Awards Program

March 3 - 5, 2017
Gaylord Opryland Resort
Nashville, TN
Honoring Excellence in Pulmonary and/or Critical Care Medicine Education

2017 AWARDS PROGRAM

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Darlene Buczak Abstract Award for Educational Excellence

The Darlene Buczak Abstract Award for Educational Excellence recognizes Pulmonary and Critical Care Medicine training Program Directors, Associate Program Directors, faculty, and fellows-in-training for their outstanding contributions and commitment to medical education and training. The recipient is selected for success in applying an innovative educational method in higher training program. Congratulations to the 2017 awardee:

Rosemary Adamson, M.B.B.S.
University of Washington

The APCCMPD honors the contributions of all 2017 applicants:

Diana J. Kelm, M.D.
Mayo Clinic

Deepak R. Pradhan, M.D.
New York University School of Medicine

INTRODUCTION

Leadership skills are essential for critical care physicians. Most fellowship programs do not include focused education about leadership. Furthermore, there is no commonly employed framework for leadership training within pulmonary and critical care medicine. In order to address this gap in current training, a formal curriculum aimed at teaching leadership skills to critical care medicine fellows was developed using a novel framework. High-fidelity simulation was employed as a means to practice and solidify newly learned leadership techniques and behaviors.

METHODS

Commonly identified leadership skills and behaviors were extracted from a review of the literature and used to develop a Crisis Leadership Framework (Fig. 1). This framework was used to teach leadership skills to first-year critical care fellows at a single institution. These skills were then assessed using high-fidelity simulation of low-frequency, high-risk critical care scenarios, with fellows leading multidisciplinary teams consisting of physicians, nurses, and respiratory therapists. Each scenario concluded with a clinical debrief led by the fellow. Immediate feedback on leadership behaviors was provided by the non-participating fellows, facilitated by a faculty member using the Crisis Leadership Framework. Leadership skills were formally assessed by course faculty using the Non-Technical Skills for Surgeons (NOTSS) assessment tool (Fig. 2). Participants were also surveyed regarding their perceptions of the utility of the training and their leadership skills.

RESULTS

After the first simulation session, all participating fellows (N = 11) agreed that they better understood key concepts of leadership (100% strongly agree, 55% somewhat agree) and all reported feeling better prepared to lead a team during crisis (45% strongly agree, 55% somewhat agree). Ninety-one percent of fellows felt comfortable leading a clinical debrief following the session (36% strongly agree, 55% somewhat agree). NOTSS ratings improved in all domains (scale 1-4) between the first and second simulation session: the situational awareness mean score increased from 2.5 to 3.3, communication and teamwork from 2.0 to 3.3, leadership from 2.0 to 3.0, and decision-making from 2.0 to 2.3.

CONCLUSION

Implementation of a leadership curriculum within critical care fellowship training is both feasible and well-received by trainees.Focused development of leadership skills using simulation enhanced fellows’ perceived leadership knowledge and preparation as well as their adoption of leadership behaviors. Further studies are needed to see if exposure to this curriculum translates to improved leadership skills and team performance during real-life emergencies.

REFERENCES


**“Fellow of the Day”: A Novel Role in Continuity Clinic to Improve Fellow and Medical Student Outpatient Experiences**

**Authors:**
- Joseph H. Sklitski, M.D.
- Kanin Ramor, M.B.B.S., M.D.
- Maya Chokron, M.D.

**INTRODUCTION**

Fellows and Clinical Care Medicine (PCCM) fellows of our institution are responsible for longitudinal care of their continuity clinic (CC) patients. These patients often generate paperwork or messages that require attention outside clinic office hours. It is difficult to address if on a busy CC rotation or on a night shift, thus potentially resulting in a delay in a patient's outpatient care. Additionally, our fellows teach medical students during their hectic half-day of CC, which can interrupt the fellows' clinic flow and the teaching experience for medical students. To address these issues, we instituted an innovative pilot project of a new clinical role called the Fellow of the Day (FOD).

