundations of human motivation, posits that a desire to learn arises from the fulfillment of three psychological requirements: a sense of relatedness, autonomy, and a sense of competence. This framework can be applied to curriculum development and the shaping of the culture of a department. We sought to develop a structured approach to address these “psychological needs” and also improve the learning environment in a residency program. “Confession groups” have been demonstrated as an opportunity for residents to present, discuss, and reflect on personal and professional concerns without fear of repercussion. These sessions involve reading, out loud, anonymous “confessions” that have been previously submitted by group members. We applied the Delphi technique as an overarching structure to repeated “confession groups,” that alternating with meetings with department leadership.

Aims: The underlying goal was to determine whether the residency working/learning environment could be improved with this structured approach in a virtual format.

Methods: Confessions sessions were held every several months through Zoom. An email prior to each session was sent out to residents inviting responses to a brief survey requesting attendance at the virtual meeting. The overarching meeting structure is a modification of the Delphi method (Table 1, Figure 1). The meetings represent an end in themselves, but are also structured to enable qualitative analysis of content that arose from the meetings. The initial open-ended prompt (Figure 2) allowed us to first select concerns that could be addressed to achieve the underlying goal of the residency learning environment could be improved (i.e. purposive sampling). Several iterative meetings (including with program leadership) enabled a saturation of initial themes, followed by further clarification of those specific themes (i.e. theoretical sampling).

Results: Concerns that arose in the meetings were discussed and addressed by program leadership, as outlined by the structure in Figure 1. Perhaps the most notable outcome of these sessions has been the generation of a class representative system, in which an individual from each resident class acts as a sounding board for residents regarding any issues that arise, and a liaison to the program leadership to voice these concerns.

Conclusion: This structure of confidential resident meetings alternating with meetings with department leadership has allowed the implementation of program and departmental changes.

INTRODUCTION:

Self-determination theory, a school of thought within social psychology that describes foundations of human motivation, posits that a desire to learn arises from the fulfillment of three psychological requirements: a sense of relatedness, autonomy, and a sense of competence. This framework can be applied to curriculum development and the shaping of the culture of a department. We sought to develop a structured approach to address these “psychological needs” and to improve the learning environment in a residency program. “Confession groups” have been demonstrated as an opportunity for residents to present, discuss, and reflect on personal and professional concerns without fear of repercussion. These sessions involve reading, out loud, anonymous “confessions” that have been previously submitted by group members. We held a series of meetings, with iterative discussion of challenges, obstacles and priorities. As an overarching structure, the iterative nature of the discussions were inspired by a modification of the Delphi technique. These meetings alternating with meetings with department leadership. The underlying goal of this curriculum was to improve residency working/learning environment with a structure approach in virtual format.

METHODS:

Confessions sessions were held every several months through Zoom. An email prior to each session was sent out to residents inviting responses to a brief survey containing an open-ended prompt (Figure 1) and requesting attendance at the virtual meeting. These meetings alternated with meetings with department and residents. The overarching meeting structure was inspired by the Delphi method, and modified as a framework for change management (Figure 4). The meetings represented an end in themselves, but also structured to enable qualitative analysis of content that arose from the meetings. The initial open-ended prompt submitted to residents (Figure 1) allowed us to select concerns that could be addressed to achieve the underlying goal of the residency learning environment could be improved (i.e. purposive sampling).

One meeting amongst residents would occur followed by presentation of the findings to the program and assistant program directors. This was followed by a second set of prompts (Figure 2) a new prompt that honed in on key concerns to clarify salient, actionable items from the first meeting, paired with the same open-ended prompt to space for new concerns. This next meeting was followed by discussion with program and assistant program directors in addition to departmental non-physician and physician administrators. These iterative meetings amongst residents and with program leadership allowed identification and clarification of specific themes (i.e. theoretical sampling).

RESULTS:

Perhaps the most valuable outcome of these sessions has been the generation of a class representative system, in which an individual from each resident class acts as a sounding board for residents regarding any issues that arise, and serves as liaison to the program leadership to voice these concerns. In general, this structure of confidential resident meetings alternating with meetings with leadership has allowed the successful implementation of residency program and departmental changes on an ongoing basis.

CONCLUSIONS:

REFERENCES:

The Effect of Using the MedChallenger Question Bank and Other Study Tools on OB/GYN Resident In-Service Exam Performance
Liza Karotkin, MD; Melissa Lozano, MD; Barbara Deli, MD
Icahn School of Medicine at Mount Sinai

INTRODUCTION:
• The Council on Resident Education in Obstetrics and Gynecology (CREOG) Examination is administered annually to OB/GYN Residents to assess medical knowledge and provide information regarding educational quality of a residency program
• Educational studies have demonstrated improvement in resident CREOG scores with targeted educational interventions.
• Performance on the CREOG examination can predict successful performance on the American Board of Obstetrics and Gynecology (ABOG) written examination.
• A study conducted at the UT Southwestern General Surgery program showed a positive correlation between the number of questions answered in the TrueLearn question bank and resident performance on their respective yearly in-service exam.

OBJECTIVES:
• In the 2019-2020 academic year, the OB/GYN department at Mount Sinai West provided the MedChallenger question bank to its residents to aid in CREOG exam preparation.
• We hypothesized that the number of MedChallenger questions answered would correlate with CREOG exam performance.

METHODS:
• MedChallenger data was collected to determine the total number of questions answered for each resident.
• Survey data of resident study habits and resident USMLE Step 1 and Step 2 scores were also recorded.
• Resident CREOG score reports for the 2020 CREOG exam were reviewed for 25 residents.
• A Spearman correlation was performed to determine the association between the number of MedChallenger questions answered and resident CREOG exam scores.

RESULTS:
• There is insufficient evidence to conclude that there is an association between number of MedChallenger questions completed and 2020 CREOG exam scores (Figure 1; p=0.68).
• There is a positive correlation between USMLE Step 1 and Step 2 scores and 2020 CREOG exam scores, but it was not statistically significant (Figure 2; p=0.07 and 0.09, respectively).
• 2020 CREOG exam scores were found to be significantly higher in participants who used TrueLearn (Table 1; p=0.03).

CONCLUSIONS:
• Implementation of a question bank, MedChallenger, for in-service exam preparation showed no correlation between the number of questions answered and 2020 CREOG exam scores.
• Survey data of residents showed that those who used an alternative question bank, TrueLearn, had significantly higher CREOG scores.
• 2020-2021 academic year data will be collected to determine what effect TrueLearn question bank use has on resident exam performance.

REFERENCES:
INTRODUCTION:

• Bedside POCUS can identify pathology such as pleural effusion, pulmonary consolidation, and ARDS with higher degrees of sensitivity and specificity than traditional examinations.
• Serial POCUS for evidence of pulmonary edema improves hospital outcomes in patients with CHF exacerbations resulting in shorter hospital stays and more frequent adjustment to diuretic dosing.
• Formal training of medicine trainees during their residency both increases their comfort with interpreting and obtaining ultrasound images, and improves the quality of images obtained when observed by expert practitioners.
• Barriers to implementation of POCUS education in Internal Medicine Residency programs include resident time commitments, lack of experienced faculty, and access to US machines.

OBJECTIVES:

1. Increase awareness and interest in the use and practicality of Point of Care Ultrasound among residents.
2. Improve comfort with utilization of Point of Care Ultrasound (POCUS) for General Inpatient Medicine and ICU patient care.
3. Promote proficiency in obtaining clear images from expert practitioners.
4. Improve ability to interpret and identify anatomical structures, common diagnoses, and pathology from ultrasound images.
5. Provide education pathway to increase frequency of utilization of diagnostic POCUS among internal medicine residents on inpatient rotations.

METHODS:

Learner Survey:

• Online survey was sent to all Mount Sinai Internal Medicine PGY1 and PGY2 residents.
• Survey assessed prevalence and frequency of current ultrasound utilization within the internal medicine program for diagnostic and procedural purposes, attitudes regarding the current state of ultrasound utilization and education, and individual willingness to participate in a dedicated ultrasound skills development curriculum.
• Respondents were queried on their comfort utilizing POCUS (1-5 ordinal scale, 1 = least comfortable, 5 = most comfortable), satisfaction with current ultrasound education (1-5 ordinal scale, 1 = least satisfied).

Faculty Identification:

• Faculty within the Mount Sinai Division of Hospital Medicine and Institute for Critical Care Medicine were identified and volunteered to assist in facilitating in-person didactic training and bedside practical sessions.
• Institute for Critical Care Medicine faculty volunteered to review learner’s ultrasound imaging studies and provide expert attestations to affirm clarity and accuracy of images.

Technology:

• Portable ultrasound machine was identified and underwent assessment to ensure optimal functionality and image quality.
• Access for Internal Medicine residents to Q-pathTM to confirm participant attestation, provide feedback.

RESULTS:

• Respondents from the Mount Sinai Internal Medicine program PGY1 and PGY2 classes expressed low levels of comfort utilizing ultrasound (Figure 1), although are utilizing frequently for procedures and diagnostic purposes (Figure 2).
• A longitudinal POCUS curriculum emphasizing Pulmonary Ultrasound was formulated (Figure 3), including:
  o At home and in-person didactic learning
  o Supervised bedside teaching and demonstration from expert faculty
  o Independent practice of POCUS skills with requirement to obtain 5 examples of the six image criteria for a complete pulmonary ultrasound exam (Figure 4)
  o Expert faculty review of all image studies in Q-pathTM to confirm participant attestation, provide feedback.

CONCLUSIONS/FUTURE:

1. A dedicated POCUS curriculum addresses a clear need within the Mount Sinai Internal Medicine residency program.
2. Self-directed online learning, in-person didactic sessions, and individual practice-based design allows for both knowledge acquisition of POCUS technique with means of honing necessary practical skills.
3. Consistent expert faculty facilitation, image review and feedback can ensure appropriate assessment of learner’s POCUS skill and quality.
4. Self directed nature with rolling in person sessions provides framework to expand trainee participation.
5. The curricular design and structure allows a similar model to be adopted for future expansion into different diagnostic POCUS examinations.

REFERENCES:

ABSTRACT:

Introduction: This study seeks to improve knowledge and skills in the care for individuals with developmental disabilities (IDDs) among internal medicine and pediatrics residents. There are no formal curricula to address transitioning care of IDDs to adult providers and the complex medical, social, and psychological implications of these transitions such as guardianship. Due to the lack of curriculum to address these knowledge gaps in both trainee programs, we propose a multimodal curriculum on IDDs for the pediatric and internal medicine residency programs at The Icahn School of Medicine at Mount Sinai. Methods: We used a pre-workshop questionnaire to assess trainees’ baseline knowledge of medical and social issues specific to IDDs. We then delivered a workshop with case-based discussion and resources for guardianship and transitions of care. Immediately after, 2 months after, and 6 months after the workshop, we reassess the trainees using the same questionnaire to determine whether they acquired, retained, and applied new knowledge regarding the care of IDDs. A virtual standardized patient (SP) workshop is currently being developed and will be compared alone and in conjunction with the workshop.

Result: Overall, 69 residents participated in the workshop (55 internal medicine, 9 pediatrics and 5 combined internal medicine and pediatrics). At baseline, participants had good knowledge of the clinical description of autism (93.2%), and cerebral palsy (94.8%), with only 50% of residents identified cerebral palsy significantly improved immediately post-workshop (96%, z=2.49, p=0.013). The largest baseline knowledge gaps were noted in transitions of care (43.0%), and guardianship (22.0%). Both of which improved immediately after the workshop (transitions knowledge increased to 72.5% (z=2.84, p=0.005), guardianship knowledge increased to 58.8%, z=2.43, p=0.015). Follow-up data from 2 months and 6 months after the workshop is pending.

Conclusion: Internal medicine and pediatrics residents significantly improved their knowledge base in cerebral palsy, transitions of care and guardianship after participating in an educational workshop addressing these topics. Further data collection is pending to determine the long-term durability of this knowledge.

INTRODUCTION:

As the life expectancy of IDDs approaches that of the general population, there are a growing number of young adults with developmental disabilities who are aging out of pediatric practices and transitioning to the care of internal medicine and pediatrics. The transition of care is rarely initiated at the recommended age of 12 years, which leaves insufficient time to identify appropriate adult specialists and family caregivers of IDDs. One SP from the Morchand Center for Clinical Competence at the Icahn School of Medicine at Mount Sinai has been recruited and trained to act out a clinical scenario: the caregiver of a non-verbal 21-year-old with autism presenting for a televisit to establish care with an internist, who will discuss guardianship and transitions of care. The encounter is currently being developed with anticipated production in May or June 2021.

METHODS:

Study Participants
- PGY-2 and PGY-3 internal medicine residents
- PGY-1, PGY-2 and PGY-3 pediatrics residents
- PGY-1 and PGY-2 combined internal medicine-pediatrics residents

Study Design
- All trainees who consented to participate were given a pre-workshop questionnaire to assess their knowledge of medical and social issues specific to IDDs, including clinical features of autism and cerebral palsy, transitions of care and guardianship.
- The workshop is a 1-hour session with the following components:
  - Description of the features of autism and cerebral palsy
  - The presentation of 2 clinical cases
  - An 18-year-old patient with autism and moderate intellectual disability presenting to the emergency room for an acute illness, accompanied by the caregiver who lacks guardianship.
  - A 21-year-old non-verbal patient with cerebral palsy presenting to an internist to help facilitate the transition of care from pediatric to adult health care providers.
- After the workshop:
  - The clinical video will be a “gold standard” encounter with an SP and physician to teach important knowledge and skills for interacting with caregivers of IDDs. One SP from the Morchand Center for Clinical Competence at the Icahn School of Medicine at Mount Sinai has been recruited and trained to act out a clinical scenario: the caregiver of a non-verbal 21-year-old with autism presenting for a televisit to establish care with an internist, who will discuss guardianship and transitions of care. The encounter is currently being developed with anticipated production in May or June 2021.
- Trainee knowledge is assessed with a questionnaire at three times post-intervention to determine durability of knowledge:
  - Immediately after
  - 2 months after
  - 6 months after
- To compare participant data from different timepoints while retaining anonymity, participants create an identification code that consists of the first 3 letters of their mother’s first name followed by the day of the month of the participant’s birthday (e.g. if mother’s name is Ruth and participant’s birthday is June 12, 1990, their identification code would be (Ruth) 12).
- This study was presented to the ISMMS Institutional Review Board and deemed exempt from further review.

RESULTS:

<table>
<thead>
<tr>
<th>Specialty</th>
<th>Prior Experience with IDDs</th>
<th>Developmental Pediatrics Rotation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Internal Medicine</td>
<td>36</td>
<td>N/A</td>
</tr>
<tr>
<td>Pediatrics</td>
<td>6</td>
<td>1</td>
</tr>
<tr>
<td>Internal Medicine-Pediatrics</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>

Key Findings
- Baseline knowledge of common developmental disabilities was good overall, with a statistically significant improvement in knowledge of cerebral palsy immediately post-workshop (z=4.35, p=0.001).
- The largest baseline knowledge gaps were noted in transitions of care (43.0%), and guardianship (22.0%). Both of which improved immediately after the workshop (transitions knowledge increased to 72.5% (z=2.84, p=0.005), guardianship knowledge increased to 58.8%, z=2.43, p=0.015).

Table 3. Residents’ Knowledge on IDDs

<table>
<thead>
<tr>
<th>Knowledge Area</th>
<th>Baseline (N=69)</th>
<th>Post-workshop (N=69)</th>
<th>Follow-up (N=69)</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clinical features of autism</td>
<td>92.7%</td>
<td>98.5%</td>
<td>95.7%</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Transitions of care</td>
<td>65.2%</td>
<td>72.5%</td>
<td>68.1%</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Guardianship</td>
<td>66.7%</td>
<td>58.4%</td>
<td>58.8%</td>
<td>0.036</td>
</tr>
</tbody>
</table>

Table 4. Residents’ Knowledge on the Care of IDDs

<table>
<thead>
<tr>
<th>Knowledge Area</th>
<th>Baseline (N=69)</th>
<th>Post-workshop (N=69)</th>
<th>Follow-up (N=69)</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clinical Practice</td>
<td>85.7%</td>
<td>83.7%</td>
<td>80.6%</td>
<td>N/A</td>
</tr>
<tr>
<td>Knowledge of medical and social issues specific to IDDs</td>
<td>96.1%</td>
<td>92.7%</td>
<td>85.5%</td>
<td>N/A</td>
</tr>
<tr>
<td>Knowledge of medical and social issues specific to IDDs</td>
<td>95.7%</td>
<td>95.7%</td>
<td>95.7%</td>
<td>N/A</td>
</tr>
</tbody>
</table>

Table 5. Residents’ Knowledge on IDDs

CONCLUSIONS:

1. Baseline knowledge of common developmental disabilities was good overall, with a statistically significant improvement in knowledge of cerebral palsy immediately post-workshop (z=4.35, p=0.001).
2. The largest baseline knowledge gaps were noted in transitions of care and guardianship among pediatric and internal medicine residents.
3. Perceived importance of curriculum on IDDs was significantly greater immediately after the workshop than at baseline. Two months after the workshop felt that the workshop content enhanced their clinical practice.
4. A virtual standardized patient (SP) workshop after the workshop felt that the workshop content enhanced their clinical practice among those participants.
5. Two months after the workshop, knowledge and perceived importance of specialized training in the care of youth with IDDs tended to decrease.

REFERENCES:

ABSTRACT:

Introduction: Emergency department providers of all levels may benefit from access to a compendium of peer-reviewed, highly structured, brief videos that present a just-in-time refresher on the essential components of performing and documenting physical exams. Our purpose is to create a brief physical exam video for the purposes of just-in-time education and training, with the goal of improving exam performance and documentation that requires minimal preparation time.

Methods: Physical exam videos will all be two minutes or less, featuring an emergency physician demonstrating the exam on a volunteer. Videos will be peer reviewed for quality and completeness. Videos will be easily accessible through a website or hyperlink in the electronic health record system.

Result: With regular application of the videos, ED providers should perform more comprehensive physical exams, carry out exam maneuvers properly, and produce more thorough and accurate documentation, without compromising preparation time.

Conclusion: Just-in-time physical exam videos may serve as an innovative educational resource for providers of all levels working on-shift in the emergency department.

INTRODUCTION:

Emergency department (ED) providers manage illnesses spanning all fields of medicine and are expected to have proficiency in a variety of physical exams. Some physical exams have multiple components or require special maneuvers. The performance of physical exams by ED providers may improve with the use of just-in-time training (JITT). JITT is a teaching method that provides brief, targeted educational material on a specific topic just prior to completing a task. JITT can minimize preparation time, allow the learner to visualize a task just before performing it, and has been rated positively by learners.1,2

JITT in the form of brief instructional videos has been shown to reduce preparation time and increase success for simple procedures including splint application, intravenous needle placement, and defibrillator use, compared to using traditional textbook reading material.2,4 A common practice in the ED is for all levels of providers to search the Internet for just-in-time educational materials in the form of videos for a quick refresher on the proper performance of complex physical exams. However, these videos are often too lengthy to be of utility. A Google search of “shoulder physical exam” videos yields results ranging from 5 to 22 minutes in length. While videos of this length may be useful for education off-shift, they are not practical on-shift with multiple patients waiting to be seen.

Additionally, the quality and applicability of online resources is highly variable. One group performed a systematic search of YouTube for videos on ophthalmoscopy, and found that of 7,640 results, only 27 (0.4%) were deemed satisfactory for educational purposes.3

To the best of our knowledge, JITT for physical exams has not been studied. A brief video of the essential components of a physical exam may act as a just-in-time refresher and may increase the provider’s accuracy, validity and comprehensiveness of multi-pronged physical exams as well as make for more thorough exam documentation.

Having JITT videos available to ED providers, rather than having them conduct an Internet search themselves, will also save time and assure use of high-quality educational resources.

ED providers of all levels may benefit from access to a compendium of peer-reviewed, highly structured, brief (less than two minute) videos that present a just-in-time refresher on the essential components of performing and documenting physical exams. Our purpose is to create brief physical exam videos for the purposes of just-in-time education and training, with the goal of improving exam performance and documentation that requires minimal preparation time.

METHODS:

Physical exam videos will be filmed in the Mount Sinai Simulation Teaching and Research (STAR) Center. The videos will feature a board-certified emergency physician demonstrating the exam on a volunteer with explanatory audio and text (Figures 1,2). Topics will be briefly outlined orthopedic, ophthalmologic, trauma, and others that have multiple components or complex maneuvers.

All videos will be two minutes or less. The emphasis will be on brevity, with the fundamentals of an exam performed within the time span. The videos are not meant as a form of primary education; the provider is expected to have a level of baseline knowledge and familiarity with the exam, but may not have done it completely or frequently in the recent past.

All videos will undergo peer review by senior emergency physicians with expertise in the area. There will be an explicit checklist for completeness, relevance and critical points. Once completed, depending on the platform used, the videos will be easily accessible through a website or hyperlink in the electronic health record system as a reference to the on-shift provider.

The efficacy of the videos on exam performance and documentation will be evaluated through self-assessment surveys sent to all levels of ED providers, through attending physician evaluations of residents and advanced practice providers, and in encounters with standardized patients. A prospective, randomized-controlled pilot study is currently underway to evaluate the efficacy of a brief just-in-time video on the performance and documentation of a physical exam on a standardized patient compared to more traditional learning methods.

RESULTS:

Just-in-time training in the form of brief educational videos of the physical exam that are of short duration, high quality, and peer-reviewed will be a useful refresher for providers of all levels working on-shift in a busy emergency department. With regular application of the videos, ED providers should perform more comprehensive physical exams, carry out exam maneuvers properly, and produce more thorough and accurate documentation, without compromising preparation time.

By watching the videos and then performing the exams themselves, providers will also derive an educational benefit by use of a just-in-time resource. Brief physical exam videos may also be a useful resource for clinicians working in a busy primary care or general internal medicine setting.

CONCLUSION:

Brief, just-in-time physical exam videos may serve as an innovative educational resource for providers of all levels working on-shift in the emergency department.

REFERENCES:

The Creation of Intergenerational Legacy Projects Via Virtual Platform as a Tool to Debunk Ageist Attitudes Among Pre-Clinical Medical Students

Krsna Kothari, Cecily McIntyre, Dayle Lapolla, and Noelle Marie Javier MD
Icahn School of Medicine at Mount Sinai

BACKGROUND
- Medical students and their future patients will benefit from positive attitudes about older adults.
- The co-creation of a legacy project requires active listening and collaboration and therefore is an ideal setting for the development of a meaningful, intergenerational relationship.
- Understanding the effect of virtual settings on intergenerational relationship building is of particular importance during the COVID-19 era.

OBJECTIVE
- We investigated the feasibility of a structured, online intervention to deconstruct ageist attitudes among pre-clinical medical students.

METHODS
- This study used an interventional pre-post design. There were two components of the program.
- Component 1: Pre-clinical medical students from the Icahn School of Medicine at Mount Sinai attended three didactic sessions about ageism and intergenerational programs and were provided with legacy project examples.
- Component 2: Students were randomly paired with an older adult recruited from the Mount Sinai Hospital Department of Geriatrics. Pairs met six times with optional guidance to create a legacy project together over the course of the meetings. Due to the COVID-19 pandemic, pairs met over Zoom technology.
- Assessment: Surveys that addressed ageist beliefs were administered to pre-clinical medical students and older adult participants both before and after the six meetings. Mid-intervention and post-intervention semi-structured interviews were also administered to participants from both age groups as an opportunity for them to reflect on their experience.

POST-INTERVENTION INTERVIEW FINDINGS
Interviews took place over Zoom and averaged 35 minutes for older adult participants and 18 minutes for medical students. Themes are highlighted below.

SURVEY FINDINGS
Figure 1 and Figure 2 both illustrate findings from the pre- and post-interventional survey of medical school participants. Questions evaluated attitudes around working with older adults and personally held ageist beliefs using an accredited 12-item “Expectations Regarding Aging” questionnaire.