**ABSTRACT PRESENTATION**

FOD had a flexible schedule with fewer number of patients scheduled. The FOD role was studied over a 4-month period. We collected data using an electronic survey (PROMIS standard University MedicineTM that was sent to medical students, PCCM fellows, and supervising staff). Survey responses were based on a 5-point Likert scale. For questions pertaining to teaching medical students and addressing priority messages while in the ICU, the scale ranged from 1 (Never) to 5 (Daily). For questions on fellow involvement, supervision, and communication, Likert scale ranged from 1 (1-3 times a week) to 5 (Daily = 3 times a week). We surveyed multiple stakeholders including fellows, medical students, and faculty. Sixteen fellows (94% response rate) were engaged in clinical patient care (shadowing alone 14 vs. 7, p=0.02) and medical students were present before the FOD and only 1 (7%) post-FOD implementation. Thirteen fellows (87%) wanted to continue the FOD role at the end of the study period. The number of clinic and paperwork post-FOD implementation was 1 vs. 2, and 2 vs. 5, respectively. Leadership from 2 to 3.0, decision making from 2 to 3.3, and communication from 2.0 to 3.5. The leadership from 2 to 3.0, decision making from 2 to 3.3, and communication from 2.0 to 3.5.

**CONCLUSION**

As the implementation of the FOD role was a huge success, the education committee recommended continuation of having the FOD role in our institution. To address these issues, we instituted an innovative pilot project of a new clinical role called the Fellow of the Day (FOD). The FOD role was studied over a 4-month period. We collected data using an electronic survey (PROMIS standard University MedicineTM that was sent to medical students, PCCM fellows, and supervising staff). Survey responses were based on a 5-point Likert scale. For questions pertaining to teaching medical students and addressing priority messages while in the ICU, the scale ranged from 1 (Never) to 5 (Daily). For questions on fellow involvement, supervision, and communication, Likert scale ranged from 1 (1-3 times a week) to 5 (Daily = 3 times a week). We surveyed multiple stakeholders including fellows, medical students, and faculty. Sixteen fellows (94% response rate) were engaged in clinical patient care (shadowing alone 14 vs. 7, p=0.02) and medical students were present before the FOD and only 1 (7%) post-FOD implementation. Thirteen fellows (87%) wanted to continue the FOD role at the end of the study period. The number of clinic and paperwork post-FOD implementation was 1 vs. 2, and 2 vs. 5, respectively. Leadership from 2 to 3.0, decision making from 2 to 3.3, and communication from 2.0 to 3.5.

**REFERENCES**


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**Novel Blended Learning Course on Ultrasound for Rapid Assessment of Acute Respiratory Failure**

**Presenters / Authors:**
- Deepak Pradhan, M.D.
- Vimalaraj M. Mukherjee, M.D.
- Bishop Zahary, M.D.
- Harald Souhann, M.D.
- New York University School of Medicine

**INTRODUCTION**

Acute respiratory failure (ARF) affects nearly 2 million yearly hospitalized in the United States, with associated mortality over 20%. It requires expeditious diagnosis and treatment, and is relevant to many clinicians groups including pulmonologists, intensivists, hospitalists, and emergency physicians. Point-of-care ultrasound provides rapid bedside information on the etiology of acute respiratory failure that is non-invasive and without ionizing radiation. The Bedside Lung Ultrasound in Emergency (BLUE) protocol is a simple reproducible algorithm guiding ultrasound for the assessment of acute respiratory failure with high sensitivity and specificity. This study evaluated the impact of the BLUE protocol and competency in performing the BLUE protocol, and effective educational course design. We present a novel one-day course with a blended learning design to teach learners to correctly and rapidly use ultrasound for assessment of acute respiratory failure.