DISCUSSION AND CONCLUSION
- In summary, a combination of survey and interview findings indicate that this structured online intervention was able to debunk ageist attitudes among a small sample of pre-clinical medical students.
- Out of the 5 pairs, 2 completed legacy projects, 2 started but did not complete, and 1 did not attempt.
- The 3 that did not complete emphasized in interviews that the structure facilitated by creating a legacy project added depth and intimacy to the conversations.
- Further research is required to see whether increasing the number of weeks pairs can meet will allow them to complete legacy projects as well as create lasting relationships.
- In the context of a rapidly aging population, preparing medical students to care for older adults as patients and as people should be a priority in medical education. This intervention represents a model that brings us one step closer to bridging the gap in geriatric care.

Table 1: Demographics

<table>
<thead>
<tr>
<th>5 Older Adults</th>
<th>5 Pre-Clinical Medical Students</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean Age: 84.5 years</td>
<td>Mean Age: 24.6 years</td>
</tr>
<tr>
<td>Racial/Ethnic Background: 40% African American, 40% White, 20% Puerto Rican (Self-Identified)</td>
<td>3 2nd Years, 2 1st Years</td>
</tr>
<tr>
<td>Racial/Ethnic Background: 20% East Asian, 20% Asian, 20% Indian/Asian American 20% Latina, 20% Black.</td>
<td></td>
</tr>
</tbody>
</table>

Figure 1: I expect patients 65 or older to comprise of a large part of my future practice.

Figure 2: When people get older, they need to lower their expectations of how healthy they can be.
Simulation Based Education of Patient Experience to Emergency Medicine Residents

Heidi Baer, Eric Legome, Kaedrea Jackson, Saira Mehmood, Joshua McHugh, Daniel Satnick, Steven J. Bolger, Yasamin Solanianzadeh
Icahn School of Medicine at Mount Sinai

Purpose:
Over the last several years, the field of Emergency Medicine (EM) has seen an increasing focus on the importance of patient experience throughout the United States. Health care leaders and hospital systems are devoting more time and resources to both understanding and improving the patient experience. The rising attention to this area of interest has yielded over 107 publications since the year 2011, literature which has shown patient experience to be highly correlated with improved patient outcomes, increased profit, and achievement of hospital quality goals (1-4).

Surveys such as Press Ganey (PG), Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS), and RateMyHospital (RMH) and the data which they provide, are driving forces for modification and improvement practices for both Academic and Community Institutions. Despite the weight which these surveys hold from an administrative standpoint and in measuring physician performance, emergency medicine resident education and understanding of these surveys in teaching hospitals remains quite limited. There have been recent publications which describe classroom-based curriculum for patient experience (5,6) as well as simulation-based empathy training (7). However, to date no study has utilized in-situ simulation to create a validated curriculum guided by the principles of patient experience surveys.

In an effort to address this void, this study outlines the implementation of a longitudinal simulation curriculum to teach patient experience driven patient-physician interactions amongst EM residents at our teaching institution. This curriculum was based on an objective checklist which incorporates the previously validated patient experience surveys (PG, HCAHPS, RMH). In order to analyze the patient experience, our Emergency Department administration leadership and the Simulation Division worked to create a curriculum for our residents that focuses on the patient-provider interaction. Six content experts, familiar with patient experience/satisfaction, simulation, and debriefing, worked together to create two types of patient presentations commonly seen in the emergency department. Residents were prebriefed prior to each case. Subsequently, a resident participated in a simulated patient interaction while several residents observed the interaction. Our content experts used a checklist during the scenario to review which objectives were covered. Content experts then debriefed all participants with an emphasis on the pre-determined criteria for an effective and meaningful patient experience. These simulated encounters portray patients that may be considered “difficult,” whether due to personality differences, language barriers, and/or concerns of family members. We will evaluate future Press Ganey and Rate My Hospital responses to see if patients see and/or appreciate any change in interactions with emergency department staff.

METHODS:
In order to analyze the patient experience, our Emergency Department administration leadership and the Simulation Division worked to create a curriculum for our residents that focuses on the patient-provider interaction. Six content experts, familiar with patient experience/satisfaction, simulation, and debriefing, worked together to create a curriculum for our residents that focuses on the patient-provider interaction. Six content experts, familiar with patient experience/satisfaction, simulation, and debriefing, worked together to create two types of patient presentations commonly seen in the emergency department. Residents were prebriefed prior to each case. Subsequently, a resident participated in a simulated patient interaction while several residents observed the interaction. Our content experts used a checklist during the scenario to review which objectives were covered. Content experts then debriefed all participants with an emphasis on the pre-determined criteria for an effective and meaningful patient experience. These simulated encounters portray patients that may be considered “difficult,” whether due to personality differences, language barriers, and/or concerns of family members. We will evaluate future Press Ganey and Rate My Hospital responses to see if patients see and/or appreciate any change in interactions with emergency department staff.

Simulation Checklist:

   - Introduces self
   - Identifies patient (name, ID band)
   - Establishes privacy

2. Elicits reasons for visit / concerns.
   - Asks if there are additional questions (Ex. Is there anything else I can do for you.)

3. Elicits patient expectations for visit.
   - Expresses empathy / understanding.
   - Answers psychological and physical complaints

4. Recaps / summarizes.
   - Manages expectations / intervention.
   - Addresses pain

5. Inquires about further needs.
   - Closes the loop
     - Explains testing, treatment, medications
     - Explains next steps after disposition

RESULTS:
General sentiment was positive with regard to the curriculum. Residents felt that the experience would improve their patient interactions. There were several common learning points among residents that recurred during the debrief. These included asking the patient open ended questions, recapping with the patient, strategies for managing patient expectations, and explaining next steps for management to the patient.

CONCLUSIONS:
Simulation and debriefing focused on the patient experience is an immersive way to engage residents. Residents believe this curriculum will enhance their future interactions with patients. Although there are numerous variables in the Emergency Department contributing to patient interaction, we believe that optimizing frontline provider interactions will lead to increased satisfaction from both patients and physicians.

REFERENCES:
ABSTRACT:

Introduction: Traditional “SOAP” formats are not always optimal in the outpatient setting. We sought to assess if the “Problem-Based Check Out” (PBCO) was effective in an outpatient residency clinic.

Method: Pre-survey was sent to assess attitudes of outpatient check-out process. The PBCO was then explained and piloted among first and second-year residents in a primary care setting. Feedback was obtained via survey.

Result: Most residents do not have a standard way of presenting in the outpatient setting. The majority involved in the PBCO pilot had a very favorable reaction. The residents found PBCO to be effective with particular advantages in increasing efficiency and streamlining thought-processes.

Conclusion: Preliminary data is compelling that PBCO may be as or more effective in the outpatient teaching setting than traditional styles of presentation.

INTRODUCTION:

Medical students traditionally learn to present in a temporally linear style. In the commonly used SOAP format, one presents the history followed by type of visits (48.6%), and time constraints (40.5%).

While this format lends itself well to emergency or inpatient settings, its relevance to outpatient is less clear. Outpatients often have multiple complaints, asymptomatic chronic problems, care coordination needs, and preventive health care to address. Presentations translate well to outpatient settings? Does inpatient frameworks for presenting translate well to outpatient settings?

METHODS:

Internal medicine residents in the Mount Sinai West-Morningside program who are based the William F. Ryan Community Health Center for their primary care practice were sent a pre-intervention survey to assess attitudes towards the check-out process in clinic. This survey was sent to all residents in all three years of training. Residents in their first year (PGY-1) and second year (PGY-2) were taught the format of PBCO and asked to apply it when presenting to an attending.

CONCLUSIONS:

Scrubbing SOAP: Rethinking Resident Presentations in the Outpatient Setting

Deborah Edelman, MD
Mount Sinai Morningside - Mount Sinai West; Icahn School of Medicine at Mount Sinai

ABSTRACT:

Introduction: Traditional “SOAP” formats are not always optimal in the outpatient setting. We sought to assess if the “Problem-Based Check Out” (PBCO) was effective in an outpatient residency clinic.

Method: Pre-survey was sent to assess attitudes of outpatient check-out process. The PBCO was then explained and piloted among first and second-year residents in a primary care setting. Feedback was obtained via survey.

Result: Most residents do not have a standard way of presenting in the outpatient setting. The majority involved in the PBCO pilot had a very favorable reaction. The residents found PBCO to be effective with particular advantages in increasing efficiency and streamlining thought-processes.

Conclusion: Preliminary data is compelling that PBCO may be as or more effective in the outpatient teaching setting than traditional styles of presentation.

INTRODUCTION:

Medical students traditionally learn to present in a temporally linear style. In the commonly used SOAP format, one presents the history followed by review of systems, exam, assessment, and plan.

While this format lends itself well to emergency or inpatient settings, its relevance to outpatient is less clear. Outpatients often have multiple complaints, asymptomatic chronic problems, care coordination needs, and preventive health care to address. Adapting oral presentations to synthesize and transmit salient details can result in significant cognitive burden on both preceptors and residents.

With this in mind, we sought to pilot utilization of "Problem-Based Check Out" (PBCO) created by the University of Alabama and assess its efficacy in our residency program.

METHODS:

Internal medicine residents in the Mount Sinai West-Morningside program who are based the William F. Ryan Community Health Center for their primary care practice were sent a pre-intervention survey to assess attitudes towards the check-out process in clinic. This survey was sent to all residents in all three years of training. Residents in their first year (PGY-1) and second year (PGY-2) were taught the format of PBCO and asked to apply it when presenting to an attending.

CONCLUSIONS:

Scrubbing SOAP: Rethinking Resident Presentations in the Outpatient Setting

Deborah Edelman, MD
Mount Sinai Morningside - Mount Sinai West; Icahn School of Medicine at Mount Sinai

ABSTRACT:

Introduction: Traditional “SOAP” formats are not always optimal in the outpatient setting. We sought to assess if the “Problem-Based Check Out” (PBCO) was effective in an outpatient residency clinic.

Method: Pre-survey was sent to assess attitudes of outpatient check-out process. The PBCO was then explained and piloted among first and second-year residents in a primary care setting. Feedback was obtained via survey.

Result: Most residents do not have a standard way of presenting in the outpatient setting. The majority involved in the PBCO pilot had a very favorable reaction. The residents found PBCO to be effective with particular advantages in increasing efficiency and streamlining thought-processes.

Conclusion: Preliminary data is compelling that PBCO may be as or more effective in the outpatient teaching setting than traditional styles of presentation.
Cultural Humility in Medical Practice: A Learning Session for Trainees Across Specialties

Emily Hertzberg MD, Kenneth Ashley MD, Rui Jiang MD, Maria Maldonado MD, Nicole B. Ramsey MD, Brijen Shah MD, Richard Silvera MD, Edward Poliandro PhD, Barbara Warren PsyD

Icahn School of Medicine at Mount Sinai

BACKGROUND:

In August 2018, the Icahn School of Medicine at Mount Sinai (ISMMS) Office of Graduate Medical Education (GME) joined the ACGME Clinical Learning Environment Review (CLER) Health Care Disparities collaborative. The goal of this national collaborative was to provide education and tools to develop institutional strategies to address health care disparities (HCD) involving learners and faculty in system-based solutions and through quality improvement. The focus of the ISMMS GME team was on disparities related to the intersection of race/ethnicity and sexual orientation/gender identity. As part of ISMMS GME collaborative team, we adapted an educational session on implicit bias to include topics of cultural humility, structural competency, and structural racism as well as bias mitigation techniques with cases and examples of disparities by race, ethnicity, sexual orientation and gender identity.

PURPOSE:

The purpose of this work is to evaluate a cultural humility, implicit bias, structural competency, and health equity educational session for trainees. Our aim was to increase knowledge of these topics, improve understanding and assess implementation of bias mitigation techniques through survey design.

METHODS:

The educational session is a two-hour interactive session that has been given in person or virtually via Zoom. The session was piloted over 4 sessions prior to August 2020. Between August 2020 and December 2020, there have been 6 sessions that reached 71 trainees. Attendees were trainees in MSWM (Mount Sinai West/Morningside) Internal Medicine, and MSH (Mount Sinai Hospital) Pediatrics. The session was assessed pre- and post-session with a 10-question survey using a 5-point Likert scale to evaluate for understanding of concepts and ability to implement bias mitigation techniques.

RESULTS:

Q1: I understand how implicit bias impacts patient outcomes

Q2: I am able to implement a technique to mitigate my implicit bias

Q3: I am able to implement the practice of cultural humility into my approach to patient care

Q4: I can describe how institutionalized racism impacts patient care and outcomes

Q5: I can state the structural determinants of health & recommend resources to my patients

Q6: I can obtain information about my patients’ socio-cultural context in order to better understand their complaints/concerns

Q7: I am able to develop rapport with my patients regarding their cultural background or belief system.

Q8: I am able to assist patients to get information and/or resources to help them navigate the healthcare system & address their specific SOI

Q9: I am able to demonstrate an openness and willingness to examine my own cultural perspectives & preferences

Q10: I am able to teach specific strategies of practicing patient care that demonstrates the principles of cultural humility

FUTURE DIRECTIONS:

These sessions have continued into 2021 and will reach additional residency programs throughout the health system. We hope to expand our session assessment by investigating post-session practice changes and incorporate patient feedback through HCAHPS data and patient advisory boards as well as patient outcomes.

LIMITATIONS:

We evaluated the curriculum based on self-reported data. The workshop allowed residents to retrospectively reflect on whether implicit bias impacted their patient care, and to increase their knowledge of such principles. However, in order to demonstrate whether the workshop was effective, a debriefing session at some point after the workshop would be useful for trainees to share patient encounter experiences where they reflect on how they recognized their implicit bias in the moment and utilized the PAUSE method that was taught to them. Moreover, the purpose of such training is to mitigate healthcare disparities, and we did not evaluate pre and post patient outcomes.

ACKNOWLEDGEMENTS:

• The Office of Graduate Medical Education at the ISMMS
• The Office of Diversity and Inclusion
• Team members from the ISMMS ACGME health care disparities collaborative

Table 1. Baseline characteristics of those who participated in the training

<table>
<thead>
<tr>
<th>Total number of trainees who participated in training</th>
<th>N=71</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-training survey response</td>
<td>69 (97%)</td>
</tr>
<tr>
<td>Post-training survey responses</td>
<td>59 (55%)</td>
</tr>
</tbody>
</table>

By Residency

<table>
<thead>
<tr>
<th>Mount Sinai West/Morningside Internal Medicine</th>
<th>46</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mount Sinai Hospital Pediatrics</td>
<td>25</td>
</tr>
</tbody>
</table>
ABSTRACT:

Introduction: Effective scientific communication is as important as conducting good research. Good scientific writing entails an important skill set that needs to be nurtured and developed, but an appropriate curriculum for the same is lacking in medical school and residency training. While there are a few online resources to this end, none is tailored to the specific needs of a medical professional in training. As we implement a formal curriculum in scientific writing for our Internal Medicine (IM) Residency Program, we conducted this needs assessment survey.

Methodology: A questionnaire-based needs assessment survey was administered across all residents in our IM residency program. Google forms with QR code and hyperlink-based access was utilized to ensure high response rate. Questions were broadly divided into demographics (limited to year of training), previous research experience, comfort with manuscript preparation and any suggestions (free text). No identifying data was collected.

Results: A total of 50 responses were received, with 56% coming from 1st year residents. Only 4 had previous formal training in conducting research (MPH or PhD). 80% wanted to pursue sub-specialty fellowship training and career plans post residency (Figure 2). Only 4 had previous formal training in conducting research (MPH or PhD). 80% wanted to pursue sub-specialty fellowship training and career plans post residency (Figure 2).

Conclusion: The survey responses solidified our work to improve the knowledge gap and develop a curriculum delivery method adapted to the heterogenous learning preferences of the residents in the program.

INTRODUCTION:

> Effective scientific communication is critical for research dissemination

> A questionnaire-based needs assessment survey was administered across all residents in our IM residency program.

METHODS:

> Questionnaire-based needs assessment survey to all residents in the Internal Medicine program

> Survey was disseminated using Google forms with QR code and hyperlink used to ensure high response rate

> No identifying data collected

> 15 questions with majority multiple choice with option for free text

> Domains explored

> Demographics (limited to year of training)

> Previous research experience or training

> Comfort with manuscript preparation

> Career plans post residency

> Use of social media for research promotion

RESULTS:

> 50 responses were received (Figure 1)

> Majority wanted to pursue sub-specialty training post residency (Figure 2) with 62% involved in research work prior to starting residency (Figure 3)

> Majority of the respondents were somewhat (44%) or not at all (48%) comfortable with statistical methods

> Half of the respondents used some form of reference manager for manuscript preparation

> There was a heterogeneous response to how residents select their journal for publication (Figure 5)

> Around 40% of respondents used social media for promoting their research or learning about others’ research (Figure 6)

> Residents had different preferred learning approaches (Figure 7)

CONCLUSIONS:

> Great interest in residency program for a formal curriculum

> Address the knowledge gap by developing a curriculum

> Variable curriculum delivery method based on learner preferences
INTRODUCTION:

- Pediatric overweight and obesity have increased in prevalence over the last few decades.
- Despite expert guidelines that provide recommendations on pediatric overweight and obesity screening, prevention, and management, these disorders are underdiagnosed, and providers often deviate from expert guidelines.
- The appropriate education of resident physicians, who serve as front-line providers for many patients and play an important role in caring for them, is critical.

OBJECTIVE:

To evaluate the effectiveness of resident-focused educational interventions on the screening and management of pediatric overweight and obesity by resident physicians.

METHODS:

- Design: two months pre- and two months post-intervention chart reviews of preventive visits conducted by residents at an academic continuity practice.
- Charts of patients 2-18 years old with BMI ≥85th percentile for age and sex at the visit were reviewed (overweight defined as BMI 85th to <95th percentile; obesity defined as BMI ≥95th percentile).
- Interventions included:
  - Lecture on overweight/obesity definitions, screening and management recommendations
  - Information card outlining screening and management algorithms attached to computers in the clinic workroom
  - Best Practice Advisory alert in the electronic medical record
  - Handout outlining healthy lifestyle tips
- Data analysis: descriptive data were calculated; comparisons were performed using y2 or Fisher’s exact test. All P values were two-tailed, with P<0.05 considered statistically significant.

RESULTS:

- Of 1490 total charts reviewed, the number of patients with either overweight or obesity was 667 (44.8%).
- There was no significant difference in baseline characteristics between the pre- and post-intervention groups (Table 1).
- After implementation of interventions, documentation of diet, physical activity, and family history significantly increased (P<0.05); however counseling on diet, physical activity and portion size did not (Figure 1).
- Correct overweight diagnosis by residents increased from 25.7% to 56.4% (P<0.0001). Similarly, correct obesity diagnosis increased from 60.8% to 84.5% (P<0.0001) (Figure 2).
- Compared to patients with overweight, patients with obesity overall were more likely to receive screening labs and counseling on diet, physical activity, and portion size (all P<0.05).

CONCLUSIONS:

- Implementation of resident-focused educational interventions improved residents’ diagnosis of overweight and obesity but not frequency of counseling.
- Additional efforts are needed to further boost diagnosis rates and improve counseling efforts, and further studies will ascertain whether this then translates into positive behavior changes and improved clinical outcomes.

REFERENCES:

INTRODUCTION:
“teachers...mulling over proper curriculum for years to no avail, since few institutions could or would meet such exacting measurements. The most workable plan was to outline generally what needed to be covered in a residency program and leave it up to individual institutions and their circumstances how to best cover it.”

• The creation of a structured resident educational curriculum in ophthalmology has yet to be widely implemented.
• The lack of a structure described as a challenge in the 1930s has now allowed for countless innovations within resident education in ophthalmology.
• Virtual reality simulators
• Flipped classrooms
• Competency rubrics

However, there remains a gap in the current literature on basic skills acquisition and objective assessment of skills retention for ophthalmology residents.

A new video-based orientation curriculum was created and implemented during this two-week orientation period for incoming ophthalmology residents to objectively teach and measure ophthalmic examination skills acquisition and retention.

METHODS:
Orientation Schedule Optimization:
First, analysis of conventional orientation schedules broke down the two-week schedule into categorical schedules- Clinical Skills Sessions, Didactic Sessions, Administrative Sessions, Patient Care Sessions. Necessary improvements to the pre-existing curriculum structure included increased slit lamp exposure, high-yield, introductory didactics only, streamlined/minimal administrative sessions and structured practice-oriented patient care sessions.

Post-Curriculum OCEX
On the last day of orientation, residents were recorded completing an entire ophthalmic exam on standardized patients consisting of co-residents and attendings. The recorded videos were then graded using a 36-point grading rubric based off of the validated Ophthalmic Clinical Evaluation Exercise (OCEX). An average score was generated between the three independent evaluators.

References:

RESULTS:
7 residents were recruited:
OSCE
• Average pre-curriculum scores: 16.5 +/- 5.80
• Average post-curriculum scores: 30.9 +/- 2.70
p-value (Paired T-test): 0.0002

Conclusions:
• This novel curriculum incorporating a flipped classroom, novel video series, proctored clinical skills sessions, and structured patient care sessions was effective in rapidly increasing incoming ophthalmology resident comfort and skills with BOE
• Continued implementation of the orientation curriculum will allow for more data to be collected to further corroborate the promising results of this pilot program
• In a field as visually oriented as ophthalmology, video-based instruction should be more widely implemented in the training of residents.

REFERENCES:
**NeuroSim: Neurology Curriculum Through Web-Based Interactive Learning**

Daniel Santos MD¹, Samira Farouk MD MS², Laura Stein MD¹

¹Department of Neurology, Icahn School of Medicine at Mount Sinai
²Department of Nephrology, Icahn School of Medicine at Mount Sinai

**WEBSITE:**
- We created NeuroSim (www.neurosimg.org), an interactive website with case-based learning and multiple-choice questions to supplement resident training curriculum.
- Adapted from NephSim, NeuroSim is the third in the Sim Series, a collection of medical teaching websites.
- We use WordPress, self-hosting online software, funded and maintained by the Department of Neurology Residency Program at the Icahn School of Medicine at Mount Sinai.
- On December 9th, 2020, NeuroSim.org publicly released 8 interactive cases, each involving 5 – 10 imbedded multiple-choice questions.
- Since launch, 1–2 new cases have been added every month and we average ~96 visitors per month.
- Current cases cover topics including Stoke Codes, Status Epilepticus, Vertigo, Increased Intracranial Pressure, Multiple Sclerosis, and Headache.

**METHODS:**
- Needs assessment surveys of PGY2 to PGY4 neurology residents were conducted to evaluate subjective gaps in training and use of online learning materials during medical school and residency.
- Cases are based on topics outlined in the American Academy of Neurology Resident Core Curriculum.
- Cases are created by senior PGY-4 residents, supervised and edited by chief resident of education as well as neurology faculty.

**EDUCATIONAL NEEDS**
- 79% (n=23) of residents responded to the baseline needs assessment.
- 91% described using online interactive resources during medical school and 83% rated online interactive resources in the top 5 of resources utilized in medical school.
- 35% described using online interactive resources during residency, however 91% felt online interactive cases and questions would beneficially supplement their resident training.
- 78% felt that developing new cases or questions would help them master a specific topic.

**CASE FEEDBACK**
- 8 visitors have completed post-case surveys, including medical students, neurology residents, and non-neurology providers.
- Feedback has been very positive. All 8 visitors “strongly agree” that cases help them understand topics discussed and helped them build on their understanding of neurology.
- One visitor mentioned “I am a pediatrician, and this year ended a master in epilepsy, [learning through] NeuroSim is better” and another called NeuroSim “a great studying resource.”

**CONCLUSIONS**
- NeuroSim is an innovative online interactive learning platform with potential to supplement the learning of neurology and bridge training gaps among neurology trainees.
- Data collection is ongoing, but early feedback suggests that the platform and curriculum amplifying the learning of complex topics in across learner levels.
Engaging Physician Trainees through Bedside ICU Narratives

NGUYEN, C; DAVIDOVICH, A; STOEVER, J; PATADIA, D; SHACHI, T; MONTANARO, J; SMITH, B; SHAPIRO, J; MOHANRAJ, EM
Mount Sinai Morningside Hospital, Icahn School of Medicine at Mount Sinai, New York

BACKGROUND

- Physicians in the ICU treat complex patients in a stressful environment
- Recent attention has focused on improving patient- and family-centered care but ICUs remain loci for dehumanization
- The marked increase in patient isolation and physician stress due to the covid-19 pandemic dramatically increases the dehumanizing effect
- There are many barriers to providing humanistic care including high workload, non-communicative patients, and physician burnout which can result in empathy erosion and decreased sense of fulfillment

METHODS

- We designed a questionnaire and poster (Image 1) to elicit and share patients’ biographic and social background information
- Patients in the Mount Sinai Morningside ICU (NY, NY) with anticipated stay greater than 48 hours were enrolled
- Patients or a surrogate provided questionnaire responses and patient photographs, which were shared on daily inter-professional rounds and posted in the patient’s room
- To study intervention impact on physicians, residents in the ICU were consented for enrollment

OBJECTIVES

- Institute a narrative medicine practice to better understand critically ill patients on a personal level
- Humanize the ICU patient experience
- Foster a deeper sense of meaning and fulfillment for physician trainees in the ICU
- Assess the impact of sharing patient biographies on the attitudes and experiences of physician trainees in the ICU
- Assess the impact of sharing patient biographies on the attitudes and experiences of physician trainees in the ICU

RESULTS

- The study was conducted in a New York City academic hospital during the second surge of covid-19
- Over 8 weeks, 20 patient biographies were completed and shared (Image 2)
- Demographics of the 19 enrolled resident physicians are detailed in Figure 1
- Post-intervention, residents agreed or strongly agreed that they spent more time eliciting personal information, spent additional time at the bedside, developed improved rapport with surrogate(s), felt more enthusiasm for ICU care, and derived increased meaning from work (Figure 2)
- Residents also reported increased sense of responsibility for patient welfare (37%), additional time spent with surrogate (42%), and a compulsion to monitor patient progress beyond routine duties (47%)
- The five thematic categories with representative comments are detailed in Table 1
- The majority of residents indicated that the intervention was fun and worthwhile, with only minimal interruption to ICU rounds

FIGURE 1: RESIDENT DEMOGRAPHICS

<table>
<thead>
<tr>
<th>Category</th>
<th>Residents Agree or Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Patient humanization</td>
<td>100%</td>
</tr>
<tr>
<td>Communication and relationship building</td>
<td>80%</td>
</tr>
<tr>
<td>Impact on patient care</td>
<td>75%</td>
</tr>
<tr>
<td>Fulfillment of work</td>
<td>75%</td>
</tr>
<tr>
<td>Impact on emotions and burnout</td>
<td>70%</td>
</tr>
</tbody>
</table>

SIGNIFICANCE

- Sharing patient biographies helps to overcome barriers limiting humanistic care in the ICU
- Residents spent more time with patients, developed easier rapport with surrogates, and derived more meaning from work
- Residents perceived the intervention as humanizing and felt that learning patient biographies may positively impact delivery of care
- Emotional responses were perceived as helpful and challenging, which may mitigate physician burnout, improve ICU moral climate, and enhance fulfillment from work
- Humanizing the ICU likely had a more profound impact given extreme patient isolation and physician stressors...
ABSTRACT:

Introduction: Health literacy and health inequity have emerged as extremely significant social issues currently facing the medical community. Despite in-depth verbal explanations and language translation services, many patients fail to understand the anatomy related to medical conditions and operations being offered as valuable treatments. We proposed introducing medical students to a digital drawing platform to facilitate the delivery of clear healthcare communication and more equitable care. Our study set out to evaluate how an instructional course on digital drawing would impact the likelihood of medical students to utilize medical illustrations in future patient encounters.

Method: “Draw Your Way Through Medicine” is an elective course in digital medical illustration, offered at the Icahn School of Medicine at Mount Sinai. The nine-week course hosted weekly virtual lectures and workshops during the fall 2020 semester. The first three lectures introduced students to digital drawing concepts through the Procreate iPad application, while the remaining lectures focused on using visual explanations to depict specific pathologies and procedures. Students completed pre- and post-course surveys which utilized a 1 to 5 Likert scale and included both multiple-choice and free-response questions. Statistical analysis was performed using paired t-tests.

Result: A total of 36 students enrolled in the course, 27 of which completed the pre-course survey while 23 completed both pre- and post-course surveys. The pre-course survey cohort was majority female (63%) and contained more students from preclinical years (85%). Enrolled students reported a strong perceived value in drawing as a communication tool (4.57, p = 0.01), specifically in the clinical context (4.76) prior to the course. Further, both before and after the course, enrollees felt that a digital drawing platform could enhance patient satisfaction (4.62 to 4.71, p = 0.03). Students’ comfort level with drawing improved from after course completion (3.14 to 3.48, p = 0.02), specifically in reference to medical visuals (2.24 to 3.67, p < 0.01). Qualitative responses echoed the perceived value and enthusiasm for implementing digital drawing as a clinical communication tool.

Conclusion: The introduction of a digital drawing course showed the considerable value in improving medical students’ confidence in generating medical illustrations. Moving forward, the course should be expanded to additional audiences and focus on implementing this platform in actual patient encounters.

INTRODUCTION:

• Studies have shown that the correlation between insufficient health literacy and race acts as a major deterrent for individuals seeking and receiving quality healthcare.

• As early as the 14th century, drawings have played an essential role in the development of medicine and surgery.

• Few physicians receive any formal artistic instruction during the course of their medical training. Thus, any ventures into medical illustration demonstration and teaching could be considered unorthodox.

• Objective: Determine how a formal instructional course in digital drawing would impact a cohort of medical students.

METHODS:

• For the fall 2020 semester, Draw Your Way Through Medicine was offered as an elective course for medical students. The course consisted of nine, one-hour sessions (see Table 1).

• All digital illustration was performed using Procreate (Savage Interactive; North Hobart, Tasmania, Australia). All classes were hosted virtually via Zoom (Zoom Video Communications, San Jose, CA, USA) and consisted of slideshow presentations, pre-recorded videos, and live drawing demonstrations.

RESULTS:

Table 1. Course syllabus, showing lecture objectives and topics.

<table>
<thead>
<tr>
<th>Week</th>
<th>Teaching Objective</th>
<th>Teaching Learning Module</th>
<th>Specialty, Disease/Procedure</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Understand the basics of Procreate/digital drawing</td>
<td>Digital Drawing Follow Digital Drawing Follow</td>
<td>–</td>
</tr>
<tr>
<td>2</td>
<td>Understand layers, their function, and how to use them.</td>
<td>Along Instruction Along Instruction</td>
<td>–</td>
</tr>
<tr>
<td>3</td>
<td>Use tracing, shading to create a database of organs.</td>
<td>Digital Drawing Follow Along Instruction</td>
<td>–</td>
</tr>
<tr>
<td>4</td>
<td>Use drawing to study and create study guides.</td>
<td>Digital Drawing Follow Along Instruction</td>
<td>Medical Education</td>
</tr>
<tr>
<td>5</td>
<td>Illustrate a physiological process. Practice telling a story, identify important points and steps.</td>
<td>Physician Guest Lecture and Workshop</td>
<td>Pediatric Nephrology, Hydronephrosis</td>
</tr>
<tr>
<td>6</td>
<td>Illustrate a surgery. Practice telling a story, identify important points and steps.</td>
<td>Physician Guest Lecture and Workshop</td>
<td>General Surgery, Laparoscopic Cholecystectomy</td>
</tr>
<tr>
<td>7</td>
<td>Illustrate a physiological process. Practice telling a story, identify important points and steps.</td>
<td>Physician Guest Lecture and Workshop</td>
<td>Emergency Medicine and Radiology, Exsanguine Hemorrhage</td>
</tr>
<tr>
<td>8</td>
<td>Illustrate a surgery. Practice telling a story, identify important points and steps.</td>
<td>Physician Guest Lecture and Workshop</td>
<td>Pediatric Surgery, Inguinal Hernias</td>
</tr>
<tr>
<td>9</td>
<td>Understand how to use drawing in the clinic, medical education, and academia.</td>
<td>Physician Guest Lecture and Workshop</td>
<td>Obstetrics and Gynecology, Cervical Insufficiency</td>
</tr>
</tbody>
</table>

Table 2. Enrolled student demographics.

<table>
<thead>
<tr>
<th>Gender</th>
<th>Course Enrolment</th>
<th>Pre-Course Survey</th>
<th>Post-Course Survey</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>n=12 (33.3%)</td>
<td>10 (37%)</td>
<td>9 (43%)</td>
</tr>
<tr>
<td>Female</td>
<td>n=24 (66.7%)</td>
<td>17 (63%)</td>
<td>12 (57%)</td>
</tr>
<tr>
<td>Total</td>
<td>n=36</td>
<td>n=27</td>
<td>n=21</td>
</tr>
</tbody>
</table>

REFERENCES:


Figure 1. Pre- and post-course mean survey results.

Figure 2. Sample drawings from the course.
INTRODUCTION

- Physician-led innovation in technology, business, health policy and life sciences has been an emerging hybrid career path, but not well supported in today’s medical education system.
- MD++ was founded by Sherman in May 2020 as a national 501c3 organization to support this emerging student population - growing to 822 medical students as of March 2021.

METHODS

- 209 survey responses representing 81 medical schools
- 36% response rate

RESULTS

<table>
<thead>
<tr>
<th>Case Studies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Objectives: Does prior work experience or interest in a hybrid career decrease student interest in residency or type of residency?</td>
</tr>
<tr>
<td>INTRODUCTION: Physician-led innovation in technology, business, health policy and life sciences has been an emerging hybrid career path, but not well supported in today’s medical education system.</td>
</tr>
<tr>
<td>METHODS: 209 survey responses representing 81 medical schools, 36% response rate.</td>
</tr>
<tr>
<td>RESULTS: Will you pursue residency after medical school?</td>
</tr>
<tr>
<td>Figure 1: Likert scale of 1 = “Definitely Pursue Residency” to 5 = “Definitely not pursuing Residency”</td>
</tr>
<tr>
<td>Figure 2: Grouping of intended specialty of interest</td>
</tr>
<tr>
<td>Figure 3: The majority of MD++ students plan on &gt;50% of clinical practice post-residency</td>
</tr>
<tr>
<td>Figure 4: MD++ has facilitated 50 mentor-mentee matches, placed 30 students into tailored entrepreneurial or venture fellowships, and organized over 20 events that have collective engaged hundreds of medical students</td>
</tr>
<tr>
<td>Figure 5: Some of the events MD++ has virtually hosted since our launch in May 2020. Top left: a market mapping competition to prepare medical students for venture capital fellowships. Bottom right: a fireside chat with Dr. Sachin Jain on physician-innovator career</td>
</tr>
</tbody>
</table>

CONCLUSIONS

- 84.9% responded positively to a Likert scale survey “Will you pursue residency after medical school?”.
- Work experience prior to medical school (χ2 = .23) and interest in a hybrid physician-innovator career (χ2 = .59) did not correspond with any decrease in intent to pursue residency.
- Qualitative responses suggest more institutional and extracurricular opportunities would support early career exploration for aspiring physician-innovators.

FUNDING & ACKNOWLEDGEMENTS

- Thanks to AlleyCorp for their early and continued sponsorship of MD++.
- Huge thanks to the MD++ executive team, especially our founding VP of Community, Bethany Dubois (MS1).

REFERENCES

BACKGROUND

- The coronavirus 19 (COVID-19) pandemic has necessitated unprecedented changes in undergraduate medical education, including suspension of visiting sub-internships.
- This disrupted opportunities for students to explore other residency programs, who responded by developing virtual experiences to expose outside students to their residency program.

OBJECTIVE

To discuss the design and impact of a novel otolaryngology virtual sub-internship created as a substitute for the visiting electives suspended due to the COVID-19 pandemic.

METHODS

- A two-week virtual rotation was designed and registered with the Visiting Student Learning Opportunities (VSLO) program.
- The rotation was offered the first two weeks of August and September 2020.
- Students completed pre- and post-rotation surveys, responding to statements using a 1 (Strongly Disagree) to 5 (Strongly Agree) scale, to obtain feedback and assess impact.

RESULTS

- 12 students enrolled and participated in approximately 60-70 hours of virtual interactive sessions, including clinical and surgical lectures, program overviews, resident Q&A panels, faculty "Meet & Greets," alumni information sessions and hospital tours.
- Each student delivered an end-of-rotation presentation to the department on a clinical topic or research interest of their choice.
- Overall, visiting students indicated the virtual sub-internship was an important opportunity to better understand program structure and culture; it influenced their rankings of programs and should continue to be offered even after in-person sub-internships resume.

<table>
<thead>
<tr>
<th>Statements</th>
<th>Pre-Rotation Rating (mean ± SD)</th>
<th>Post-Rotation Rating (mean ± SD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>I know about the ENT program structure and clinical rotations at Mount Sinai</td>
<td>2.00 ± 0.60</td>
<td>4.75 ± 0.45</td>
</tr>
<tr>
<td>I am aware of the educational opportunities (didactics, courses, conferences) offered to residents at Mount Sinai</td>
<td>1.83 ± 0.58</td>
<td>4.67 ± 0.49</td>
</tr>
<tr>
<td>I am aware of the housing options available to residents at Mount Sinai</td>
<td>2.00 ± 0.95</td>
<td>4.75 ± 0.45</td>
</tr>
<tr>
<td>I know about the research opportunities at Mount Sinai</td>
<td>2.00 ± 0.85</td>
<td>4.67 ± 0.49</td>
</tr>
<tr>
<td>I know about the income, meal, and educational stipends, and travel reimbursements offered to residents at Mount Sinai</td>
<td>1.50 ± 0.52</td>
<td>4.67 ± 0.49</td>
</tr>
<tr>
<td>I feel like I know about what it is like to live and work in NYC</td>
<td>3.92 ± 1.00</td>
<td>4.58 ± 0.51</td>
</tr>
<tr>
<td>I feel like I know what the day in the life of a Mount Sinai ENT resident looks like</td>
<td>2.17 ± 0.39</td>
<td>4.67 ± 0.49</td>
</tr>
<tr>
<td>I know what the hospitals and resident working environments look like</td>
<td>2.25 ± 0.75</td>
<td>4.00 ± 1.13</td>
</tr>
<tr>
<td>I feel like I would get along with the residents at Mount Sinai</td>
<td>3.58 ± 1.00</td>
<td>4.92 ± 0.29</td>
</tr>
</tbody>
</table>

Table 1. Student responses to pre- and post-rotation surveys. Students were asked to respond to various statements using a 1 (Strongly Disagree) to 5 (Strongly Agree) scale.

<table>
<thead>
<tr>
<th>Statements</th>
<th>Rating (mean ± SD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>I enjoyed the Mount Sinai Virtual Away elective</td>
<td>4.92 ± 0.29</td>
</tr>
<tr>
<td>This opportunity was helpful in learning more about the program</td>
<td>4.92 ± 0.29</td>
</tr>
<tr>
<td>This opportunity will factor into my ranking lists</td>
<td>5.00 ± 0.00</td>
</tr>
<tr>
<td>This opportunity should be continued as a supplementary experience even when in-person Sub-1's can resume</td>
<td>4.25 ± 0.75</td>
</tr>
</tbody>
</table>

Table 2. Student responses to post-rotation survey questions regarding the enjoyment and utility of the virtual sub-internship. Students were asked to respond to various statements using a 1 (Strongly Disagree) to 5 (Strongly Agree) scale.

CONCLUSIONS

- The COVID-19 pandemic has presented numerous challenges for undergraduate medical education, necessitating educational innovation to ensure continued immersion in the clinical environment, including visiting sub-internships.
- Visiting sub-internships are particularly important for students applying into competitive subspecialties or without a home program.
- Although there is no substitute for in-person visiting sub-internships, a well-designed, interactive virtual rotation can be an informative and impactful alternative.
- Future research is needed to determine how best to incorporate virtual clinical rotations in undergraduate medical education moving forward.

REFERENCES


INTRODUCTION:
Medical students applying to Emergency Medicine residency typically complete away rotations during their fourth year. These rotations allow students to hone clinical skills, experience different types of Emergency Departments, and decide on their application and interview season and obtain a Standardized Letter of Evaluation, which is an integral part of the residency application review process. Residency programs benefit from hosting visiting students as these is an integral part of the residency application review process. This began by presenting the patient and providing their initial assessment and management of patients with common precepting. Students were surveyed about their perceptions of this activity on our end-of-course evaluation, and faculty preceptors were debriefed after each session.

RESULTS:
Five students participated in the course and each completed two virtual precepting sessions in addition to other course activities. All students reported they strongly agreed that they enjoyed the virtual precepting sessions and would recommend it for a future virtual rotation. Faculty felt that the type of teaching interaction they would expect when seeing a real patient. One theme that emerged from comments (Figure 3) was that students felt the sessions truly focused on clinical reasoning rather than medical knowledge. They had to take up deus ex machina strategies of each case in advance.

In addition to positive reviews from the students, faculty felt these sessions allowed them to get to know each student and develop patterns in clinical reasoning that may not be apparent when presentations are scattered throughout a typical shift.

CONCLUSIONS:
1. This format allowed for an interactive teaching session that both students and faculty thought was a valuable activity in a virtual setting.
2. Allowing students to read about the presentation and management of each case in advance of the session allowed preceptors to isolate the clinical reasoning skills inherent to the practice of Emergency Medicine:
3. Designing an innovative approach to virtual emergency medicine clerkships may have on performance.
4. This could even be further modified to the format to be feasible.

An Innovative Approach to Demonstrating Clinical Reasoning in a Virtual Clerkship
Christopher Richardson MD, Jamie Edelstein MD, Jennifer Beck-Esmay MD, Felipe Serrano MD, Chris Bahn MD, Chen He MD.
Department of Emergency Medicine at Mount Sinai Morningside-West

ABSTRACT:
Introduction: We developed a “virtual” Emergency Medicine clerkship to replace our traditional elective rotation during the COVID-19 pandemic. While converting traditional didactics to a remote-learning format was straightforward, we also needed to design new activities and assessment tools to allow students to demonstrate fundamental clinical reasoning skills inherent to the practice of Emergency Medicine.

Methods: We developed a virtual precepting model based on six clinical cases. For each case, students were provided with a packet of clinical data to review and develop initial clinical reasoning before a one-on-one meeting with an attending physician to discuss the case. Students began by presenting the patient and providing their initial assessment and management of patients with common chief complaints. The attending physician then provided additional clinical data (such as labs and imaging) and a discussion ensued to progress the case forward. Each case concluded with a mock phone call summarizing the encounter to the admitting physician. Students were surveyed about their perceptions of this activity on our end-of-course evaluation, and faculty preceptors were debriefed after each session.

Learning Objectives: By the end of the rotation, students will demonstrate the ability to:

1. Critically appraise resources including both peer-reviewed journal articles and online educational blogs and podcasts.
2. Apply current evidence-based medicine to the evaluation, assessment, and management of patients with common chief complaints.
3. Develop an understanding of the “EM Mindset” and appreciation for the specialty of Emergency Medicine.
4. Identify the essential elements of a focused history for common ED complaints.
5. Work in teams to develop educational materials for their fellow students.

Teaching and Learning activities included:
A. Faculty-Led Zoom Conferences. These didactic sessions were generally followed by a “flipped classroom” session with students expected to actively participate in advance by reviewing assigned materials and the didactic focused on discussion and elaboration.
B. Journal Club. Students worked in small teams to analyze assigned articles and facilitate a group discussion.
C. Asynchronous Case Discussion Sessions. Using the Slack web collaboration platform, students were presented with cases with questions prompting them to research clinical questions and discuss and defend their reasoning.
D. Student-Led Zoom Discussions. Each student designed a short evidence-based teaching session on an assigned clinical condition and presented it to the group. We introduced this with a dedicated session on clinical reasoning and learning strategies.
E. Virtual Precepting / Clinical Reasoning Cases. Described below.

We developed virtual precepting sessions based on six clinical cases. Each case, we provided preceptors a packet of preliminary clinical data as mock EMR notes, photos of physical examination, labs, and imaging to progress the case during their fourth year. These students typically complete away rotations during their fourth year. These sessions were designed to allow students to demonstrate fundamental clinical reasoning skills inherent to the practice of Emergency Medicine.

We allotted 30 minutes for each case discussion, for a total session time of one hour. After each precepting session, faculty assessed student performance using our clinical shift evaluation and provided feedback in the course and clerkship leadership.

Conclusions: Students and faculty found this approach to demonstrating clinical reasoning skills in a virtual rotation to be effective. It does require a significant investment of faculty time which may limit use in future rotations.
INTRODUCTION

• Peer physical examination (PPE) is widely used in medical schools for pre-clinical interview and physical exam instruction due to its educational benefit, ability to improve empathy, low cost, and accessibility compared to standardized patient use.¹

• In this approach, students can reflect on the experience of assuming the patient’s role.²

• To date, no studies have specifically examined student attitudes towards PPE for learning fundoscopy.²³⁴

• Fundoscopy and dilation may be considered a more sensitive exam technique due to photophobia with examination, blurred vision for hours post-dilation, and the close proximity at which one must approach their peer in order to perform the exam.²

OBJECTIVE

• This study sought to evaluate medical student preferences in regard to learning the fundoscopic exam and explore attitudes towards alternate learning and exam approaches.

METHODS

• Medical students in the Class of 2023 at ISMMS (n=138) participated in a 2-hour fundoscopy workshop in small groups in March 2020.

• An anonymous web-based survey with Likert scale items was sent via email the following day.

• Student attitudes towards PPE and its use in fundoscopy

• Learning benefit of fundoscopy session

• Student comfort to conduct fundoscopy on a potential patient

• Empathy towards patients experiencing dilation

• Preference towards dilation vs. alternate exam techniques for self and potential patients

• Preference to perform mydriatic vs non-mydriatic exam on peers vs. standardized patients

RESULTS

• 51 students responded to the survey (37% of the class)

• 84% of students who responded to the survey participated in dilation

• % dilation of participants was representative of the class with X² = .37, p > .05

Figure 1. Student attitudes towards PPE

Figure 2. Student concerns with PPE in general

Figure 3. Student concerns with fundoscopy PPE

Figure 4. Effect of fundoscopy session on student learning

Figure 5. Choosing dilation versus alternative tools

CONCLUSIONS

• Students’ attitudes towards fundoscopy were favorable and generally aligned with their overall PPE preferences.

• Students demonstrate a preference towards alternative methods of examination that did not require dilation.

FUTURE DIRECTIONS

• Incorporating newer methods and teaching tools, such as smartphone fundoscopy, should be considered in developing future curricula, and may better align with student learning preferences.

• Use of such technology is particularly relevant in the COVID-19 era.

• Improving fundoscopy education is likely to become even more relevant with advances in artificial intelligence and use of tele-ophthalmology.

REFERENCES


STaR: Stroke, Thrombectomy, and Acute Revascularization a Preliminary Report on a Neurology Exposure Project
Daniella C. Sisniega MD, Desiree Markantone MD, Emma Loebel, Michelle Fabian MD, and Laura K. Stein MD, MPH
Icahn School of Medicine at Mount Sinai

ABSTRACT:
Purpose: Despite revolutionary developments in acute stroke treatment, there is a misconception that neurological disorders are devastating and untreatable. Additionally, many students experience “neurophobia” with difficulty applying complex neuroscience to clinical neurology. At the same time, we face a shortage of neurologists when the prevalence of neurological conditions increases. A needs assessment of 58 Icahn School of Medicine at Mount Sinai (ISMMS) third-year students revealed that 86% (n=49) had no clinical exposure to stroke before the neurology clerkship and 90% (n=52) thought they would benefit from additional stroke exposure during the neurology clerkship. We sought to increase preclinical exposure to acute stroke diagnosis and treatment and assess its impact on familiarity with a career in neurology, level of interest in neurology, and knowledge of acute stroke diagnosis and management.

Methods: Preclinical students elected to participate in a 4-week clinical observation period (COP), during which they observed the number of acute stroke codes and neurovascular consultations they encountered. After the COP, participants attended a small group session to debrief the cases they observed. Students completed a Likert scale survey on familiarity with a career in neurology, level of interest in neurology, and knowledge of acute stroke at three time points: before the COP, after the small group session, and one year after completing the COP.

Results: We recruited eleven participants over three months. Further subject enrollment was suspended due to the COVID-19 pandemic. Prior to the COP, 18% (n=2) of participants had observed a stroke code and only 9% (n=1) thrombectomy. By the end of the COP, 90.9% (n=10) of participants had observed at least one stroke code and 45.4% (n=5) had observed a thrombectomy. Data were analyzed using a paired sample t-test. After the COP, participants reported increased familiarity with the jobs of neurologists (Likert mean=2.27 vs. 4.54), vascular neurologists (Likert mean=2.9 vs. 4.54), and neurologists (Likert mean=2.36 vs. 4.54). Participants also reported increased confidence in clinical stroke diagnosis, imaging modalities, and treatment.