**ABSTRACT PRESENTATION**

Learners completed pre- and post-course surveys regarding learner characteristics, confidence in performing ultrasound exams for acute respiratory failure, confidence identifying relevant pathology on ultrasound and effectiveness of course components. Learners also completed pre- and post-testing evaluating ultrasound knowledge and image interpretation in acute respiratory failure. Prerequisite reading materials were provided. The course was a blended learning design: combining didactic and case-based lectures (Ultrasound Physics, Fluid Signs of Lung Ultrasound, BLUE Protocol, Lower Extremity Deep vein thrombosis study, Evidence behind BLUE protocol, and Lung/No Lung Pathology) with hands-on small group sessions with expert faculty, and case-based simulation assessments with learner feedback. Instructors used behavioral checklists during the simulation cases to objectively record learner performance of image acquisition, image interpretation, and adherence to BLUE protocol; as well as time to completion of the algorithm. Non-parametric testing was used for statistical analysis. Fifteen learners completed the course. The significant majority (71%) were current 3rd year pulmonary/critical care fellows in training. All learners had foundational ultrasound experience. Median (IQR) scores for the post test was 40 (29,55) and post test was 60 (54,65) for the BLUE protocol. Agreed standards for ultrasound in performance of relevant ultrasound exams for acute respiratory failure were the course. Lung/No Lung, and Lower Extremity Deep vein thrombosis study achieved 100% correct performance. Figure 2: learners also felt more confident in identifying relevant pathology on ultrasound after the course (compared to pre-course confidence). Figure 3: Confident standards for ultrasound exams of acute respiratory failure; stratified by CC and lung point, and non-compressible deep vein; all p<0.02. Correct learner performance via behavioral checklists of image acquisition, image interpretation, and adherence to BLUE protocol. Figure 4: CONFIDENCE IDENTIFYING PATTERNS ON ULTRASOUND: Pre- and POST-Course ARF.

**REFERENCES**


**TABLE 1. Results of the Fellows’ Survey**

<table>
<thead>
<tr>
<th>Question</th>
<th>Pre-FOD</th>
<th>Post-FOD</th>
<th>p-Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teaching medical students</td>
<td>3.5</td>
<td>4.5</td>
<td>&lt;0.001</td>
</tr>
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<td>3.5</td>
<td>4.5</td>
<td>&lt;0.001</td>
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<td>4.5</td>
<td>&lt;0.001</td>
</tr>
</tbody>
</table>

**FIGURE 1. Confidence in Performing Ultrasound Exams, The Course vs. Post-Course**

**FIGURE 2. Confidence Identifying Patterns on Ultrasound, Pre-Course vs. Post-Course**

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**Objective ultrasound in oncology, and image interpretation via pre- and post-testing, statistical improvement in performance, ultrasound exams of acute respiratory failure, and identifying relevant pathology on ultrasound, and showed excellent performance of the BLUE protocol on behavioral checklists during simulation cases.**

**CONCLUSION**

A novel blended learning design course for learners with basic ultrasound experience was well received and resulted in tangible improvements in knowledge, image interpretation, and image interpretation skills while increasing confidence in performing an algorithmic method to rapidly assess acute respiratory failure through bedside point-of-care ultrasound.
The APCCMPD Abstract Award for Medical Education Research recognizes Pulmonary and Critical Care Medicine training Program Directors, Associate Program Directors, key clinical faculty, and fellows in training for their outstanding contributions and commitment to medical education research. This award is bestowed to one APCCMPD member each year. The recipient is selected for conducting innovative research focused on undergraduate or graduate medical education, in Pulmonary and/or Critical Care.

Congratulations to the 2017 awardee:

Lekshmi Santhosh, M.D.
University of California - San Francisco

Authors:
Anna Brady, M.D.
University of Washington
W. Graham Carlos, M.D.
Indiana University

BACKGROUND
It is important for teaching physicians to know what qualities are most valued by learners. To date, only two studies have been published addressing internal medicine residents’ perceptions of teaching faculty.1,2 We sought to expand on the evidence about this topic through a multicenter study of four geographically diverse academic medical centers. Our study focused on teaching characteristics of intensive care unit (ICU) physicians that learners perceive are most impactful.

METHODS
The study was conducted at Indiana University, Johns Hopkins University, UCSF, and University of Washington. Internal medicine residents completed an anonymous online survey rating the importance of characteristics of ICU attending role models. Questions on our 37-item questionnaire were derived from prior studies and from the Stanford Faculty Development Center for Medical Teachers Clinician Teaching program.1-3 Learners also named impactful role models at their institutions. T-tests were used to compare scores.

RESULTS
260 residents responded to the survey. The attributes most commonly rated as “very important” to trainees were that the attending enjoyed teaching house staff, demonstrated empathy and compassion to patients and families, explained clinical reasoning & differential diagnoses, treated non-M.D. staff members respectfully, and showed enthusiasm on rounds. Factors that trainees rated as less important were having numerous research publications, having served as a chief resident, sharing personal life with house staff, and organizing end-of-rotation social events.