The neurology resident leading the debrief reviewed the patient’s presentation, NIHSS, imaging, and clinical course of the case selected by the student.

Data Collection and Interpretation: Students completed a Likert scale survey (1-5) on familiarity with a career in neurology, level of interest in neurology, and knowledge of acute stroke at three time points: before the COP, after the small group session, and one year after completing the COP. A paired sample T-test was used to compare the pre- and post-COP means.

CONCLUSION:
While subject enrollment was limited, our results suggest that in preclinical students interested in neurology, clinical exposure to acute stroke diagnosis and management improves familiarity of the roles of cerebrovascular specialists and confidence in clinical stroke knowledge.

RESULTS:

<table>
<thead>
<tr>
<th></th>
<th>Pre-COP Mean</th>
<th>1 Year Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interest in Neurology</td>
<td>2.9</td>
<td>4.2</td>
</tr>
<tr>
<td>Understanding of the job of a neurologist</td>
<td>2.9</td>
<td>4.5*</td>
</tr>
<tr>
<td>Understanding of the job of a vascular neurologist</td>
<td>2.4</td>
<td>4.5</td>
</tr>
<tr>
<td>Understanding of the relationship between neurologist and neuroendovascular surgeons in stroke</td>
<td>2.4</td>
<td>4.2*</td>
</tr>
<tr>
<td>Confidence in the recognition of stroke symptoms</td>
<td>2.6</td>
<td>4.5*</td>
</tr>
<tr>
<td>Confidence in the identification of a vascular territory</td>
<td>2.1</td>
<td>4.2*</td>
</tr>
<tr>
<td>Familiarity in the general management of acute stroke</td>
<td>2.3</td>
<td>4.4*</td>
</tr>
</tbody>
</table>

* p-value <0.05

CURRENT DIRECTION:
Due to the nature of the ongoing COVID-19 pandemic, the STaR course was converted to an 8-week virtual course that incorporates interactive lectures and virtual simulations to expose participants to the field of vascular neurology. Enrollment was also opened to clinical students and members of other health professions such as speech language pathologists, physical therapists, and nurses.

Week 1: Introduction to STaR course and stroke
Week 2: Recognizing and diagnosing acute stroke
Week 3: Imaging Modalities in Acute Stroke Care
Week 4: Logistics of a stroke code and treatment options
Week 5: Journal Club - Disparities in Stroke Care
Week 6: Stroke management in the hospital, potential residual deficits and complications, and discharge planning
Week 7: Stroke simulation! Putting it all together
Week 8: Multidisciplinary Stroke Care
A Novel, Online, Case-Based Neuro-Ophthalmology Workshop for Neurology Clerkship Students

Emma Loebel BA1, Michael Fara MD PhD2, Samira Farouk MD1,2, Laura Stein MD MPH1,2, Nisha Chadha MD1,4
1Icahn School of Medicine at Mount Sinai, 2Department of Neurology, 3Department of Nephrology, 4Department of Ophthalmology

INTRODUCTION

• Undergraduate ophthalmology education (OE) has declined, with only 16% of medical schools requiring clinical rotations in ophthalmology
• Innovative approaches are needed to integrate this content
• The neurology clerkship offers an opportunity to incorporate OE, specifically within the often underemphasized discipline of neuro-ophthalmology (NO)
• Evidence suggests learners gain and retain knowledge to a greater degree when taught in interactive formats, and medical students learn better with case-based formats
• To address this educational gap, we developed an online, interactive, case-based neuro-ophthalmology learning tool

METHODS

The study team, comprised of ophthalmology (Oph) and neurology (Ny) faculty, developed 5 high-yield NO cases informed by Oph and Ny educational organization guidelines

Published 5 cases on 2020Sim.com, an OE tool modeled off of NephSim, a free open access medical education (FOAMed) tool using Wordpress, a web publishing software

All third year medical students rotate through four week neurology clerkship

1-hour workshop conducted using 2020sim.com NO cases, and 10 question pre-test administered in Week 1 or 2 of clerkship

10 question post-test and exit survey administered in Week 4 of clerkship

RESULTS

Aligned with what is important in my neuro-oph training
Learning tool is high quality
Helped build my understanding of neuro-oph
Increased my knowledge in neuro-oph
Preferred interactive session to traditional didactics

• 91% recommend this workshop using 2020SIM cases be offered in the future
• 94% would like to see a similar learning tool for other specialties

Figure 1. Five case topics published on 2020SIM.com
Figure 2. Exit survey results

Figure 3. Difficulty of case questions from the learner perspective

Figure 4. Test scores increased from 8.03/10 to 8.43/10 after the workshop

CONCLUSIONS

• Our novel, interactive, case-based neuro-ophthalmology tool increased student knowledge and was well-received by students.
• Collaboration with departments with which ophthalmology intersects can provide opportunities to increase undergraduate OE
• We hope to broaden exposure of OE by introducing 2020SIM.com to other medical institutions and the medical community online.

REFERENCES

Virtual Review Sessions in the Structures Course in a Large-Group, Interactive Format

Nicola Feldman, MS,1 Mia Saade,1 Naoum Fares Marayati,1 Tyler Italiano,1 Daniella Curcio, PhD1
1Medical Education, Icahn School of Medicine at Mount Sinai

INTRODUCTION
• Structures: first course of medical school, covering gross anatomy, embryology, histology
• Second-year medical students (M2s) serve as TAs; responsibilities include leading review sessions prior to exams
• Traditional approach: groups of 10-18 M1s rotate through small-group classrooms, each with M2s providing rapid review of a topic
• COVID-19 restrictions made this format impossible
• A novel approach: all M1s in the same remote video session, with M2s covering material at a slower, interactive pace

METHODS
• First 2 review sessions: groups of M1s rotated through a series of 20-minute Zoom sessions (similar to traditional approach)
• Last 2 review sessions:
  • All M1s in one 3-hour Zoom session
  • M2s covered certain material at certain times
  • Time allotted depending on difficulty and amount of material
  • M2 TAs also incorporated more interactivity, such as questions to students
• Surveyed M1s regarding their preferred format & solicited qualitative feedback from M1s and M2s

RESULTS

<table>
<thead>
<tr>
<th>Preferred Format</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Large-group</td>
<td>55%</td>
</tr>
<tr>
<td>Traditional</td>
<td>23%</td>
</tr>
<tr>
<td>No preference</td>
<td>23%</td>
</tr>
</tbody>
</table>

Figure 1: Preferred Review Session Formats of M1s
NB: M2s also expressed preferences for the large-group format

Table 1: Qualitative Feedback from M1s

<table>
<thead>
<tr>
<th>Feedback</th>
</tr>
</thead>
<tbody>
<tr>
<td>I really enjoy the practice questions that some of the presentations have! Those are super helpful, especially for histology and imaging.</td>
</tr>
<tr>
<td>I like when TAs quiz students during the sessions and make them interactive.</td>
</tr>
<tr>
<td>The M52s were able to be more interactive and quiz us which I found super helpful to test my knowledge!</td>
</tr>
<tr>
<td>In some cases, I find myself re-watching [TAs’] videos 2-3 times before taking the exams! TAs that bring extra energy and make it interactive are also appreciated.</td>
</tr>
</tbody>
</table>

CONCLUSIONS
• In remote environment, most students preferred a large-group, interactive Structures review session format
• Several advantages:
  • Different parts of the session could be different lengths: more time spent on challenging topics & interactive quizzing
  • M1s benefited from hearing answers to questions asked by all classmates
  • M2 TAs only needed to be available for a short period of time to lead their section of the session
• Implications once in-person instruction resumes: review sessions in a lecture hall (in-person) or virtually (hybrid learning system)?
Office Hours as a Method for Student Support During the Virtual Summer Enrichment Program

Nicola Feldman, MS,1 Gabrielle Hernaiz-De Jesus,1 David Bechhofer, PhD1

1Medical Education, Icahn School of Medicine at Mount Sinai

ABSTRACT

Introduction: The Summer Enrichment Program (SEP) is an intensive four-week pre-matriculation program for medical students entering the Icahn School of Medicine, without significant background in biological chemistry and molecular/cell biology. Traditionally, teaching assistants (TAs) provide support by leading formal review sessions, using prepared material, immediately following each lecture series on a specific topic. In 2020, the COVID-19 pandemic necessitated an all-virtual SEP held via Zoom. Understanding that virtual learning can cause preclinical students to feel isolated, we sought to provide increased opportunities for academic support and connection. In particular, TAs held weekly, informal “office hours” via Zoom as an open forum to answer student questions, a novel structure that was added to the usual TA review sessions and had not previously been included in SEP. Here, we aim to analyze the effectiveness of these office hours in supporting students in the virtual environment.

Methods: TAs held office hours once weekly, the day after lecture material had concluded for the week, to give students time to digest the material. Office hours sessions were solely an opportunity for students to ask questions; no formal review material was prepared. After SEP had concluded, all SEP students were surveyed regarding these office hours, answering several questions on a 5-point Likert scale (1 = strongly disagree, 2 = disagree, 3 = neutral, 4 = agree, 5 = strongly agree).

Results: Of 23 SEP students, 10 unique students attended at least one office hours session, with some of those students attending multiple sessions. Of students who attended at least one session, 100% of survey respondents answered “agree” or “strongly agree” to the statement “I found the TA office hours helpful.” In addition, 90% of survey respondents answered “agree” or “strongly agree” to “Having office hours in all of my courses would make me feel more supported in a totally virtual learning environment.” Based on these data and our own experiences with feelings of social and academic isolation during the shift to online learning, we sought to provide increased opportunities for academic interaction and support during SEP 2020.

In 2020, the social distancing restrictions imposed by the COVID-19 pandemic necessitated significant changes to SEP, most notably a shift to a virtual SEP. It has been found that the shift to virtual learning during the early COVID-19 pandemic in spring 2020 resulted in decreased student engagement in some cases,2 in addition, research has demonstrated that interaction with peers and educators helps to make online learning more effective.3 Based on these data and our own experiences with feelings of social and academic isolation during the shift to online learning, we sought to provide increased opportunities for academic interaction and support during SEP 2020.

METHODS:

During SEP 2020, TAs not only provided the typical one-hour review session following each section of the course, but they also held weekly, informal “office hours.” In contrast to the review sessions, no formal material was prepared for these office hours; they were solely an opportunity for students to ask questions. Office hours were held the day after class had concluded for the week, usually on Fridays, to give students an opportunity to digest the material and think of any questions they wanted to discuss with TAs. SEP students were informed of the office hours by email and were also informed of the format of the office hours (i.e., no formal review material presented). In the same email, students were also invited to email TAs with any questions or to set up a separate time to meet individually with the TAs.

After SEP had concluded, all SEP students were surveyed regarding their perceptions of the TA office hours, including whether they had attended any office hours, how helpful they found the office hours if so, whether and how the office hours helped them feel more supported during the virtual SEP, and whether they believed similar initiatives might be helpful in other courses in the virtual learning environment. Most questions were scored on a 5-point Likert scale (1 = strongly disagree, 2 = disagree, 3 = neutral, 4 = agree, 5 = strongly agree).

RESULTS:

Out of 23 SEP students, 10 unique students attended at least one office hours session, with some of those students attending multiple sessions. The response rate to the survey was 43%. Responses to selected survey questions are shown in Figure 1. In addition, selected qualitative feedback received from students on the survey is shown in Table 1.

CONCLUSIONS:

1. Weekly, informal TA office hours were an effective method for academic support during SEP 2020, with a plurality of students choosing to attend them and all attendees finding them helpful.

2. Offering office hours also provided a sense of social support, even for students who did not choose to attend office hours, that students found especially important in the virtual learning environment.

3. Students believe office hours would have similar effects in other courses; educators may consider implementing similar interventions, which are fairly easy to implement as no advance preparation is required, as virtual learning continues into 2021.

REFERENCES:


INTRODUCTION:

- The East Harlem Health Outreach Partnership (EHHOP) is a student-run free clinic (SRFC) that serves the uninsured, largely immigrant, community of East Harlem.
- SRFCs have a dual mission in providing quality care to underserved populations and ensuring an effective learning and practice environment for students.
- Currently, hands on skills training regarding end-of-life (EOL) and Advance Care Planning (ACP) is unstandardized in SRFCs, with providers often inadequately prepared and lacking the cultural humility required to navigate these conversations.
- ACP prevents unwanted procedures, increases utilization of hospice and palliative care services, and empowers patients to take control over their EOL experiences.
- SRFC patients’ EOL experiences can be complicated by severe symptom burden, language barriers, and lack of time for goals of care conversations. For patients who are undocumented, the identity documentation and legality of ACP forms can be particularly distressing.
- EHHOP has developed a curriculum for senior medical student-clinicians about ACP, tailored to working with the undocumented community in the primary care setting.
- Here we aim to assess the utility of this curriculum in improving student-clinician knowledge and comfort surrounding ACP.

METHODS:

- An ACP didactic session (case-based, interactive) was designed by a team of palliative care physicians, primary care providers, and medical student leaders at EHHOP and taught to senior student-clinicians.
- The session focused on setting goals for EOL conversations to coaching patients through selection of healthcare proxy, and understanding cultural and legal challenges to ACP within the target population.
- An ACP conversation template was provided to students at the conclusion of the session.
- A pre- and post-session survey was administered to assess knowledge and comfort surrounding ACP.
- Student knowledge and comfort with ACP was reassessed at the conclusion of these discussions.

Didactic Structure

- Introduction to ACP & Documentation: 15 minutes
- Structure of an HCP Discussion: 15 minutes
- SSRFC Specific Caveats: 10 minutes
- Breakout Case: 15 minutes
- Group Debrief: 5 minutes

RESULTS:

- Students’ perception of their own ACP knowledge increased significantly from an average of 2.8 out of 5 prior to the didactic to 3.8 out of 5 after the didactic (p = 0.02).
- Students’ comfort surrounding ACP conversations increased significantly from an average of 2.4 out of 5 prior to the didactic to 3.8 out of 5 after the didactic (p = 0.02).
- Prior to didactic, 60% of students correctly answered multiple choice questions about ACP, whereas after didactic, 100% of students answered questions correctly.
- Most common topics of interest included: understanding the structure of ACP conversations and learning the difference between healthcare proxy and healthcare agent.

CONCLUSIONS:

- This intervention led to implementation of formal ACP training tailored to patients in SRFC.
- This improved medical student knowledge and comfort surrounding ACP, leading to initiation of real-world EOL conversations.
- This will reduce future stress for students, patients, caregivers, and providers in emergent situations.

FUTURE DIRECTIONS:

1. Introduction of ACP conversations into primary care visits at EHHOP clinic.
2. Long-term follow up with students; assessment of comfort and knowledge after in-clinic ACP conversations are conducted.
4. Repetition of didactic curriculum with incoming student clinicians in subsequent classes at EHHOP clinic.
5. Dissemination of curriculum to SRFCs throughout the United States, tailored to target population at each clinic.

REFERENCES:

BRIDGING THE DISPARITY IN SKIN COLOR REPRESENTATION IN PRECLINICAL MICROBIOLOGY EDUCATION

Madeline Kim1, Kelsey Auyeung1, Gabriel Santos Malave1, Sidra Ibad1, Eden David1, Dante Dahabreh1, Roberto Posada, M.D. 2

1. Medical Student, ISMMS; 2. Professor of Pediatrics and Medical Education, ISMMS

INTRODUCTION

• One of the numerous ways in which racism manifests in medical education is the scarcity of images of brown and black skin in didactic materials.1,2

• Currently, the vast majority of dermatology images used in the preclinical courses at the Icahn School of Medicine at Mount Sinai (ISMMS) feature light-colored skin, leaving students ill-prepared to recognize dermatologic manifestations of disease in people of color.

• Incorporating high-quality images focusing specifically on skin of color into course material may increase the ability of students to identify common infectious disease-related conditions on brown and black skin.

METHODS

• We compiled a collection of images of brown or black skin manifesting key conditions with bacterial, viral, and/or fungal etiologies to incorporate into the first-year ‘Medical Microbiology’ course at ISMMS.

• Images were retrieved from peer-reviewed journal articles and dermatologist-reviewed websites and were approved by the Medical Microbiology course director.

• We plan to administer a brief assessment to the class of 2023 with questions featuring fictional infectious disease cases, each with an image of light or dark skin.

• The performance of the class of 2024 (first class to complete the course with the new images included) on this assessment will be compared to that of the class of 2023.

CONCLUSION

• Course evaluations from past years have included student concerns on the limited diversity of skin tones in lecture images.

• Performance on our assessment may vary based on personal experience, lecture attendance, performance in the course, and use of external study materials.

• Limitations include comparison of classes with a 1-year difference in preclinical education and board exam preparation.

• The study is in its early stages and will be deployed this year.

ACKNOWLEDGEMENTS

• ISMMS Department of Medical Education

REFERENCES


4. Medical Microbiology Lectures 4, 28, 39, April-May 2020

The purpose of this study was: Neurology residents nationally have reported high rates of burnout. The purpose of this study was: To gauge the current attitudes and perspectives of neurology faculty towards neurology residents’ well-being and burnout. Gain information that will help guide the content and structure of future faculty development.

Methods

• 35-item questionnaire to obtain information about faculty demographics workload, burnout and attitudes towards resident wellness
• Utilized Likert-style response options and survey questions were thematically grouped into one of three categories:
  • Faculty-resident understanding (tendency towards empathy or understanding of resident experiences),
  • Attitudes towards residency training overall, and
  • Faculty perceptions of their own preparedness to recognize when residents are struggling due to fatigue or emotional exhaustion/depression
• Also screened for symptoms of burnout among faculty using a validated single-item questionnaire
• Survey was distributed via email to all neurology faculty at the Icahn School of Medicine at Mount Sinai’s two neurology programs: Mount Sinai Hospital and Mount Sinai Beth Israel Mount Sinai West

Statistics:

• Group differences between respondents with and without burnout were assessed using t-tests and rank sum tests
• Associations between categorical variables were assessed using crosstabulations and chi-square tests of association

Results

• Survey was emailed to 113 neurology faculty and 42 surveys were completed (response rate 37.2%)
• Average age of respondents was 48.25 years (n=38)
• 57% were female (24/42)
• Burnout was reported by 39% of respondents (16/41)
• Female faculty members were more likely to report burnout (p=.02) and were more likely to provide responses indicative of faculty-resident understanding (p=.055)
• With a trend towards significance, female faculty members were more likely to express negative attitudes towards residency overall (p=.082)
• Fewer years in practice was associated with greater understanding of resident experiences (p=.002) and with more negative attitudes towards residency overall (p=.045)
• There were no significant differences in attitudes towards residency, faculty preparedness or faculty-resident understanding between neurology faculty with and without burnout.

Table 1: Demographics

<table>
<thead>
<tr>
<th>Respondent Demographics</th>
<th>Female</th>
<th>Male</th>
<th>95% CI</th>
<th>P Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Burnout</td>
<td>24/17</td>
<td>54.2%</td>
<td>17.6%</td>
<td>[0.0958 -0.635]</td>
</tr>
<tr>
<td>Mean</td>
<td>21/16</td>
<td>2.67</td>
<td>1.88</td>
<td>[1.33 -0.513]</td>
</tr>
<tr>
<td>Negative Attitude</td>
<td>21/16</td>
<td>4.19</td>
<td>3.56</td>
<td>[1.34 -0.0848]</td>
</tr>
<tr>
<td>Towards Residency</td>
<td>21/16</td>
<td>13.9</td>
<td>15.4</td>
<td>[3.07 -0.0365]</td>
</tr>
<tr>
<td>Less Faculty-Rest</td>
<td>21/15</td>
<td>4.81</td>
<td>4.2</td>
<td>[1.44 -0.221]</td>
</tr>
</tbody>
</table>

Attitudes and Perspectives of Neurology Faculty Toward Neurology Resident Well-Being and Burnout

A. Wise, D. Lucido, V. Shanker, M. Swan; Department of Neurology, Mount Sinai West

Introduction

Neurology residents nationally have reported high rates of burnout relative to other specialties. In 2017, 73% of neurology residents and 55% of fellows had at least one symptom of burnout. 60% neurologists had at least one symptom of burnout.

The purpose of this study was:

• To gauge the current attitudes and perspectives of neurology faculty towards neurology residents’ well-being and burnout.
• Gain information that will help guide the content and structure of future faculty development.

Methods

• 35-item questionnaire to obtain information about faculty demographics workload, burnout and attitudes towards resident wellness.
• Utilized Likert-style response options and survey questions were thematically grouped into one of three categories:
  • Faculty-resident understanding (tendency towards empathy or understanding of resident experiences),
  • Attitudes towards residency training overall, and
  • Faculty perceptions of their own preparedness to recognize when residents are struggling due to fatigue or emotional exhaustion/depression.
• Also screened for symptoms of burnout among faculty using a validated single-item questionnaire.
• Survey was distributed via email to all neurology faculty at the Icahn School of Medicine at Mount Sinai’s two neurology programs: Mount Sinai Hospital and Mount Sinai Beth Israel Mount Sinai West.

Statistics:

• Group differences between respondents with and without burnout were assessed using t-tests and rank sum tests.
• Associations between categorical variables were assessed using crosstabulations and chi-square tests of association.

Results

• Survey was emailed to 113 neurology faculty and 42 surveys were completed (response rate 37.2%).
• Average age of respondents was 48.25 years (n=38).
• 57% were female (24/42).
• Burnout was reported by 39% of respondents (16/41).
• Female faculty members were more likely to report burnout (p=.02) and were more likely to provide responses indicative of faculty-resident understanding (p=.055).
• Fewer years in practice was associated with greater understanding of resident experiences (p=.002) and with more negative attitudes towards residency overall (p=.045).
• There were no significant differences in attitudes towards residency, faculty preparedness or faculty-resident understanding between neurology faculty with and without burnout.

Table 2: Faculty Attitudes and Burnout by Gender

<table>
<thead>
<tr>
<th>(n/n)</th>
<th>Female</th>
<th>Male</th>
<th>95% CI</th>
<th>P Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Burnout</td>
<td>24/17</td>
<td>54.2%</td>
<td>17.6%</td>
<td>[0.0958 -0.635]</td>
</tr>
<tr>
<td>Mean</td>
<td>21/16</td>
<td>2.67</td>
<td>1.88</td>
<td>[1.33 -0.513]</td>
</tr>
<tr>
<td>Negative Attitude Towards Residency</td>
<td>21/16</td>
<td>4.19</td>
<td>3.56</td>
<td>[1.34 -0.0848]</td>
</tr>
<tr>
<td>Less Faculty-Rest的理解</td>
<td>21/16</td>
<td>13.9</td>
<td>15.4</td>
<td>[3.07 -0.0365]</td>
</tr>
<tr>
<td>Faculty Preparedness</td>
<td>21/15</td>
<td>4.81</td>
<td>4.2</td>
<td>[1.44 -0.221]</td>
</tr>
</tbody>
</table>

There were no significant differences in attitudes towards residency, faculty preparedness or faculty-resident understanding between neurology faculty with and without burnout.

References


Take Home Points

• Many early-career neurologists are recent residency graduates, which may provide an increased level of familiarity with current training practices.
• Female faculty may encounter unique challenges during training, impacting their outlook on this experience.
• A multitude of alternate possible explanations for these findings exist and further exploration is warranted.
• These results may guide faculty development programs to help mitigate burnout and promote wellness among neurology residents and faculty.
The Utility of Mock Virtual Otolaryngology Interviews During the COVID-19 Pandemic

Annie E. Arrighi-Allisan, BA¹, Aldo V. Londino, MD¹

¹Mount Sinai Hospital, Department of Otolaryngology – Head and Neck Surgery, New York, NY

BACKGROUND

The COVID-19 pandemic has greatly disrupted the otolaryngology residency application cycle. Reliance on virtual meetings, virtual electives and virtual interviews has caused considerable apprehension for students and faculty alike. The use of in-person mock interviews has been shown to improve preparedness and confidence among interviewees. Less is known, however, about the utility of mock virtual interviews. This study explores the utility of a mock residency interview program in preparing otolaryngology applicants for a virtual interview format.

METHODS

Pre- and post-mock interview surveys were administered to 19 medical students applying into Otolaryngology residency. The mock sessions consisted of 15-minute standard virtual Zoom interviews with senior otolaryngology faculty (uninvolved in the residency application process) at The Mount Sinai Hospital, followed by 15 minutes of feedback. Pre- and post-interview surveys contained 12 and 21 questions, respectively, targeting confidence levels, ease of communication, perception of non-verbal cues, technical difficulties, and overall satisfaction.

RESULTS

17 applicants responded to both surveys, yielding an 89.5% response rate. Applicants were significantly more confident in their ability to perform well during a virtual interview following their mock session (40% confident before vs. 88.2% after, p=0.001). Approximately 30% of applicants experienced technical difficulties during their session. Ease of virtual communication (65.0% vs. 94.1%, p=0.002), concern over impaired perception of an interviewer’s non-verbal cues (90.0% vs. 58.8%, p=0.03), and perceived lack of control (55.0% vs. 35.0%, p=0.04) all significantly improved following the mock interview program.

CONCLUSIONS

With new reliance on virtual platforms for communication during the otolaryngology residency application cycle, a mock virtual interview program is an impactful tool to help improve student confidence and preparedness. As virtual platforms in medicine become increasingly ubiquitous, further research is warranted to explore the longer-term impact these preparatory programs have on applicant success.

Table 1: Proportion of participants who agreed with statement following mock interview

<table>
<thead>
<tr>
<th>Aspect of Mock Virtual Interview</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Found mock interview helpful</td>
<td>82.35%</td>
</tr>
<tr>
<td>Improved virtual confidence</td>
<td>58.82%</td>
</tr>
<tr>
<td>Encountered technical difficulties</td>
<td>29.41%</td>
</tr>
<tr>
<td>Received helpful feedback</td>
<td>76.47%</td>
</tr>
<tr>
<td>Adequate interview time allowed</td>
<td>82.35%</td>
</tr>
<tr>
<td>Adequate feedback time allowed</td>
<td>82.35%</td>
</tr>
</tbody>
</table>

Table 2: Proportion of participants who agreed with statement before and after interview

<table>
<thead>
<tr>
<th>Component of Questionnaire</th>
<th>Before (%)</th>
<th>After (%)</th>
<th>P value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Confidence with virtual interview performance</td>
<td>40.00%</td>
<td>88.24%</td>
<td>&lt;0.0001</td>
</tr>
<tr>
<td>Comfortable with virtual interview communication</td>
<td>65.00%</td>
<td>94.11%</td>
<td>0.002</td>
</tr>
<tr>
<td>Less control over virtual performance</td>
<td>55.00%</td>
<td>35.30%</td>
<td>0.05</td>
</tr>
<tr>
<td>More difficult connecting with interviewer virtually</td>
<td>90.00%</td>
<td>58.82%</td>
<td>0.01</td>
</tr>
<tr>
<td>Worried about detecting and responding to non-verbal cues</td>
<td>90.00%</td>
<td>58.82%</td>
<td>0.03</td>
</tr>
</tbody>
</table>

Medical Education Research Day | April 27, 2021
INTRODUCTION

- Specific parenting behaviors have been shown to promote children’s early cognitive-social-emotional and health outcomes.
- Babies are primed for learning. Over a million new neural connections are made each second in the first years of life.
- New parents are also primed for learning during the postpartum period.
- The postpartum unit offers a unique opportunity to share the science of early learning and positive parenting behaviors with families through physical messaging and staff training.

OBJECTIVE

- To assess the impact of both physical messaging and training on hospital staff’s self-reported knowledge, attitudes, and behaviors in regards to promoting early childhood development through everyday healthcare interactions with families.

METHODS

- Staff on Mount Sinai Hospital postpartum floors, including nurses, lactation consultants, business administrators, PCAs, security, and food services were surveyed before and after placement of physical messaging and 1-hour training.
- Surveys measured:
  - Knowledge and attitudes on a Likert scale
  - Behaviors on a dichotomous scale
  - Responses analyzed using t-tests

RESULTS

- 75 staff completed pre-survey
- 77 completed post-survey
- Statistically significant changes in behavior, knowledge and attitudes
- Staff knowledge on infant brain growth, the impact of positive parenting and verbal stimulation on brain development increased significantly (Table 2)
- Staff attitudes increased significantly (Table 2)

CONCLUSIONS

- A 1-hour staff training and physical messaging significantly changed staff reported knowledge, attitudes and behaviors regarding promoting positive parenting.
- Strengths and innovations of this study are:
  - Inclusion of inter-professional staff
  - Utilization of physical space to prompt staff behavior and deliver science
  - Leveraging the postpartum period as an opportunity to promote early development
  - Cultural transformation valuing the inclusion of promoting strong parent-child relationships and early childhood development in the healthcare setting
  - Creation of a scalable model for implementation at other institutions

Acknowledgements Our thanks to Edge Research for assistance with data analysis. This project was a collaboration between the Mount Sinai Parenting Center and VROOM and was generously funded by the Bezos Family Foundation.

Table 1: Content Staff Discussed, Modeled or Praised with Families

<table>
<thead>
<tr>
<th>Following</th>
<th>Pre: % of staff selected yes</th>
<th>Post: % of staff selected yes</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>The brain grows the fastest during the first five years of life</td>
<td>65</td>
<td>80</td>
<td>0.035</td>
</tr>
<tr>
<td>It is important the parents talk to their children for early brain development—even before their children can talk.</td>
<td>77</td>
<td>88</td>
<td>0.002</td>
</tr>
<tr>
<td>Having back and forth interactions with the child (pausing, waiting for response).</td>
<td>65</td>
<td>84</td>
<td>0.005</td>
</tr>
<tr>
<td>Talking out loud about the things you are seeing, hearing, and doing.</td>
<td>72</td>
<td>92</td>
<td>0.001</td>
</tr>
<tr>
<td>Making eye contact and looking into the child’s eyes.</td>
<td>88</td>
<td>99</td>
<td>0.008</td>
</tr>
</tbody>
</table>

Table 2: Pre/Post Staff Attitudes and Knowledge

<table>
<thead>
<tr>
<th>Did you know or believe the following:</th>
<th>Pre: % staff selected STRONGLY AGREE</th>
<th>Post: % staff selected STRONGLY AGREE</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Children start learning the moment they are born.</td>
<td>83</td>
<td>94</td>
<td>0.045</td>
</tr>
<tr>
<td>Positive relationships with caring adults are critical for early brain development.</td>
<td>85</td>
<td>96</td>
<td>0.013</td>
</tr>
<tr>
<td>The brain grows fastest during the first five years of life.</td>
<td>79</td>
<td>94</td>
<td>0.009</td>
</tr>
<tr>
<td>It is important that parents talk to their children for early brain development—even before their children can talk.</td>
<td>81</td>
<td>96</td>
<td>0.002</td>
</tr>
<tr>
<td>Parents can promote early brain development as part of daily routines.</td>
<td>86</td>
<td>97</td>
<td>0.008</td>
</tr>
<tr>
<td>Hospital staff can promote early brain development during typical interactions.</td>
<td>62</td>
<td>90</td>
<td>0.000</td>
</tr>
<tr>
<td>At Mount Sinai, we all have a role in encouraging children’s early learning and brain development.</td>
<td>69</td>
<td>87</td>
<td>0.007</td>
</tr>
<tr>
<td>It is part of my role to share specific information or messages with parents and caregivers about early learning and brain development.</td>
<td>60</td>
<td>77</td>
<td>0.022</td>
</tr>
<tr>
<td>In my setting it is feasible to routinely demonstrate positive adult-child interactions for parents and caregivers.</td>
<td>61</td>
<td>82</td>
<td>0.003</td>
</tr>
<tr>
<td>In my setting it is feasible to routinely praise parents and caregivers for what they are already doing to support their children.</td>
<td>67</td>
<td>82</td>
<td>0.033</td>
</tr>
</tbody>
</table>
ABSTRACT:

Introduction:
When a medical procedure, skill, or area of knowledge isn’t routinely reviewed there’s a risk of losing competency. An area which is commonly practiced and has significantly impacted medical care is point-of-care ultrasound (POCUS). POCUS learning curves have been studied in medical students and resident physicians (RPs), but only in a limited fashion in attending-level physicians (ALPs). Furthermore, research on POCUS skill decay, defining when to optimally intervene with continuing medical education re-training, is lacking. Our primary hypothesis is that ALPs have significantly different learning curve profiles vs those characterizing RPs and medical students. Our secondary hypothesis is that skill decay rates of ALPs will vary as a function of frequency of POCUS application over time.

AIM 1: Determine POCUS learning curves for ALPs who were not previously credentialed in an ultrasound modality during residency. We hypothesize that POCUS learning curves differ for ALPs vs RPs in their baseline medical knowledge and clinical responsibilities differ.

AIM 2: Establish the average decay rate for ultrasound competency relevant to emergency ultrasound. We hypothesize that ALPs will have diminished competency over time if they don’t consistently perform or supervise POCUS; the rate of competency decay over time may also be impacted by POCUS procedural difficulty and practice of similar procedures.

AIM 3: Determine the frequency of POCUS performance or supervision for ALPs necessary to maintain competency. We hypothesize there’s a minimum number of POCUS exams either performed or supervised necessary to maintain competency.

Method:

AIM 1: Attendings not credentialed in a core POCUS (Aorta, Fetal, FAST, Pneumothorax) will have a baseline knowledge test, a skills test via Standardized Direct Observation Tool (SDOT), and a survey sent out periods followed by a curriculum similar to that followed by RPs but adjusted to their clinical schedule. After course completion, ultrasound procedure performance will be reviewed in quality analysis (QA) and they will undergo a post-test SDOT.

AIM 2 & 3: Attendings credentialed in a core POCUS exam will undergo an SDOT and knowledge test without prior preparation. Studies performed either by them or while supervising RPs over the past two years will be reviewed.

Proposed Analysis:

AIM 1: The number of ultrasounds performed to reach an acceptable level of skill as determined by trained faculty during QA will be examined to determine the number needed to reach competency in addition to a passing score on the post-test SDOT.

AIM 2: When a medical procedure, skill, or area of knowledge isn’t routinely reviewed there’s a risk of losing competency. An area which is commonly practiced and has significantly impacted medical care is point-of-care ultrasound (POCUS). POCUS learning curves have been studied in medical students and resident physicians (RPs), but only in a limited fashion in attending-level physicians (ALPs). Furthermore, research on POCUS skill decay, defining when to optimally intervene with continuing medical education re-training, is lacking. Our primary hypothesis is that ALPs have significantly different learning curve profiles vs those characterizing RPs and medical students. Our secondary hypothesis is that skill decay rates of ALPs will vary as a function of frequency of POCUS application over time.

AIM 1: Determine POCUS learning curves for ALPs who were not previously credentialed in an ultrasound modality during residency. We hypothesize that POCUS learning curves differ for ALPs vs RPs in their baseline medical knowledge and clinical responsibilities differ.

AIM 2: Establish the average decay rate for ultrasound competency relevant to emergency ultrasound. We hypothesize that ALPs will have diminished competency over time if they don’t consistently perform or supervise POCUS; the rate of competency decay over time may also be impacted by POCUS procedural difficulty and practice of similar procedures.

AIM 3: Determine the frequency of POCUS performance or supervision for ALPs necessary to maintain competency. We hypothesize there’s a minimum number of POCUS exams either performed or supervised necessary to maintain competency.

METHODS:

AIM 1: Attendings not credentialed in one of a core POCUS (FAST, Fetus Trimester Pregnancy, Lung, Cardiac) will have a baseline knowledge test, a skills test via Standardized Direct Observation Tool (SDOT), and a survey sent out periods followed by a curriculum similar to that followed by RPs but adjusted to their clinical schedule. After course completion, ultrasound procedure performance will be reviewed in quality analysis (QA) and they will undergo a post-test SDOT.

AIM 2 & 3: Attendings credentialed in a core POCUS exam will undergo an SDOT and knowledge test without prior preparation. Studies performed either by them or while supervising RPs over the past two years will be reviewed.

CONCLUSIONS:

1. Pending - Currently under IRB Review. We aim to see if there is a difference between attending and resident learning curves, establish what the skill decay curves are in the core ultrasound applications, and determine how many performed and supervised ultrasound are necessary to maintain skills.

REFERENCES:
ABSTRACT:
Introduction: Literature suggests that faculty leaders’ behaviors related to burnout and engagement of faculty and that leadership support may lead to lower rates of burnout. In particular, faculty whose leaders provide coaching and feedback and recognize them for a job well done are less likely to be burnt out while targeted coaching efforts can improve well-being at work.
Method: Utilizing literature and our needs assessment (institution-wide faculty survey), we created 2 sessions on coaching and appreciation of team members. Sessions included brief didactics, role play, polling, and group discussion. Pre-post surveys were conducted to assess pre/post workshop attitudes and post-workshop satisfaction with the sessions.
Result: Of the 88 leaders invited, 62 (70%) attended at least one session and 43 (%) attended all sessions. 42/62 (68%) attendees completed the pre-workshop survey. Most felt they were moderately (71%) or extremely skilled (26%) in coaching, with 85% feeling reporting they sometimes or frequently provided coaching to direct reports. Most leaders felt that they showed appreciation in various ways “at least some of the time” (91-100%). Barriers to coaching and providing appreciation included: not enough time; too many faculty reports; lack of direct observation and lack of skill. Over 90% of attendees responded to the post-workshop survey. The learners agreed that the workshop increased their knowledge and skills in coaching (95%) and appreciation (96%), and 88% felt that their peers would benefit from these workshops.
Conclusion: We successfully recruited senior leadership to attend innovative workshops focused on coaching and appreciation skills. Although we were limited in participants and a one-time virtual workshop, participants practiced skills and received feedback. Next steps include providing the workshop to other institutional leaders and measuring long-term changes in leadership behavior and faculty well-being.

METHODS:
Further qualitative and quantitative data confirmed that leaders themselves desired concrete methods and tools to improve their coaching techniques. Faculty engagement and coaching development conversations with their teams. A group of physician and non-physician experts gathered to create a curriculum for leaders on coaching and appreciation. We recruited faculty leaders via leadership meetings and personal emails.

Coaching
This hourlong curriculum aimed to a) impress upon physicians the urgency of this issue, b) explain the value and need for coaching skills, and c) introduce best practice methodologies in having coaching conversations. The result was a session of blended learning incorporating brief didactic elements, role play activities, polling, and group discussion. Our session built upon a variety of elements such as personal fulfillment and motivation, appreciative inquiry, active listening, cognitive bias and attribution, and the GROW Coaching Model. Our faculty are a mix of 2 physicians and 2 non-physicians, including an organizational psychologist and a MBA and leadership trainer, all with expertise in leadership development, coaching, and motivation.

Appreciation
This session aims 1) to make the case for the importance of leaders showing appreciation and recognition to team members 2) to provide concrete tools to find the praise-worthy behaviors 3) to develop cues for when to recognize team members and 4) to authentically show appreciation and recognition to your team members. This is not a workshop to create more awards, but instead intends to demonstrate how to regularly value and appreciate their efforts and communications. The program encourages leaders to actively look for opportunities to celebrate, praise, recognize, and appreciate staff and offers techniques on how to elevate the impact of these moments by leveraging their communication.

RESULTS:
Participants
Of the 88 leaders invited, 62 (70%) attended at least one session and 43 (%) attended all sessions. This included: 23 Chairs, 15 Institute Directors, 6 Hospital CEO’s/CMO’s.

REFERENCES:

CONCLUSIONS:
1. Leaders felt moderately skilled in coaching before the workshop and most believed they provide coaching and appreciation sometimes or frequently to their reports.
2. Barriers to giving coaching and appreciation to reports included lack of time, too many reports, and not enough witnessed behaviors and the need for more training.
3. We successfully recruited senior leadership to attend innovative workshops focused on coaching and appreciation skills.
4. Pre/post-test showed significant growth in both behavioral and attitudinal measures related to their work, increased their knowledge and skills and would recommend the session to others.
5. Limitations included the small number of participants and not yet measuring behavior changes and downstream effects of the sessions.
6. Next steps include providing the workshop to other institutional leaders and measuring long-term changes in leadership behavior and faculty well-being.

QUALITATIVE:
What skills or information will you use?
• Three levels of praise (4x)
• Structured approach to performance evaluations with personalized praise
• Methods to deliver appreciation, personalized notes
• What would you suggest to improve the appreciation sessions?
• Template tools
• Approaches for different types of employees
• Follow up would be useful
• More interaction

POST-WORKSHOP SURVEY
Pre-Workshop Survey (n=42/62) 65%
Leaders’ Barriers to Coaching and Giving Appreciation (%)
- Not effective
- Not enough time
- Too many faculty reports
- Not enough witnessed behaviors
- The need for training
- No barriers
- Not enough time
- Not enough witnessed behaviors
- The need for training
- No barriers
Pre-Workshop Survey (n=42/62) 65%
Percentage of Leaders reporting coaching skills
- At least some of the time
- Mostly
- Moderately
- Occasionally
- Rarely
- Very Frequently

Post-Workshop Survey: Appreciation (n=25/48) 52%
Content is relevant to my work
My team would benefit from this workshop
My peers would benefit from this workshop
Chart Area
Pre-Workshop Survey: Appreciation (n=25/48) 52%
Pre-Workshop Survey: Appreciation (n=25/48) 52%
Session increased my knowledge or skills
Strongly Agree, Agree, Neutral, Disagree

What skills or information will you use?
• GROW model (11x)
• Structured approach to performance evaluations with personalized interactions
• Active listening, humble inquiry
What would you suggest to improve the Coaching sessions?
• Nothing (6x)
• More time
• More interaction
• Expand the humble inquiry model from an interview example to a work example

QUALITATIVE:
- Nothing (6x)
- More time
- More interaction
- Expand the humble inquiry model from an interview example to a work example

REFERENCES:

CONCLUSIONS:
1. Leaders felt moderately skilled in coaching before the workshop and most believed they provide coaching and appreciation sometimes or frequently to their reports.
2. Barriers to giving coaching and appreciation to reports included lack of time, too many reports, and not enough witnessed behaviors and the need for more training.
3. We successfully recruited senior leadership to attend innovative workshops focused on coaching and appreciation skills.
4. Pre/post-test showed significant growth in both behavioral and attitudinal measures related to their work, increased their knowledge and skills and would recommend the session to others.
5. Limitations included the small number of participants and not yet measuring behavior changes and downstream effects of the sessions.
6. Next steps include providing the workshop to other institutional leaders and measuring long-term changes in leadership behavior and faculty well-being.

QUALITATIVE:
What skills or information will you use?
• GROW model (11x)
• Structured approach to performance evaluations with personalized interactions
• Active listening, humble inquiry
What would you suggest to improve the Coaching sessions?
• Nothing (6x)
• More time
• More interaction
• Expand the humble inquiry model from an interview example to a work example

REFERENCES:

CONCLUSIONS:
1. Leaders felt moderately skilled in coaching before the workshop and most believed they provide coaching and appreciation sometimes or frequently to their reports.
2. Barriers to giving coaching and appreciation to reports included lack of time, too many reports, and not enough witnessed behaviors and the need for more training.
3. We successfully recruited senior leadership to attend innovative workshops focused on coaching and appreciation skills.
4. Pre/post-test showed significant growth in both behavioral and attitudinal measures related to their work, increased their knowledge and skills and would recommend the session to others.
5. Limitations included the small number of participants and not yet measuring behavior changes and downstream effects of the sessions.
6. Next steps include providing the workshop to other institutional leaders and measuring long-term changes in leadership behavior and faculty well-being.
ABSTRACT:

THRIVE aims to allow participants to:
• gain first-hand experience in MedTech innovation,
• develop team-science skills by collaborating with talented and motivated trainees with diverse backgrounds and perspectives,
• connect with top researchers leading innovation in relation to COVID-19,
• take a project idea from concept through to commercially viable innovation.

METHODS:

THRIVE is a 9-month program for participants from diverse professional backgrounds to develop MedTech innovations related to COVID-19. The program is designed to provide an experiential team science platform for participants to take a project idea from concept to commercially viable innovation.

Ongoing evaluation:

As this is an ongoing program, the following data is still to be collected:


2. Supported by grant UL1TR001433 from the National Center for Advancing Translational Sciences.

FUTURE PLANS:

Despite being an ongoing project, THRIVE is showing promise as both a forum to foster team science skills, and a platform for innovation development in relation to COVID-19. Future plans are to:

• Retain the ongoing mentorship to current teams to continue to advance projects, secure funding and launch innovation.
• Assemble and secure additional funding to expand THRIVE educational initiatives to address future healthcare challenges with MedTech innovation.
• Integrate this approach with others to foster a team science environment and increase teaming capacity at Mount Sinai.

REFERENCES:


supported by grant UL1TR001433 from the National Center for Advancing Translational Sciences.
ABSTRACT:

Introduction: Despite relatively equal gender representation among US medical students, a gender gap exists in female representation within academic medicine. Numerous studies have emphasized the influence of gender-specific mentors in medical students’ career decisions; however, this has not been explored fully in ophthalmology. Therefore, this study evaluated ophthalmology educators’ attitudes towards gender-specific mentorship, to better understand how this relates to medical students’ decision to enter the field and their career development.

Methods: A 22-question anonymous web-based survey was sent to all Ophthalmology Department Chairs, Residency Program Directors (PDs), and Directors of Medical Student Education (MSEs) via the AUPO email listserver. Thirteen of the survey questions, including a mix of free response and Likert scale questions, inquired about attitudes towards mentorship and current mentorship experiences. Nine questions asked about demographic information, including the participants’ self-reported gender identities.

Respondent demographics were compared using summary statistics and chi-square analysis. Within the AUPO data set, female-identifying respondents were compared to male-identifying respondents, with average Likert scale scores of 2 and 1.67, respectively. Additional analyses included a comparison of male- and female-identifying respondents.

CONCLUSIONS: Male and female AUPO members reported no difference in the ratio of female mentees. However, female respondents were more likely to feel gender-specific mentorship was important, (p<0.01). Furthermore, 13 of 40 female members (32.5%) reported having a significant female mentor themselves vs. 1 of 29 male members (3%), (p<0.05).

RESULTS: We found that genero-specific mentorship within ophthalmology, assessed among female AUPO Program Directors, Chairs, and Medical Student Educators exists and is valued.

CONCLUSIONS: The development and increased institutional support of more formal mentorship programs may facilitate an increase in the number of female ophthalmologists.

4. More investigation is also required to understand institutional, national, and societal practices that currently provide obstacles for females in ophthalmology, to ultimately help reduce the gender gap and create more opportunities for women in ophthalmology.

BACKGROUND:

- Post-acute Rehab (PAR) patients are fragile and high risk for decompensation
- Skilled Nursing Facility (SNF) use in last year of life
  
  From 2006 to 2011: 1 in 8 Medicare beneficiaries cycled between hospital and SNF during the last year of life
- This population needs advance care planning (ACP)
- This study aimed to increase ACP for PAR patients at a SNF in NYC

METHODS:

The study was conducted at a community skilled nursing facility (SNF) with 164 PAR beds. Electronic medical records for 34 recently admitted PAR patients were reviewed to quantify ACP prevalence. This facility has a PC screening tool as part of the admission process. We focused on the referral process to palliative care as it was the most modifiable component with the most potential to increase ACP completion. The first PDSA cycle focused on improving the rate of PC referrals for patients who screened positive on admission. Referrals were tracked with reminders to providers if referrals were not completed.

RESULTS:

At baseline, 23% of admissions had a Medical Order for Life Sustaining Treatment (MOLST) and 12% had a health care proxy. The palliative care screening tool identified 6 patients for referral to PC, but 0% of referrals were completed. After the PDSA was implemented 100% (9 of 9) of PC referrals were completed. Secondary outcomes showed that the palliative care referral led to additional ACP in 30% (3 of 9) of the patients.

CONCLUSIONS:

This QI initiative increased the PC referral rate for PAR patients with identified PC needs. The low number of patients identified by the PC tool suggest that the tool is not sensitive enough. Future PDSAs will focus on revising the screening tool to more accurately identify patients who would benefit from specialty level PC, with the goal of developing a more reliable PC screening tool for PAR settings.

REFERENCES:

Use of off-label medications and clinician uncertainty during the COVID-19 pandemic: a survey study

Melissa B. Hill, Nikhil Shamapant, Surafel Tsega, Max Mandelbaum, Michael L. Herscher
Icahn School of Medicine at Mount Sinai, New York, NY

BACKGROUND

- Prescription of a drug for use beyond the guidelines of regulatory authorities ("off-label") is common in medicine. [1] However, there is debate regarding the ethical and legal implications of the practice. [2,3]
- As of December 9, 2020, there have been over 15 million reported cases and over 285,000 deaths in the United States due to COVID-19, with limited treatment options [4].
- Drugs including hydroxychloroquine, lopinavir-ritonavir, tocilizumab, methylprednisolone and many others have been used off-label for COVID-19. [5]
- In the absence of evidence-based guidance for COVID-19, individual clinicians must decide if and how to prescribe medications off-label.
- The aim of this study is to assess frontline providers’ attitudes regarding prescribing of drugs off-label for patients with COVID-19.

METHODS

- Online survey was emailed to 722 frontline physicians, nurse practitioners, physician assistants and clinical pharmacists at three hospitals within the Mount Sinai Health System. Survey completed over a 4-week period prior to June 8, 2020.
- Participants were eligible if they staffed inpatient medicine wards or the Intensive Care Unit (ICU) between March 1st and May 11th during the COVID-19 pandemic.
- Survey questions (Table 2) evaluated clinicians’ attitudes towards prescribing medications off-label during the COVID-19 pandemic as well as factors that may have influenced off-label prescribing such as peers’ practice patterns, institutional guidelines, disease severity, and drug scarcity.
- Questions were evaluated on a four-point forced-choice Likert scale and the number and proportion of responses were documented.

RESULTS

- Of 722 clinicians contacted, 242 clinicians (33.5%) provided responses (Table1).
- An overwhelming majority of providers agreed or strongly agreed that their decision to prescribe drugs off-label for COVID-19 has been influenced by the practice patterns of peer providers (96.3%) and that discussion amongst peers increases their confidence when prescribing off-label (90.5%).
- Most clinicians (88.8%) agree or strongly agree that institutional guidelines make them feel more comfortable when prescribing drugs off-label for COVID-19.
- Of the 190 off-label prescribers, 78.4% feel somewhat or very uncertain that the benefits outweigh the risks for the drugs the clinician has prescribed.

CONCLUSIONS

Table 1 - Baseline characteristics of survey respondents, n=242

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Responses, n (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Training</strong></td>
<td></td>
</tr>
<tr>
<td>Attending &lt;2 years</td>
<td>11 (4.5)</td>
</tr>
<tr>
<td>Attending 2-5</td>
<td>32 (13.2)</td>
</tr>
<tr>
<td>Attending 6-10 years</td>
<td>33 (13.6)</td>
</tr>
<tr>
<td>Attending &gt;10 years</td>
<td>34 (14.0)</td>
</tr>
<tr>
<td>Fellow</td>
<td>25 (10.3)</td>
</tr>
<tr>
<td>Nurse Practitioner</td>
<td>18 (7.4)</td>
</tr>
<tr>
<td>Physician Assistant</td>
<td>17 (7.0)</td>
</tr>
<tr>
<td>Clinical Pharmacist</td>
<td>1 (0.4)</td>
</tr>
<tr>
<td>PGY1 Resident</td>
<td>24 (9.9)</td>
</tr>
<tr>
<td>PGY2 Resident</td>
<td>29 (12.0)</td>
</tr>
<tr>
<td>PGY3 Resident</td>
<td>11 (4.5)</td>
</tr>
<tr>
<td>PGY4+ Resident</td>
<td>7 (2.9)</td>
</tr>
<tr>
<td><strong>Specialty</strong></td>
<td></td>
</tr>
<tr>
<td>Internal Medicine</td>
<td>163 (67.6)</td>
</tr>
<tr>
<td>Critical Care</td>
<td>24 (9.9)</td>
</tr>
<tr>
<td>Infectious Disease</td>
<td>21 (8.7)</td>
</tr>
<tr>
<td>Neurology</td>
<td>15 (6.2)</td>
</tr>
<tr>
<td>Other*</td>
<td>64 (26.4)</td>
</tr>
<tr>
<td><strong>Setting</strong></td>
<td></td>
</tr>
<tr>
<td>ICU</td>
<td>80 (33.1)</td>
</tr>
<tr>
<td>Inpatient</td>
<td>187 (77.3)</td>
</tr>
<tr>
<td>Outpatient</td>
<td>125 (51.7)</td>
</tr>
<tr>
<td>Other**</td>
<td>7 (2.9)</td>
</tr>
</tbody>
</table>

*Other specialties indicated (all <5% of total, by descending frequency): Pediatrics (9), Gastroenterology (5), Emergency Medicine (4), Pulmonology (4), Cardiology (4), Hematology/Oncology (4), Hematology (4), Family Medicine (3), Radiology (3), Surgery (3), Rheumatology (3), Endocrine (3), Environmental and Occupational Medicine (2), Unspecified (2), Medical Oncology (1), Dermatology (1), Palliative Care (1), Transplantation (1), Liver (1), Sleep Medicine (1), Adult Primary Care (1), Infectious Disease Pharmacists (1), Anesthesiology (1), Obstetrics-Gynecology (1), Pathology (1) **Other settings indicated (all <5% of total, by descending frequency): Research (2), Radiology (2), Emergency Room (1), Home Visits (1), Administrative (1) *Question permits multiple answers PGY = Post-Graduate Year

REFERENCES


Table 2 – Select survey questions

<table>
<thead>
<tr>
<th>Question</th>
<th>Responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>How certain are you that the benefits outweigh the risks for drugs you have prescribed off-label for COVID-19?</td>
<td>A. Very certain B. Somewhat certain C. Somewhat uncertain D. Very uncertain</td>
</tr>
<tr>
<td>The following questions collected responses using a four-point Likert scale: A. Strongly Agree B. Agree C. Disagree D. Strongly Disagree</td>
<td></td>
</tr>
<tr>
<td>To what extent do you agree or disagree with this statement: “My decisions to prescribe drugs off-label for COVID-19 have been influenced by the practice patterns of peer providers.”</td>
<td></td>
</tr>
<tr>
<td>Institutional guidelines make me feel more comfortable when prescribing drugs off-label for COVID-19.</td>
<td></td>
</tr>
<tr>
<td>Prescribing a drug off-label for COVID-19 can be justified by evidence such as a case series, retrospective review, or other non-randomized or non-controlled trials.</td>
<td></td>
</tr>
<tr>
<td>Prescribing a drug off-label for COVID-19 can be justified based upon clinical severity.</td>
<td></td>
</tr>
<tr>
<td>Discussion amongst peers increases my confidence in prescribing a drug off-label for COVID-19.</td>
<td></td>
</tr>
<tr>
<td>Relevant specialists should be consulted before prescribing a drug off-label for COVID-19.</td>
<td></td>
</tr>
<tr>
<td>Scarcity of a drug should be considered when using off-label indications for treatment.</td>
<td></td>
</tr>
<tr>
<td>Prescribing a drug off-label for COVID-19 is only justified if there is adequate supply remaining for patients who need it for on-label use.</td>
<td></td>
</tr>
</tbody>
</table>

Table 3 - Drugs prescribed off-label for COVID-19, n=190

<table>
<thead>
<tr>
<th>Drug Prescribed†</th>
<th>Responses, n (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hydroxychloroquine</td>
<td>185 (97.4)</td>
</tr>
<tr>
<td>Azithromycin</td>
<td>171 (90.0)</td>
</tr>
<tr>
<td>Low Molecular Weight Heparin</td>
<td>158 (83.2)</td>
</tr>
<tr>
<td>Glucocorticoids</td>
<td>149 (78.4)</td>
</tr>
<tr>
<td>Direct Oral Anticoagulant</td>
<td>132 (69.5)</td>
</tr>
</tbody>
</table>

†Other drugs indicated (all <5% of total, by descending frequency): Convalescent plasma, Remdesivir, Gimsilumab
INTRODUCTION:

Over-ordering daily labs affects patient safety through hospital-acquired anemia, patient discomfort, frontline staff burden, and unnecessary downstream testing and cost.

**Learning Objective #1:** To describe the current state of daily labs ordered per patient in the context of prior interventions to reduce lab burden as a means of identifying areas of improvement for future quality initiatives.

**Learning Objective #2:** To assess interdisciplinary attitudes on daily laboratory testing to develop a sustainable quality improvement intervention.

LAB RESULTS:

- An average of 2.2 labs were collected per patient day between June – October 2020.
- This was an increase from the 1.3 labs per patient day found in a similar patient population from March 2016 to August 2017 after the last daily lab reduction intervention.

FIGURE 2B: CURRENT LAB CULTURE: JUNE 2020 - OCT 2020

SURVEY RESULTS

- **Respondents:** N=127
  - 27 attendings
  - 43 residents
  - 17 NPs
  - 19 PCAs
  - 14 RNs
  - 12 PAs

**Results**

- 90% of attendings disagreed/strongly disagreed that “daily labs enhance patient safety/care” (vs 49% of residents).
- 58% of PCAs and 71% of RNs agreed that daily labs enhance patient safety/care.
- Only 16% of PCAs and 7% of RNs agreed that daily labs may have potential harms.
- 41% of attendings and 51% of residents said daily labs (safety checklist) are seldom or never discussed during rounds.

FIGURE 3: SURVEY RESULTS

CONCLUSIONS:

- Sustainable interventions are needed to reduce lab burden.
- Our multidisciplinary survey highlights a major discrepancy between attendings and other ordering providers on the necessity of daily tests.
- These results reveal the potential impact of planned PDSA (plan-do-study-act) cycle interventions including planned educational sessions, the initiation of monthly audit and feedback email, and attending-led rounding discussions on necessary labs.

NEXT STEPS:

- **Phase 1:** Attending-led lab discussions
- **Phase 2:** Audit and feedback monthly email
- **Phase 3:** Partner with nurse managers for nursing-focused intervention on medicine floors
- **Phase 4:** Distribution of post-intervention survey
- **Phase 5:** Modify subsequent PDSA cycles based on contemporary feedback

REFERENCES

OBJECTIVES
• Review of Mount Sinai’s Institutional Partnership with the US Military
• Recognizing diversity within student veteran applicant population

INTRODUCTION
• Military veterans traditionally viewed monolithically as source of diversity in US medical school admissions
• US military is more racially diverse than civilian workforce, with minorities representing 34% of veteran population by 2040

METHODS
• Statistical analysis of admissions data from the Icahn School of Medicine at Mount Sinai and its Institutional Partnership with the US Military from 2018 to 2020
• Review of applicants who identified as first generation, under-represented in medicine, and disadvantaged backgrounds

RESULTS
• Applicants to Mount Sinai’s Institutional Partnership with the US Military represented statistically higher levels of diversity than general applicants in addition to their unique backgrounds in the military

CONCLUSIONS
• Military veteran initiatives further other diversity goals for US medical schools
• There is significant diversity within the student veteran population, as measured by applicants who identify as first generation students, under-represented in medicine and disadvantaged backgrounds
• Of the 21,869 matriculants to US medical schools in 2019, only 131 or 0.6% reported having served in the military
• A holistic review of veteran applicants can increase diversity within the student veteran population

REFERENCES
METHODS:

The project was directed toward interdisciplinary healthcare professionals who directly formulate the patient care plans for older adults with DM, including: advanced practice nurses, physician assistants, residents, osteopathic doctors, and physicians, rotating through or interacting with the Endocrinology department. The project excluded health care professionals with no prescriptive authority and students. And following preventive measures against current COVID-19 pandemic the program was delivered using digital HIPAA compliant platforms: REDCap, for capturing data; and Zoom, to deliver intervention and handout educational material.

Educational Programs:

The educational module “Finding the Sweet Spot” was developed by Geriatric Center for Research and Education, Boston, figure 2. It is distributed by MedEdPortal which is an open-access publication distributed under the Creative Commons Attribution License.

The module consists of a guided case-based presentation with a post-test post-test design. It was implemented in a population of 30 clinicians and trainees who were responsible for diabetes prescriptions and management. The workshop increased knowledge measured by the percentage of right answers, from 55% to 97% with p < .05, and it was significant (61% to 81% with p < .05%).

RESULTS:

1. The project aligns with the literature regarding cases as a teaching tool in acute and chronic care in addition to other educational activities provided by the DCES on staff.
2. The pretests results signal that knowledge about diabetes in older adults is not diverse, as 95% were females, figure 3. However, it was diverse in the respective population. Furthermore, this literature is limited to compare house-staff and nurses in USA the mean score for all participants was 61% comparable to 63% in the validation study of FSS, and 58% in this project. However, the comparison may not be appropriate as this project’s content is a covers a subpopulation of patients with diabetes.
3. The results indicated that the educational intervention produced an improvement in the participants’ knowledge which is evidenced by the increased percentage of correct answers from pretest (56% ± 14.65) to posttest (80% ± 18.64), t = 14.755, p < .001.

CONCLUSIONS:

1. The project aligns with the literature regarding cases as a teaching tool in acute and chronic care in addition to other educational activities provided by the DCES on staff.
2. The pretests results signal that knowledge about diabetes in older adults and frailty are areas that need improvement.
3. After review of feedback, the program will be offered to the house-staff in addition to other educational activities provided by the DCES on staff.

REFERENCES:


Figure 2: Outline of the content of the ‘Finding the Sweet Spot” educational module, and a copy of the first page of the handout material.

Figure 3: From left to right, the percentage of correct answers, from pretest (56% ± 14.65) to posttest (80% ± 18.64), t = 14.755, p < .001.

Figure 4: Comparison results post-test versus pretest on knowledge of diabetes and frailty.
ABSTRACT:

Purpose: In 2018, the American Academy of Pediatrics (AAP) published guidelines on maintenance IV fluids (IVF) in pediatric patients, recommending isotonic (instead of hypotonic) fluid use to significantly decrease the risk of developing hypotension. Our quality improvement (QI) team sought to improve and sustain the exclusive use of isotonic maintenance IVF in our inpatient pediatric unit, and joined a national QI collaborative. The aims were to increase the proportion of hospital days with exclusive isotonic maintenance IVF use to ≥80%, to decrease the number of routine labs per hospital day by 20% from baseline, and to decrease the proportion of time (hours) on maintenance IVF during hospitalization by 10% from baseline by May 2020.

Methods: The project took place at the inpatient pediatric unit of an academic community hospital. Champions from the departments of pharmacy, nursing, emergency medicine and pediatrics led the QI initiative. Each champion educated their staff about the updated guidelines, ongoing project and interventions. The study occurred over 14 months (April 2019-May 2020). Monthly data was collected. Outcome measures included tonicity of maintenance IVF, number of serum WBC levels (proxy for routine labs) per hospital day by 20% from baseline by May 2020

SMART Aims and Measures:

Primary Aims:
• Increase proportion of hospital days with exclusive isotonic maintenance IVF use to >80% by May 2020
• Decrease number of serum WBC levels (proxy for routine labs) per hospital day by 20% from baseline by May 2020

Secondary Aims:
• Decrease proportion of time (hours) on maintenance IVF during hospitalization by 10% from baseline by May 2020.

Settings:
Setting: Inpatient pediatric unit of community hospital
Timeline: 14 months (April 2019-May 2020)
Sample Sizes: (N=314)
• Cycles 1-20 (baseline, n=242) (proxy for routine labs)
• Cycles 21-25 (intervention/action period, n=72)

RESULTS:
There were 314 patients (baseline: cycles 1-20, n=242; action period: cycles 21-25, n=72). There was improved exclusive isotonic fluid use over time, and 98% compliance during the action period. There was an 18% decrease in the number of routine labs per hospital day. There was no significant change in adverse events, floor to PICU transfers and hospital length of stay.

Association:
• There was sustained improvement of exclusive isotonic fluid use and an 18% decrease in the number of routine labs per hospital day.

CONCLUSIONS:
Participation in a national collaborative was associated with improved health care value in the RUMC inpatient pediatric setting, as demonstrated by:
1. Sustained use of maintenance fluid that is safer for the patient (isotonic vs hypotonic); and
2. Reduced number of “routine” blood draws.

REFERENCES:
ABSTRACT:

INTRODUCTION: The Accreditation Council for Graduate Medical Education (ACGME) requires that fellows receive QI training. Feedback from the 2019-20 QI curriculum cohort indicated 46% of fellows and 82% of faculty mentors reported low fellow interest in the QI project topic as a barrier to project completion. Suggestion was made to have 2nd year fellows "pitch" QI ideas and be main project mentors. Project aims: (1) train 2nd year fellows to lead QI projects, (2) evaluate efficacy of mentor training for 2nd year fellows. Methods: Mentor development consisted of asynchronous web-based training on QI principles, with coaching during a faculty fellow “co-learning” QI curriculum. Seven 2nd year fellows pitched five QI project ideas to 16 1st year fellows for ranking; teams were created based on order of preference. 2nd year fellows were evaluated as QI mentors using a prospective survey of knowledge and baseline with QI concepts on a Likert Scale (i.e. 5=Very comfortable, 1=Very uncomfortable). A midterm survey of all fellows and faculty assessed efficacy of mentor training and 2nd year fellows' attitudes on the junior mentor role. Results: 94% of 1st year fellows, 83% of 2nd year fellows, and 90% of faculty mentors completed pre-curriculum surveys. 50% of 1st year fellows, 83% of 2nd year fellows and 80% of faculty mentors completed midterm surveys. Midterm results revealed faculty mentors (avg score 4.78) and 1st year fellows (avg score 4) felt that 2nd years were helpful as mentors. 2nd years reported improved comfort as mentors (Pre 2.8, Post 3). At four months, 1st year fellows’ comfort utilizing four key QI concepts increased. Midterm surveys revealed that 2nd year fellows preferred a junior mentor role, but wanted clear definition of the role. Faculty mentors (avg score 4.44) and 1st year fellows (avg score 3.75) agreed that 2nd years helped overcome QI project barriers. Faculty mentors reported fellow involvement improved over the prior year, although inequity persisted in participation by 1st year fellows. Conclusion: Training 2nd year fellows as mentors can improve mentors’ comfort and engagement with QI concepts. Next steps include defining roles of all QI group members and determining how to further enhance equitable fellow participation.

METHODS:

Creation of QI Project Groups

- 7th year fellows developed and led five QI teams
- Each team with: 1-2 2nd year fellows
- Senior faculty advisors: 2-3 1st year fellows

QI Training

- 2nd year fellows received formal training in QI tools and methods during year 7

Training:

- Four QI Institute for Healthcare Improvement modules
- Four QI team work sessions consisting of QI refreshers and protected group time, held throughout the year
- Three faculty development sessions via Zoom to build on QI concepts and discuss project leadership
- 1st year fellows received the same QI curriculum that was provided to 2nd year fellows the year prior, though via Zoom

Evaluation of 2nd year fellows

- 7th year fellows evaluated using a pre-curriculum and a midterm survey
- Pre-curriculum survey: demographics and self-assessment of QI concepts, as well as 2nd year’s comfort as QI coaches
- Also evaluated by 1st year fellows and senior faculty mentors
- Survey questions were based on a five-point Likert scale, i.e. 5=Very comfortable and 1=Very uncomfortable
- Rated on QI leadership abilities and understanding of QI concepts
- Also assessed specific barriers to QI projects

Feedback-tailored adjustments

- Feedback was used to provide guidance to all fellows and faculty

RESULTS:

Pre-curriculum survey results (avg Likert):

- Comfort level as QI coaches: 2.8
- Comfort with the following QI concepts:
  - Constructing a Process map: 4.0
  - Developing a SMART AIMS statement: 3.6
  - Identifying measures to assess a change: 3.4
  - PDSSA model for improvement: 3.4

Midterm surveys results (Figures 2-3)

- Fellow interest and motivation: 4.0
- Equitable participation: 4.0
- Group dynamics: 0
- Data collection: 5.625
- Analyzing data: 2.5
- Implementations & improvement intervention: 5.625
- COVID: 0
- Other: 0
- Total: 3.375

CONCLUSIONS:

- 46% of fellows (6/13) felt that low fellow interest and colleague motivation were barriers to QI project completion
- 37.5% of faculty/senior mentors (3/3) felt the same
- 2nd year fellows' comfort level as QI mentors: 3.6 (5 responses)

Role of JE mentor:

- Project creator/manager
- Teach
- Delegate task on project and planning of data collection/analysis
- Set up monthly zoom meetings

Role of SR Mentor:

- Resources as JE mentor about teaching the QI process and data enforcement
- Mentor role to engage "internal" QI members of the IDT
- "Subordinate" so that a mentor is present during the formal and informal work sessions.

Figure 3. Assessment of 2nd year fellows' leadership skills by Senior faculty mentors and 1st year fellow.

- 1st and 2nd year fellows' rating of fellow interest in QI projects and colleague motivation was similar in years 7 and 8
- 3rd year fellows were much more involved in QI projects compared to 2nd year fellows

LIMITATIONS & FUTURE DIRECTION:

- 1. Further identifying factors that could improve fellow interest in QI would be helpful. E.g. with end of year survey
- 2. Improvement in 2nd year fellows' comfort with being QI mentors as curriculum progressed. Determine if clarifying roles helped at end of year survey
- 3. Greater focus on PDSSA cycle training might be helpful
- 4. Limitations in results due to sample size, smaller n this year compared with year 7 given fewer fellows

CONCLUSIONS:

- 80% (6/7) respondents indicated that role was unclear
- 50% (2/4) suggest clarifying role with respect to 1st yr fellows
- 66% (3/4) suggest clarifying role with respect to Sr mentors

I vividly remember the time when we were on a train and

The Brookdale Department of Geriatrics and Palliative Medicine has had a quality improvement (QI) curriculum for the past eight years. An end of the year survey from the 2019-2020 academic year (year 7 of our QI program) revealed that:

- 46% (14/30) of nine 1st year and five 2nd year of geriatrics/palliative fellows felt low fellow interest/enthusiasm were barriers to QI project completion
- 82% (25/30) of senior faculty mentors felt the same

Open-ended Midterm feedback:

- Please provide us with any feedback as to how being a QI mentor is working for you so far AND how we can help you better coach the QI projects for the remainder of the year

From 2nd year fellows aka Junior mentors:

- 80% (6/7) respondents indicated that role was unclear
- 50% (2/4) suggest clarifying role with respect to 1st yr fellows
- 66% (3/4) suggest clarifying role with respect to Sr mentors

If I feel responsible for the work of the group and that really depends on whether the group is pulling their weight. It would be really helpful to have a clear understanding of the role of the junior fellows. Does this individual simply guide the group and provide feedback, edit, support for ideas? Do they equally participate with the first year fellows but then also serve in a leadership position for the group?
Halted by COVID: Pandemic Impact on QI Learning for Geriatric and Palliative Medicine Fellows

C Chang, S Chopra, W Hung, B Shah, H Fernandez
Dept. of Geriatrics and Palliative Medicine, Icahn School of Medicine at Mount Sinai

INTRODUCTION:
- Accreditation Council for Graduate Medical Education mandates that residency programs teach quality QI concepts and skills as part of the practice-based learning and improvement core competency.
- A nine-month QI curriculum for the 2019-2020 Geriatric and Palliative Medicine fellowship at a large NYC hospital was prematurely halted by the pandemic.

METHODS
- QI curriculum employed:
  - A "flipped" classroom model using Institute for Healthcare Improvement online modules to teach basic QI concepts
  - Four protected 1-2 hour sessions to reinforce knowledge application of QI concepts through active learning methods.
  - Fellow's QI Resources were created to guide project workflow.
  - Roadmap with resources
  - Accountability contracts
  - Presentation templates
- Fellows worked on departmental prioritized team-based QI projects, scheduled for presentation at midterm and end-of-year.
- Program evaluation consisted of:
  - A prospective pre-post survey with
    - Demographics
    - 6-item questionnaire on comfort with QI concepts with 5-point Likert Scale (5 = Very Comfortable, 1 = Very Uncomfortable);
    - 3 cases from the Quality Improvement Knowledge Application Tool (QIKAT)
  - 2 question open ended course evaluation
    - What are the strength and weaknesses of this course?
    - Do you have any recommendations to improve this course?
  - Accepted Presentations outside the curriculum

CONCLUSIONS:
- Even during a pandemic, a structured QI curriculum that employs a flipped classroom and engages fellows on prioritized departmental QI projects was proven an effective method for teaching quality improvement skills to fellows.
- But during the pandemic surge, all projects were halted due to learner stress, redeployment and time management issues.
- FINAL PRESENTATIONS were CANCELED
- Despite these significant barriers, 100% of QI teams submitted abstract proposals with 75% (6) acceptance for national and regional presentations.
- Course evaluations were positive with recommendations to include:
  - More protected work time with QI concept refreshers
  - Education on data collection and analysis
  - Stronger faculty facilitation
  - Advice to improve equitable group participation

RESULTS:
- Faculty-fellow “co-learning” curriculum
  - August 3
  - September 3
  - October 4
  - November 4
  - December 4
  - January 4
  - February 2
  - March 2
  - April 2
  - May 2

Year 7
- Pre QIKAT: 92% (23)
- Post QIKAT: 84% (21)
- IH: 56% (14)
- 1st years (n=25)
- 2nd years (n=10)
- Attendings (n=15)

Post curriculum, 1st year fellows demonstrated improved comfort with utilizing the 5 QI concept/tools (p<0.05)

- How essential is QI in your profession? 4.7→4.7 0.75 4.71→4.71 1 4.71→4.68 0.79
- Confidence to make local improvement 3.9→4.0 0.50 3.9→4.1 0.36 3.89→4.07 0.31
- Constructing a Process map 3.1→4.2 <0.01 4.43→4.43 1 3.46→4.25 <0.01
- Constructing a Fishbone Diagram 3.4→4.5 <0.01 4.71→4.71 0.6 3.75→4.61 <0.01
- Set SMART Aims 3→3.9 <0.01 4.14→4.14 1 3.32→3.96 <0.01
- Identifying Measures to Assess a Change 3.3→4.4 <0.01 3.71→4.14 0.36 3.39→4.07 <0.01
- PDSA Model for Improvement 3.1→4.3 <0.01 4.3→4.4 0.69 3.43→4.36 <0.01

- Yr 7 Comfort level Likert 1-5 P Likert 1-5 P Likert 1-5 P
- Yr 1 fellow Yr 2 fellow All Fellows Y1+ Y2

- Post curriculum, first year fellows demonstrated improved QI knowledge via QIKAT (PRE 20.7; POST 23 Paired T test p < 0.01)

- 2019-2020 Final QI Team projects with Mentors and fellows: 35 fellows and 16 faculty mentors at 4 sites
  - 1. Reducing SEPSIS at the New Jewish Home, Mentors: Ruth Spinner, Stephanie Le.
  - Shivani Chopra, Katerine Okononou, Daniel Gala, Zab Khan, Naveen Agar
  - 2. Improving ACP documentation in OP practice at Beth Israel-MSCL downtown Mentors: Joyce Fegel, Beth Popp
  - Amy Wikerlo, Miki Hsypidas, Natasha Moha, Aliza Carr
  - Debra Anzolfo, Angelis Ccano, Harriet Mather, Julia Burns
  - 4. Decreasing unnecessary ER utilization for MSCL-uptown outpatient practice. Mentors: Stephanie Chow, Ellen Callahan
  - Kelly Cummings, Jose DeLeon, Erika Diaz Navarre, Phillip Solomon, Kayvee Sreavelan

- Improving MOLST use on MSCL-uptown patients admitted to MACE Mentors: Christine Chang, Martine Sano,
  - Amy Reyes-Arnold, Laura Belland, Gerard Cassile, Renata Scalabrin Reis

- Increasing Substance Use Disorder Screening and Initiation of Risk Reduction Strategies in Outpatient PC Clinic,
  - Mentors: Vanessa Rodriguez, Samantha Lau, Mitch Wise, Megha Patel, Carl-Phillipe Rouesse, Cears Sears

- Decreasing late Palliative Care consults for DT-LVAD patients Mentors: Anup Bhanwani, Karen Hansen,
  - Natasha Pirach, Dina Chafeh, Donin Gilhuly, Michael Napolts

- Improving documentation of patient medical preferences/goals of care in patients hospitalized for > 30 days,
  - Mentors: Priya Krishna, Ankita Moha, Eugenia Choi, Cristian Serna-Tamayo, Julia Fiedman, Jaydi Sharma, Calsbin Kuwata, Kasey Sinha

- Accreditation Council for Graduate Medical Education mandates that residency programs teach quality QI concepts and skills as part of the practice-based learning and improvement core competency.
- A nine-month QI curriculum for the 2019-2020 Geriatric and Palliative Medicine fellowship at a large NYC hospital was prematurely halted by the pandemic.

- Even during a pandemic, a structured QI curriculum that employs a flipped classroom and engages fellows on prioritized departmental QI projects was proven an effective method for teaching quality improvement skills to fellows.
- But during the pandemic surge, all projects were halted due to learner stress, redeployment and time management issues.
- Despite these significant barriers, 100% of QI teams submitted abstract proposals with 75% (6) acceptance for national and regional presentations.
- Course evaluations were positive with recommendations to include:
  - More protected work time with QI concept refreshers
  - Education on data collection and analysis
  - Stronger faculty facilitation
  - Advice to improve equitable group participation
A Model to Increase Faculty Competency in teaching QI to Geriatric and Palliative Medicine Fellows

C Chang, S Chopra, W Hung, B Shah, H Fernandez, K Cummings
Department of Geriatrics and Palliative Medicine
Icahn School of Medicine at Mount Sinai

INTRODUCTION:

• A major barrier to the expansion of Quality Improvement (QI) and Patient Safety (PS) in medical education has been the lack of faculty development (FD) in quality and safety.
• Our geriatric and palliative medicine fellows participate in a 9-month project-based QI curriculum coached by volunteer faculty.
• Year survey of faculty coaches revealed:
  - 43% never completed formal QI curriculum
  - only 43% felt very comfortable being a QI mentor
  - 86% would welcome further QI FD.

OBJECTIVE:

• Our project aims to improve faculty QI knowledge and teaching skills to increase trainees’ engagement in QI/PS.

METHODS:

• 8 QI projects with 16 coaches were offered to 35 fellows to rank.
• All faculty coaches participated in the FD curriculum in QI that included:
  • A web-based training to teach QI principles
  • Train-the-Trainer Model to coach faculty on teaching and facilitating QI team projects during faculty-fellow “co-learning” QI curriculum.
  • A mid-year “check-in” with faculty explored project team challenges.
• Evaluation consisted of a prospective pre-post survey with:
  • Demographics
  • 6-item questionnaire on comfort with QI concepts on a Likert Scale (5 = Very Comfortable, 1 = Very Uncomfortable)
  • 3 cases from the Quality-Improvement Knowledge Application Tool (QIKAT)
  • 2 question open-ended

CONCLUSIONS:

Use of asynchronous web-based training with the Train-the-Trainer Model to coach faculty on how to teach and facilitate the QI team projects is an effective method to improve faculty comfort and competency in teaching QI skills to fellows.

RESULTS:

Faculty-fellow “co-learning” curriculum

3 Faculty only education session

• Faculty QI development Session 1: Call for Fellow’s QI project proposals Objectives: Develop appropriate Fellow QI projects based on quality metrics that matter for the Department.
• Faculty QI development Session 2: The purpose of this meeting is to review group facilitation techniques to address some of the barriers identified by the 2018-19 Y6 faculty QI coaches.
• Faculty QI development session 3: The purpose of this meeting is to monitor Team projects and to refresh on QI concepts as well as review group facilitation techniques discussed above. This will occur between Team work session 2 (10/31/19) and session 3 (11/26/20).

Post curriculum, coaches demonstrated improved comfort in being a mentor and utilizing the 3 key QI concept/tools (p<0.05) as well as improved QI knowledge (pre 22.6; post 24.5 p<0.01).

CONCLUSIONS:

Use of asynchronous web-based training with the Train-the-Trainer Model to coach faculty on how to teach and facilitate the QI team projects is an effective method to improve faculty comfort and competency in teaching QI skills to fellows.

NEXT STEPS:

• Address feedback from Course eval
• How to develop projects that both faculty and fellows want to work on?
• Interesting to attending and fellow, important for patient, do-able within 8 months
• Addresses racial inequity/bias/access in the practice that affects health outcomes?
• Improve new workflow given COVID (translators, ipads, telehealth, Patch 24)
• Priorities for our dept and health system
• Have data that we are already (or can easily) monitor in an ongoing way

Similarly, all fellows demonstrated improved comfort with utilizing the 5 key QI concept/tools (p<0.05) and improved QI knowledge (pre 20.7; post 23.0 p<0.01).

Table 1: Faculty-QI development session 1: Call for fellow’s QI project proposals. Objectives: Develop appropriate fellow QI projects based on quality metrics that matter for the Department.

<table>
<thead>
<tr>
<th>Year 7 Comfort level</th>
<th>Likert 1-5</th>
<th>P</th>
<th>Likert 1-5</th>
<th>P</th>
<th>Likert 1-5</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yr 1 follow</td>
<td>4.7</td>
<td>0.75</td>
<td>4.71</td>
<td>0.79</td>
<td>4.71</td>
<td>0.79</td>
</tr>
<tr>
<td>Yr 2 follow</td>
<td>4.71</td>
<td>0.79</td>
<td>4.71</td>
<td>0.79</td>
<td>4.71</td>
<td>0.79</td>
</tr>
<tr>
<td>All fellows</td>
<td>4.71</td>
<td>0.79</td>
<td>4.71</td>
<td>0.79</td>
<td>4.71</td>
<td>0.79</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Table 2: Year 7 Pre QIKAT vs Post QIKAT</th>
<th>Likert 1-5</th>
<th>P</th>
<th>Likert 1-5</th>
<th>P</th>
<th>Likert 1-5</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre QIKAT</td>
<td>4.71</td>
<td>0.79</td>
<td>4.71</td>
<td>0.79</td>
<td>4.71</td>
<td>0.79</td>
</tr>
<tr>
<td>Post QIKAT</td>
<td>4.71</td>
<td>0.79</td>
<td>4.71</td>
<td>0.79</td>
<td>4.71</td>
<td>0.79</td>
</tr>
<tr>
<td>All Fellows</td>
<td>4.71</td>
<td>0.79</td>
<td>4.71</td>
<td>0.79</td>
<td>4.71</td>
<td>0.79</td>
</tr>
</tbody>
</table>

Table 3: Faculty QI development session 2: The purpose of this meeting is to review group facilitation techniques to address some of the barriers identified by the 2018-19 Y6 faculty QI coaches.

<table>
<thead>
<tr>
<th>Year 7 Pre QIKAT vs Post QIKAT</th>
<th>Likert 1-5</th>
<th>P</th>
<th>Likert 1-5</th>
<th>P</th>
<th>Likert 1-5</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre QIKAT</td>
<td>4.71</td>
<td>0.79</td>
<td>4.71</td>
<td>0.79</td>
<td>4.71</td>
<td>0.79</td>
</tr>
<tr>
<td>Post QIKAT</td>
<td>4.71</td>
<td>0.79</td>
<td>4.71</td>
<td>0.79</td>
<td>4.71</td>
<td>0.79</td>
</tr>
<tr>
<td>All Fellows</td>
<td>4.71</td>
<td>0.79</td>
<td>4.71</td>
<td>0.79</td>
<td>4.71</td>
<td>0.79</td>
</tr>
</tbody>
</table>

Table 4: Faculty QI development session 3: The purpose of this meeting is to monitor Team projects and to refresh on QI concepts as well as review group facilitation techniques discussed above. This will occur between Team work session 2 (10/31/19) and session 3 (11/26/20).

<table>
<thead>
<tr>
<th>Year 7 Pre QIKAT vs Post QIKAT</th>
<th>Likert 1-5</th>
<th>P</th>
<th>Likert 1-5</th>
<th>P</th>
<th>Likert 1-5</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre QIKAT</td>
<td>4.71</td>
<td>0.79</td>
<td>4.71</td>
<td>0.79</td>
<td>4.71</td>
<td>0.79</td>
</tr>
<tr>
<td>Post QIKAT</td>
<td>4.71</td>
<td>0.79</td>
<td>4.71</td>
<td>0.79</td>
<td>4.71</td>
<td>0.79</td>
</tr>
<tr>
<td>All Fellows</td>
<td>4.71</td>
<td>0.79</td>
<td>4.71</td>
<td>0.79</td>
<td>4.71</td>
<td>0.79</td>
</tr>
</tbody>
</table>

Table 5: Faculty QI development session 4: The purpose of this meeting is to review group facilitation techniques to address some of the barriers identified by the 2018-19 Y6 faculty QI coaches.

<table>
<thead>
<tr>
<th>Year 7 Pre QIKAT vs Post QIKAT</th>
<th>Likert 1-5</th>
<th>P</th>
<th>Likert 1-5</th>
<th>P</th>
<th>Likert 1-5</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre QIKAT</td>
<td>4.71</td>
<td>0.79</td>
<td>4.71</td>
<td>0.79</td>
<td>4.71</td>
<td>0.79</td>
</tr>
<tr>
<td>Post QIKAT</td>
<td>4.71</td>
<td>0.79</td>
<td>4.71</td>
<td>0.79</td>
<td>4.71</td>
<td>0.79</td>
</tr>
<tr>
<td>All Fellows</td>
<td>4.71</td>
<td>0.79</td>
<td>4.71</td>
<td>0.79</td>
<td>4.71</td>
<td>0.79</td>
</tr>
</tbody>
</table>

Table 6: Faculty QI development session 5: The purpose of this meeting is to review group facilitation techniques to address some of the barriers identified by the 2018-19 Y6 faculty QI coaches.

<table>
<thead>
<tr>
<th>Year 7 Pre QIKAT vs Post QIKAT</th>
<th>Likert 1-5</th>
<th>P</th>
<th>Likert 1-5</th>
<th>P</th>
<th>Likert 1-5</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre QIKAT</td>
<td>4.71</td>
<td>0.79</td>
<td>4.71</td>
<td>0.79</td>
<td>4.71</td>
<td>0.79</td>
</tr>
<tr>
<td>Post QIKAT</td>
<td>4.71</td>
<td>0.79</td>
<td>4.71</td>
<td>0.79</td>
<td>4.71</td>
<td>0.79</td>
</tr>
<tr>
<td>All Fellows</td>
<td>4.71</td>
<td>0.79</td>
<td>4.71</td>
<td>0.79</td>
<td>4.71</td>
<td>0.79</td>
</tr>
</tbody>
</table>

Table 7: Faculty QI development session 6: The purpose of this meeting is to review group facilitation techniques to address some of the barriers identified by the 2018-19 Y6 faculty QI coaches.

<table>
<thead>
<tr>
<th>Year 7 Pre QIKAT vs Post QIKAT</th>
<th>Likert 1-5</th>
<th>P</th>
<th>Likert 1-5</th>
<th>P</th>
<th>Likert 1-5</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre QIKAT</td>
<td>4.71</td>
<td>0.79</td>
<td>4.71</td>
<td>0.79</td>
<td>4.71</td>
<td>0.79</td>
</tr>
<tr>
<td>Post QIKAT</td>
<td>4.71</td>
<td>0.79</td>
<td>4.71</td>
<td>0.79</td>
<td>4.71</td>
<td>0.79</td>
</tr>
<tr>
<td>All Fellows</td>
<td>4.71</td>
<td>0.79</td>
<td>4.71</td>
<td>0.79</td>
<td>4.71</td>
<td>0.79</td>
</tr>
</tbody>
</table>
Purpose:
Poor documentation, such as provider discrepancies, missing medical decision making, lack of progress notes and unprofessional observations, as well as inappropriate care, can negatively impact medical malpractice claims. Formal processes of quality documentation in emergency medicine are not well studied. We introduced a new quality improvement (QI) process using focused clinical charting and reducing deviations from standards of care in the Emergency Department. We hypothesized that an explicit simple QI scoring rubric, consistently applied, would demonstrate inter-rater reliability among attending physicians and provide a standardized tool for departmental review.

METHODS:
We modified a previously developed template that demonstrated high inter-rater reliability, but had a complex and extensive process, for more streamlined and widespread applicability. We developed a new system using two discrete templates, documentation and clinical care, and limited choices to 5 options focusing on whether the chart was defensible if there was a poor outcome and if the medical care and resource utilization fit accepted standards. Each sheet had a companion sheet with basic examples of the scoring. A ten-minute group orientation was provided by requiring all the attending staff to review a peer’s charts using this template we believe they will have a better understanding of the elements of a “good” chart as well as opportunities for improved care and resource utilization.

RESULTS:
The Shrout-Fleiss relative: fixed set mean kappa scores indicated excellent consistency among raters for both the documentation (k = 0.910) and clinical care (k = 0.836) scoring tools.

CONCLUSIONS:
A modified, simplified QI scoring rubric demonstrates inter-rater reliability among experienced attending physicians and may be used as a standardized tool for QI chart review. Next steps will focus on improving both charting and clinical care by integrating all attendings in standardized peer review using this tool.

REFERENCES:
Use of Simulation as an Orientation for Off-Service Residents in the Emergency Department

Daniel Satnick, Heidi Baer, Joshua McHugh, Yasamin Soltanianzadeh, Steven J. Bolger, Catrina Cropano, Vikas Goswamy
Icahn School of Medicine at Mount Sinai

Purpose:
The Emergency Department can be a difficult practice environment for new providers. We developed two simulation cases for rotating off-service residents as part of their orientation to the Emergency Department. These residents normally work the fields of Internal Medicine, Anesthesia, and Obstetrics & Gynecology. The broad goals of the curriculum were to empower residents to feel comfortable in a new and potentially confusing clinical space. Specific goals of the simulation were consistent with core goals of Emergency Medicine practice.

METHODS:
The simulation department developed and executed two simulations that take place each month during the orientation time for off-service residents. To begin the simulation, off-service residents are instructed to go interview and examine a simulated patient, played by a live actor. Off-service residents are then instructed to present the case to a senior Emergency Medicine Resident, discuss the case with them and develop a plan. They are subsequently asked to interpret clinical information and disposition the patient. After each case there is a debrief with the off-service residents.

RESULTS:
The off-service residents stated that they found the simulations very helpful in reinforcing general principles and practice in the Emergency Department. Repeated learning points that were cited included considering a broad differential and dangerous diagnoses, communicating with nursing staff, effectively communicating with consultants, and updating the patient on next steps in their care.

CONCLUSIONS:
Simulation is an effective orientation tool to teach off-service residents general principles of Emergency Medicine Practice. Moving forward we plan to implement a pre and post survey for learners to obtain more concrete feedback and enhance the learning experience.

Learning Objectives for Simulations:

- Understand how to work within a team using best practices such as a clear team leader and closed loop communication.
- Identify critical situations and escalating therapies as needed.
- Create a broad differential diagnosis, with “worst first.”
- Conduct thorough physical exam to uncover source of concerning findings during history taking.
- Discuss best strategies of communicating with consultants.
- Appropriately work up and disposition a life-threatening disease process.

Learner Takeaways

- Consider broad differentials and dangerous diagnoses
- Clear communication with nursing staff and consultants
- Update patients on next steps of care
- Communication with nursing staff and consultants
- Update patients on next steps of care

Consider broad differentials and dangerous diagnoses
Clear communication with nursing staff and consultants
Update patients on next steps of care
PURPOSE:

As part of orientation for the incoming emergency medicine interns, the Divisions of Simulation and EMS and Disaster Preparedness collaborated to teach basic principles of emergency preparedness through an in-situ simulation of a mass casualty incident (MCI) related to COVID-19 resurgence in New York City. The objective of this MCI simulation was to provide an opportunity for the interns to learn the principles of disaster preparedness through a simulated MCI case using the resources available in the Emergency Department at Mount Sinai West.

METHODS:

The incoming emergency medicine interns were introduced to MCI operations through a morning didactic session hosted by the EMS and Disaster Preparedness Division. This session included a discussion of the varying MCI levels and principles of adapting to a new triage system and delegating tasks. The interns then participated in two focused in-situ MCI simulation sessions in the context of a resurgence of patients with respiratory distress secondary to COVID-19. The scenarios involved a nursing home alerting the emergency department to a large number of residents with signs of respiratory distress.

RESULTS:

An anonymous 10-question survey was then distributed to the interns to collect data regarding performance during the first and second simulation sessions. We used a Likert scale from 1 (needs improvement) to 5 (exceeds expectation) to assess communication between providers, how appropriately patients were triaged and dispositioned, and how appropriately patients with respiratory distress were acutely managed.

We found an increase in the numeric rating of communication between providers comparing the first and second simulation sessions from 3.3 to 4.3. We similarly found an increase in the numeric scale regarding how appropriately patients were triaged between low acuity non-isolation, high acuity non-isolation, low acuity isolation, and high acuity isolation between the first and second simulation sessions from 3.6 to 4.0.

An anonymous 10-question survey was then distributed to the interns to collect data regarding performance during the first and second simulation sessions. We used a Likert scale from 1 (needs improvement) to 5 (exceeds expectation) to assess communication between providers, how appropriately patients were triaged and dispositioned, and how appropriately patients with respiratory distress were acutely managed.

We also found an increase in the numeric rating of communication between providers comparing the first and second simulation sessions from 3.3 to 4.3. We similarly found an increase in the numeric scale regarding how appropriately patients were triaged between low acuity non-isolation, high acuity non-isolation, low acuity isolation, and high acuity isolation between the first and second simulation sessions from 3.6 to 4.0.

CONCLUSIONS:

We created a brief learning session followed by an in-situ simulation of an MCI involving COVID-19 resurgence with an objective of allowing interns to understand basic MCI principles and use their newfound knowledge to implement existing MCI protocols and develop an organized response. Overall, we found that in-situ simulation is an effective method of allowing interns to improve communication skills and appropriately triage and disposition patients during an MCI.
BACKGROUND:
Adapting simulation-based curriculum for medical education to the virtual realm presents a unique challenge for educators. We created a virtual simulation of a mass-casualty incident (MCI) in which learners navigate through multiple cases using a track board which they control.

METHODS:
We created a novel virtual MCI simulation in which patients are displayed on a track board allowing the learners to simultaneously manage multiple patients. The scenario involved a local fire and a bus crash in which 6 patients are transported by EMS and 3 patients walk into the hospital. The learners had 8 minutes to simultaneously manage the 9 patients with access to unlimited nursing support and any consultant. The track board provided the patients’ age, gender, chief complaint, vital signs, and a picture of any pertinent injury or physical examination finding. The learners were provided with history and physical examination information by asking questions to the examiners following the ABEM Oral Certification Examination format. We provided the learners with prompts including any significant changes in vital signs or changes in respiratory status for the patients.

RESULTS:
We had multiple groups of 4-5 emergency medicine resident physicians complete the virtual MCI simulation. We observed variation in the approach of different groups of learners ranging from rapidly evaluating all 9 patients and appropriately triaging care to sequentially navigating between patients. Some teams prioritized dispositioning patients quickly while other teams prioritized resource allocation.

CONCLUSIONS:
We created a novel model for simulating a MCI virtually using a track board which learners can use to navigate through multiple cases. We have applied this model to multiple groups of emergency medicine resident physicians for medical education.
ABSTRACT:

Introduction: Due to the declining usage of forceps and vacuums in assisting vaginal deliveries, many centers have resorted to simulations to train their house staff. We previously described the success of a didactic program for simulating operative vaginal deliveries. We now report on the recorded pressures on the brachial plexus during forceps-assisted vaginal deliveries (FAVDs) as compared to vacuum-assisted vaginal deliveries (VAVDs) using a mannequin.

Method: This study was approved by the Mount Sinai Institutional Review Board with a waiver of consent. The residents in an academic Obstetrics and Gynecology program were recruited for participation. Baseline survey data including year of training, demographics, and prior experience with operative vaginal deliveries (OVDs). Following an educational session reviewing appropriate usage and techniques, a hands-on practical was conducted using a pelvic model whose matching baby contained a force monitor in its neck. Forces generated during the simulated deliveries were recorded.

Result: A total of 22 residents completed the study. During this study, 20 of the 22 residents exerted more force on the baby mannequin’s neck during VAVDs as compared to FAVDs (P<0.01). Whether evaluated by year of residency training or reported experience, there appeared to be greater forces exerted during VAVDs than with FAVDs.

Conclusion: During this educational study, the forces exerted on a baby mannequin’s neck were greater during VAVDs than they were during FAVDs. Whether this is an artifact of the study or similar to in vivo results was not tested. Additional studies are currently underway.

METHODS:

Mount Sinai OB/GYN residents were recruited to participate in the simulation study during the 2019-2020 academic year, a total of 22 residents participated. The study was approved by the Mount Sinai IRB with a waiver for consent.

The simulation study began with a baseline survey to obtain demographics, assess resident knowledge and experience with OVDs. After this, the residents underwent an educational session which was in lecture format. Two operative vaginal delivery (Figure 1). Finally, a post-simulation survey was administered.

Our previous study demonstrated success in improving resident’s knowledge and skill with OVDs. They also found the session to be worthwhile and enjoyable. For this project, we focused on the force generated on the brachial plexus of the neonate during the simulation. This was recorded in Newtons using the PROMPT force monitor. The force generated was recorded throughout the resident’s delivery using both the forceps and the vacuum, and this data was documented for analysis.

RESULTS:

Of the residents recruited, 22 in total participated; 20 of the 22 residents (91%) exerted more force on the neonate mannequin’s neck during VAVDs as compared to FAVDs (P<0.001). The force exerted was measured in Newtons. An average of 32 N was noted when residents used forceps and an average of 68 N was noted when residents used a vacuum during the simulated operative vaginal deliveries (Figure 2). This was seen regardless of reported experience or year of residency training.

CONCLUSIONS:

This simulation study involving OB/GYN residents at The Mount Sinai Hospital demonstrated that the force exerted on a neonate mannequin’s neck was greater during VAVDs than they were during FAVDs. Whether this is an artifact of the study itself or is also similar to live vaginal births was not tested in this study. Additional studies attempting to answer this would be beneficial for clinical management.

REFERENCES:


A Cost-Effective, Reusable Pericardiocentesis Simulation Model with an Interchangeable Model Heart and Chest Wall

Rishi Malik, MD; Edmund Hsu, MD; Daniel Weinick, MD; Yasamin Soltanianzadeh, MD; Daniel Satnick, MD; Heidi Baer, MD; Joshua McHug, MD; Steven Bolger, MD

Icahn School of Medicine at Mount Sinai

ABSTRACT:

Purpose: Given the exorbitant cost of pericardiocentesis task trainers, there has been a push to develop “Do It Yourself” models. Currently a cost-effective, gelatin model exists but is limited in its reusability. We propose a novel “removable lid” ultrasound guided pericardiocentesis model that remains cost effective, sustainable, and educational.

Methods: 43 emergency medicine residents from Mount Sinai Morningside and West in New York City participated in the study. Residents were randomly divided into either the control group (Group A) that used the EMDAILY model or the interventional group (Group B) that used our novel removable lid model. Each group consisted of 4-5 residents that rotated through the station for 30 minutes at a time. The study began with a 10 minute didactic session led by a faculty member. They were then given 20 minutes to practice their pericardiocentesis skills on either the original model or the interventional model. The residents were given a pre and post-survey to assess their knowledge on pericardiocentesis. The day after the practice session, a second survey was sent to assess if the residents had enough time with the model. This was to ensure the changing of the lids and balloons did not take away a significant time from the training. In addition, the faculty team leaders of each group recorded the number of models, number of balloons, number of lids used for their respective groups to evaluate the sustainability of the different models. Descriptive statistics were used to report the data.

Results: Group A, had 3 control models that became unusable after a single needle insertion. They switched to the novel model in order to still have the opportunity to learn and practice the pericardiocentesis techniques. They used a total of 4 removal balloons and 2 removable lids. Group B used a total of 3 balloons and 1 lid. 13 residents responded to the post-survey question asking if they felt they had enough time with the models. 92% responded yes they had enough time. The cost for the EMDAILY model and the novel model were $20. Each model took two hours to make. From the educational assessment pre and post survey, we found there was an increase in number of correctly answered questions about pericardiocentesis.

Conclusion: The study demonstrates that our novel low-cost, time efficient, durable pericardiocentesis model may serve as an effective training tool for ultrasound-guided pericardiocentesis.

INTRODUCTION:

Given the exorbitant cost of pericardiocentesis task trainers, there has been a push to develop “Do It Yourself” models. Currently a cost effective, gelatin model exists but is limited in its reusability. We propose a novel “removable lid” ultrasound guided pericardiocentesis model that remains cost effective, sustainable, and educational.

METHODS:

43 emergency medicine residents from Mount Sinai Morningside and West in New York City participated in the study. Residents were randomly divided into either the control group (Group A) that used the EMDAILY model or the interventional group (Group B) that used our novel removable lid model. Each group consisted of 4-5 residents that rotated through the station for 30 minutes at a time. The study began with a 10 minute didactic session led by a faculty member. They were then given 20 minutes to practice their pericardiocentesis skills on either the original model or the interventional model. The residents were given a pre and post-survey to assess their knowledge on pericardiocentesis. The day after the practice session, a second survey was sent to assess if the residents had enough time with the model. This was to ensure the changing of the lids and balloons did not take away a significant time from the training. In addition, the faculty team leaders of each group recorded the number of models, number of balloons, number of lids used for their respective groups to evaluate the sustainability of the different models. Descriptive statistics were used to report the data.

RESULTS:

Group A, had 3 control models that became unusable after a single needle insertion. They switched to the novel model in order to still have the opportunity to learn and practice the pericardiocentesis techniques. They used a total of 4 removal balloons and 2 removable lids. Group B used a total of 3 balloons and 2 lids. 13 residents responded to the post-survey question asking if they felt they had enough time with the models. 92% responded yes they had enough time. The cost for the EMDAILY model and the novel model were $20. Each model took two hours to make. From the educational assessment pre and post survey, we found there was an increase in number of correctly answered questions about pericardiocentesis.

CONCLUSIONS:

The study demonstrates that our novel low-cost, time efficient, durable pericardiocentesis model may serve as an effective training tool for ultrasound-guided pericardiocentesis.

REFERENCES:


Introduction: The treatment of acute ischemic stroke is challenging because it requires prompt management, interdisciplinary collaboration, and knowledge of and adherence to specific guidelines, which has been shown to be an effective educational technique that enhances patient outcomes, including by improving clinical performance on the actual stroke. In this study, we aimed to address these challenges using in situ simulation, which has been shown to be an effective educational technique that enhances patient outcomes.

Methods: In an in situ simulation of stroke code was designed and conducted at unannounced times. Simulations occurred in the real clinical environment, utilizing real hospital equipment and personnel. The stroke code was triggered by the actual arrival of the patient who initiated the simulation. Following the simulation completion, debriefing was utilized to review the team performance, and critical action completion and timing, as well as identify areas of success and areas of opportunity. Additionally, latent safety threats were identified and captured during the debriefing, which were rectified by collaboration between the simulation, stroke, and hospital leadership teams.

Results: Six stroke code simulations were conducted and debriefed at a variety of hospitals across New York City Health+Hospital. Debriefing demonstrated robust discussion and learning from both the interprofessional and interdisciplinary teams, as well as the need for collaboration, teamwork, and communication in the management of acute stroke patients. Evaluation found that 100% of learners found the simulations to be an effective clinical, teamwork, and communication teaching tool, and all believed it would change future performance on the stroke team. Additionally, debriefing captured several latent safety threats, which were rectified by collaboration between the simulation, stroke, and hospital leadership teams.

Conclusion: In situ simulation helps develop interdisciplinary teamwork and clinical knowledge and is useful for reviewing crucial times and processes required for best-practice care. This is particularly valuable when timely management is essential, such as in acute ischemic stroke in this case.

ABSTRACT:

Introduction: The treatment of acute ischemic stroke is challenging because it requires prompt management, interdisciplinary collaboration, and knowledge of and adherence to specific guidelines, which has been shown to be an effective educational technique that enhances patient outcomes, including by improving clinical performance on the actual stroke. In this study, we aimed to address these challenges using in situ simulation, which has been shown to be an effective educational technique that enhances patient outcomes.

Methods: In an in situ simulation of stroke code was designed and conducted at unannounced times. Simulations occurred in the real clinical environment, utilizing real hospital equipment and personnel. The stroke code was triggered by the actual arrival of the patient who initiated the simulation. Following the simulation completion, debriefing was utilized to review the team performance, and critical action completion and timing, as well as identify areas of success and areas of opportunity. Additionally, latent safety threats were identified and captured during the debriefing, which were rectified by collaboration between the simulation, stroke, and hospital leadership teams.

Results: Six stroke code simulations were conducted and debriefed at a variety of hospitals across New York City Health+Hospital. Debriefing demonstrated robust discussion and learning from both the interprofessional and interdisciplinary teams, as well as the need for collaboration, teamwork, and communication in the management of acute stroke patients. Evaluation found that 100% of learners found the simulations to be an effective clinical, teamwork, and communication teaching tool, and all believed it would change future performance on the stroke team. Additionally, debriefing captured several latent safety threats, which were rectified by collaboration between the simulation, stroke, and hospital leadership teams.

Conclusion: In situ simulation helps develop interdisciplinary teamwork and clinical knowledge and is useful for reviewing crucial times and processes required for best-practice care. This is particularly valuable when timely management is essential, such as in acute ischemic stroke in this case.

METHODS:

Prior to the simulation, participants received an email explaining that in situ stroke team simulations would be occurring and providing background information on simulation. However, the times and locations of simulations were not announced to participants ahead of time. In addition, strict No-Go criteria were utilized in conducting these simulations and were stipulated and adhered to by ED, neurology, and radiology leadership. As with all simulation No-Go criteria, these were established to ensure simulations were not disruptive to patient care at any time and provided set, pre-established reasons for not conducting a simulation, based on current conditions in the hospital.

Simulations began in the ED with an embedded participant calling in an EMS pre-notification of a patient with right-sided facial numbness, right-sided weakness, and speech difficulty. Learners had to assess the patient efficiently and appropriately upon arrival, activate the Stroke Team, and ultimately decide on appropriate treatment with a t-PA bolus. However, if the participant initiated thrombectomy performing the following critical actions:

- Assess patient, including neurological assessment, upon arrival
- Activate stroke team
- Establish time last known well
- Order stat head CT and CTA
- Request that radiology technician hold CT scanner for patient
- Draw and send appropriate labs, including point-of-care glucose
- Bring patient to radiology and transfer to CT scanner
- Discuss absolute and relative contraindications for t-PA
- Identify absence of intracerebral hemorrhage on CT
- Order t-PA, including correct dosage based on patient weight
- Gather materials necessary for t-PA administration and prepare and administer a-PAs
- Repeated neurological assessments as appropriate
- Identify presence of large vessel occlusion on CTA
- Activate interventional radiology (if thrombectomy capable in-house) or transfer to thrombectomy center

All actions occurred in the real hospital environment, including physically transporting the simulated patient to the CT scanner suite and obtaining equipment from their actual hospital locations. In addition, real imaging (Figs. 1-3) from a patient with positive pathology was utilized, and learners were able to practice and streamlining such actions allows for smoother performance in a real stroke code, facilitating quicker treatment and therefore potentially improving patient outcomes. The in situ nature of the simulations that took place allowed to reach a wide variety of learners, including physicians, nurses, and technologists across the ED, neurology, and radiology teams, during their real work day and in their real team compositions.

The simulation has been very well received, with participants unanimously indicating that they believed it was likely or very likely an effective teaching tool for clinical, teamwork, and communication teaching. Learners believed the simulation would likely or very likely change their performance in a real stroke code, suggesting that this activity facilitated the development of valuable clinical and/or communication strategies. In addition, during debriefing, facilitators were successfully able to prompt participants to address key learning points, such as clarifying target times for t-PA administration and illustrating strategies for effective communications among team members.

An additional benefit of the in situ format is the ability to perform systems testing, allowing for identification of latent safety threats that may never hide in the clinical environment. For example, we identified difficulties with accurately measuring patient weight during one simulation, given the varying weights of hospital stretchers and the likelihood of patient being attached to the bed or on the bed by the patient. Such concerns could then be brought to hospital leadership and addressed systemically to improve patient safety. Additionally, identifying these issues allows learners to evaluate and adjust their actions by giving them the knowledge necessary to provide more appropriate care in the future.

REFERENCES:

ABSTRACT:

Introduction: Robotic surgery recently became widely integrated in urological surgery, but resident training in its use is likely heterogeneous. We sought to survey residents in training to gauge what teaching instruments were available to them.

Methods: A 26 question survey was distributed to residents training at programs affiliated with the New York Section of the American Urological Association, querying information regarding availability and usage of training tools such as simulators and wet labs. In addition, a robotics education day was held at Mount Sinai for current urology residents during which residents trained with virtual and live tissue simulations. A pre and post educational day survey was administered and responses were tabulated.

Result: Nearly all residents of the New York Section of the American Urological Association reported availability of a simulator, however only 11.5% reported use once a month or more. Meanwhile 50% of residents felt that further training in robotic surgery beyond residency is necessary in order to perform robotic procedures after post-graduate training.

Conclusion: While virtual robotic simulators are widely available to residents, use is sporadic. A dedicated educational day to robotic simulation improves resident comfort with robotic surgery.

INTRODUCTION:

Robotic Assisted Laparoscopic Surgery has increased dramatically in the field of Urology since its inception in the early 2000s. As its use has expanded and is now incorporated into a variety of Urologic procedures, new questions and opinions have arisen on how to best teach this new tool to residents in their training. The initial typical approach was a gradual introduction to is use by first observing robotic surgeries performed by an experienced attending, followed by bed-side assisting on cases and then finally experience on the console under close supervision of the attending physician. Alongside these opportunities, dry and wet lab sessions with the robotic instruments have also aided to educate residents while not in a patient-care setting. More recently, simulators have become available that can also help aid in robotic education.

Although loose guidelines and opinions exist on how to best perform a robotics training curriculum in a residency program, experience varies widely from residency to residency. An effort to understand these differences, a survey was sent to residents in New York Section of the American Urologic Association. Additionally, an evaluation of a robotics education day performed in the Mount Sinai Residency Program was performed to assess its aid in robotic education.

METHODS:

A 26 question survey was sent to residents training in all of the New York Section of the American Urological Association Programs. The survey contained questions relating to robotic surgery both inside and outside of the operating room, including simulator, wet and dry lab experience, as well as perceived comfort in robotics skills. The Mount Sinai Urology Department had a Robotics Education Day that included but simulator session and wet lab session. A four question pre-survey and seven question post-survey was completed by the participating Mount Sinai Urology Residents.

RESULTS:

The survey was sent to 188 residents, and 26 surveys across 10 training programs were returned. Only 10 respondents (38.5%) reported knowledge of a robotics curriculum at their program. All respondents reported access to a simulator. Simulator use varied, but appeared infrequent (14/26 reported use “multiple times per year”); only three respondents reported use once a month (11.5%). Wet labs were available to 7/26 respondents (26.9%), but only one reported multiple wet labs per year. Lastly, 12/24 of respondents felt that further training beyond residency is necessary to perform robotic surgery after post-graduate training.

In regards to the benefits of the Mount Sinai Urology Robotics Education Day, the pre-survey found that on a scale of 1-100, comfortability on the robotic console was an average of 38.5, and on the same scale comfortability with bed-siding was 57.52. After the education day, average comfortability on the robotic console increased to 58.67, and average comfortability with bed-siding increased to 67.11. Residents found both the robotic simulator and wet lab useful for their education, and open ended responses indicated the request for more sessions throughout the year.

CONCLUSIONS:

While simulators are available, use is sporadic; wet labs events are uncommon. A robotics education day increased perceived comfort with robotic technique. Increase of exposure and training with wet labs and simulators have the potential to increase satisfaction with and confidence in robotic training.

<table>
<thead>
<tr>
<th>Table 1. Robotic training in residency survey responses</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Post-graduate training year</strong></td>
</tr>
<tr>
<td>1 3 (11.5)</td>
</tr>
<tr>
<td>2 2 (7.7)</td>
</tr>
<tr>
<td>3 5 (19.2)</td>
</tr>
<tr>
<td>4 6 (23.1)</td>
</tr>
<tr>
<td>5 10 (38.5)</td>
</tr>
<tr>
<td><strong>Simulation availability</strong></td>
</tr>
<tr>
<td>Simulator available 11 (42.3)</td>
</tr>
<tr>
<td>Simulator use frequency</td>
</tr>
<tr>
<td>Once a year 4 (15.4)</td>
</tr>
<tr>
<td>Multiple times per year 4 (15.4)</td>
</tr>
<tr>
<td>Once a month 3 (11.5)</td>
</tr>
<tr>
<td>Every other week 3 (11.5)</td>
</tr>
<tr>
<td>Once a week 2 (7.7)</td>
</tr>
<tr>
<td>Wet lab available 7 (26.9)</td>
</tr>
<tr>
<td>Wet lab frequency</td>
</tr>
<tr>
<td>Once a year 5 (19.2)</td>
</tr>
<tr>
<td>Multiple times per year 2 (7.7)</td>
</tr>
<tr>
<td>Video review session frequency</td>
</tr>
<tr>
<td>Multiple times per year 2 (7.7)</td>
</tr>
<tr>
<td>Once a month 1 (3.8)</td>
</tr>
<tr>
<td>Once a week 1 (3.8)</td>
</tr>
<tr>
<td>More than once per week 1 (3.8)</td>
</tr>
<tr>
<td>Endorsed need for further training to perform robotic surgery 12 (46.2)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Table 2. Subjective comfort with console and bed-siding before and after simulator and wet lab training</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Comfort with console skills</strong></td>
</tr>
<tr>
<td>Pre-survey (0-100 scale) 38.5</td>
</tr>
<tr>
<td>Post-survey (0-100 scale) 57.5</td>
</tr>
<tr>
<td><strong>Comfort with bed-siding skills</strong></td>
</tr>
<tr>
<td>Pre-survey (0-100 scale) 58.7</td>
</tr>
<tr>
<td>Post-survey (0-100 scale) 67.1</td>
</tr>
</tbody>
</table>
ABSTRACT:

**Introduction:** SALAD (Suction Assisted-Laryngoscopy Assisted Decontamination) is a proposed method for improving endotracheal intubation (ETI) success in a difficult airway contaminated with blood or vomitus. The purpose of this study is to evaluate the impact of SALAD on intubating a vomitus contaminated airway by measuring (1) time to successful ETI (2) number of attempts and (3) comfort with intubating a difficult airway.

**Method:** PGY 1, 2, 3, EM residents were randomly divided into two groups; the intervention (SALAD) and control group. The SALAD group was briefed with an educational session while the control group was instructed to intubate.

**Result:** Time to intubation, number of attempts, successful intubation were significantly better in the SALAD group compared to the control group. Also providers demonstrated an improvement in confidence in approaching a difficult airway after learning the SALAD Simulation Model.

**Conclusion:** SALAD technique improves intubation efficacy in a contaminated airway. Providers also have increased confidence in approach a difficult airway contaminated with blood or vomitus after learning the SALAD technique.

INTRODUCTION:

Intubation of an airway contaminated with vomitus or blood is a challenge for Emergency Medicine (EM) Physicians. Minimizing time to intubation can be crucial to maximizing patient outcome. The SALAD technique is a proposed method for improving endotracheal intubation (ETI) success in a difficult airway. The purpose of this study is to evaluate the impact of utilizing the SALAD technique to intubate a difficult airway contaminated with vomitus by measuring (1) time to successful ETI (2) number of attempts of intubation and (3) comfort with intubating a difficult airway.

METHODS:

A simulation model was created by transforming an adult airway mannequin head with artificial vomitus. A total of 38 EM residents were randomly divided into two groups. The control group was provided routine equipment to attempt ETI (direct laryngoscopy, video laryngoscopy, bougie, Yankauer suction, 7.0 Endotracheal tube (ETT) or 7.5 ETT). The intervention group received a 5 minute pre-intubation instructional session regarding the SALAD technique, starting with an oral discussion of the technique and its advantages, followed by a live demonstration(Figure 2, 3). Both groups were given an opportunity to transform an adult airway simulation mannequin with the same equipment. The study measured the time to ETI and number of attempts. A pre and post-survey assessed the confidence of intubating the difficult airway with the SALAD technique. A Likert scale from 1-10 was used.

RESULTS:

Post Graduate Years 1, 2, and 3 EM residents who were present at the residency conference were included in the study. Medical students and attendings were excluded. The mean time to successful intubation was significantly shorter in the SALAD (42.9 seconds) vs control (109 seconds) groups (p = 0.001). Successful intubation on first attempt was achieved significantly more often in the SALAD (20/21, 95%) vs control (8/18, 44%) groups (p = 0.001). The number of attempts was significantly less with SALAD (1.05) vs control (1.89) groups (p=0.01). The Likert survey highlighted three concepts. First, increased comfort with intubating a difficult contaminated airway after learning SALAD (pre-survey 3.72 ± 2.19, post-survey 6.45 ± 1.70). Second, a preference to use video laryngoscopy as primary management (pre-survey 3.24 ± 1.90, post-survey 5.90 ± 1.82). Lastly, the simulation was an effective educational model to learn SALAD (mean 9.40 ± 0.96).

CONCLUSIONS:

Utilizing the SALAD method can enhance intubation efficacy in patients with vomitus contaminated airways and improve confidence in providers presented with a difficult airway.

REFERENCES:

https://www.ingentaconnect.com/content/tcop/bpj/2018/00000003/00000003/art00003
https://cdn.journals.lww.com/md-journal/FullText/2019/11150/The_suction_assisted_laryngoscopy_assisted.39.aspx
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5226742/
https://openairway.org/salad/
https://litfl.com/jellybean-051-with-jim-ducanto/
https://litfl.com/suction-assisted-laryngoscopy-airway-decontamination-salad/
https://journals.sagepub.com/doi/full/10.1177/1024907919884206
BACKGROUND

Emergency medicine (EM) residents have minimal exposure and formal hands on training in the independent management of imminent obstetrical deliveries complicated by shoulder dystocia and postpartum hemorrhage (PPH).

OBJECTIVE:

The purpose of this study was to develop a simulation curriculum with our Obstetric (OB) colleagues to train EM residents in low frequency, high stakes obstetrical emergencies. We hypothesize that simulation will have an impact on addressing the learning gaps in the management of complicated deliveries.

METHODS:

35 Mount Sinai Morningside West EM Post Graduate Years 1-3 residents participated in the study. An online anonymous pre and post survey was distributed to the residents that had three fill in the blank questions. 34 residents completed the Pre Survey the morning of the conference before starting the simulation case. 32 residents completed the post survey within 24 hours of completing the case. The simulation case was developed by EM and OB simulation trained faculty that focused on managing an imminent vaginal delivery complicated by shoulder dystocia and postpartum hemorrhage. The survey evaluated 1) maneuvers used for shoulder dystocia 2) history and physical exam findings to assess for imminent delivery and 3) treatments for PPH.

CONCLUSIONS:

1. Our study demonstrates the usefulness simulation as a teaching tool for a low frequency, high stakes obstetrical emergency.
2. It additionally demonstrates that simulation-based curriculum that can be used to inform educators of potential learning deficits and additional areas of focus for future educational models.

RESULTS:

PGY 1-3 residents that were present that day for residency simulation conference were included in the study. Medical students and attendings were excluded to help limit the learning level and population focus. In the pre survey, for the shoulder dystocia maneuver there were 27% blank answers and 18% incorrect responses. For assessment of imminent delivery, there were 10% blank answers and 22% incorrect responses. For treatment of PPH there were 16% blank answers and 1% incorrect responses. In the post survey, there were 2.4% blank answers and 7.2% incorrect responses for maneuvers for shoulder dystocia, 4.5% blank answers and 21.4% incorrect responses for signs of imminent delivery, and 0% blank answers and 1.8% incorrect responses for treatment for postpartum hemorrhage.

Table 1. Number of residents by PGY year who participated in the pre survey and post survey

<table>
<thead>
<tr>
<th>PGY Year</th>
<th>Pre Survey</th>
<th>Post Survey</th>
</tr>
</thead>
<tbody>
<tr>
<td>PGY-1</td>
<td>11</td>
<td>8</td>
</tr>
<tr>
<td>PGY-2</td>
<td>14</td>
<td>12</td>
</tr>
<tr>
<td>PGY-3</td>
<td>12</td>
<td>8</td>
</tr>
<tr>
<td>Total</td>
<td>37</td>
<td>28</td>
</tr>
</tbody>
</table>