CONCLUSIONS
Our study provides new information to teaching faculty striving to impact their learners’ education. While prior data demonstrated that learners valued attending physicians who demonstrated empathy, compassion to patients, and explanation of clinical reasoning, we also discovered that expression of empathy, explanation of clinical reasoning, and qualities of professionalism were influential. Table 1 shows the contrast between our study and the prior literature. Next steps include analyzing course evaluations of named attending role models and conducting thematic analysis to identify predictors of teaching excellence.

REFERENCES

TABLE 1. Differences between 1998 Wright NEJM Article Top 5 Characteristics of Excellent Attending Physician Role Models and Our Data

<table>
<thead>
<tr>
<th>Attribute</th>
<th>Wright NEJM Article</th>
<th>Our Data</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enjoyed teaching</td>
<td>57%</td>
<td>80%</td>
</tr>
<tr>
<td>Demonstrated empathy &amp; compassion</td>
<td>52%</td>
<td>98%</td>
</tr>
<tr>
<td>Explained clinical reasoning</td>
<td>44%</td>
<td>85%</td>
</tr>
<tr>
<td>Treated non-M.D. staff members respectfully</td>
<td>37%</td>
<td>73%</td>
</tr>
<tr>
<td>Showed enthusiasm on rounds</td>
<td>39%</td>
<td>82%</td>
</tr>
</tbody>
</table>

FIGURE 1. Frequency with which the 84 Attendings Named as Excellent Role Models

The APCCMPD honors the contributions of all 2017 nominees:

Bjorn K. Flora, M.D.
Stony Brook University Hospital

Deepak R. Pradhan, M.D.
New York University School of Medicine
Effective Critical Care Ultrasound Education For Internal Medicine Residency, Through An Ultrasound Consults Elective Rotation

Presenter / Author: Bjom K Flora, M.D.
Stony Brook University Hospital

Author: Sahar Ahmad, M.D.
Stony Brook University Hospital

BACKGROUND
Ultrasound (US) is fast becoming a new physical exam tool for hospitalized patients cared for by Internal Medicine (IM) residents. The imaging modality provides real-time assessment of the patients physiology and efficient diagnosis or bedside without needing to wait for radiologic or technician dependent imaging and has recently been noted to be tested on the American Board of Internal Medicine (ABIM) exam. At our institution, we have developed an US elective rotation entitled "Ultrasound Consults: Applications of bedside ultrasound for the IM resident". The elective is available to all three years of IM resident trainees and is taught by Pulmonary Critical Care Medicine (PCCM) faculty and fellows, as noted in April of 2007. Our pilot program identified the need for a structured, systematic approach to teaching bedside ultrasound to IM residents. We believe that this approach will continue to prove effective and beneficial. We are planning to further evaluate the efficacy of the elective program; so far, preliminary surveys and exam data suggest high levels of efficacy and learner satisfaction.

REFERENCES
Note: Assessment of knowledge retention and the value of practiced ultrasound exams after the introduction of an emergency ultrasound curriculum. BMC Medical Education. 2007, 7:40-45.

CONCLUSIONS
A significant positive result suggests that a new program to teach ultrasound skills for acute respiratory failure is feasible and well received with expected improvements in IM residents’ US knowledge. In the future, this project will be expanded to include other IM residents and IM residents outside of New York. The intervention will be compared with controls during the next academic year. Most of the residents in the control group will receive a lecture and a hands-on session with an ultrasound machine, but these residents will not receive additional remarks or further training in all aspects of bedside ultrasound. The lesson learned is that bedside point-of-care ultrasound should be taught in a comprehensive manner with a structured training program. This intervention will be continued in future years.

ABSTRACT PRESENTATION
The results of the pilot program suggest that the Ultrasound Consults Elective Rotation is effective in teaching bedside ultrasound for acute respiratory failure. The elective is taught by Pulmonary Critical Care Medicine faculty and fellows and is available to all IM residents. The program includes didactic lectures, small group hands-on sessions, and simulation case assessments. After the completion of the course, learners demonstrated increased knowledge in ultrasound interpretation, confidence in performing ultrasound exams for acute respiratory failure, and adherence to a Bedside Lung Ultrasound in Emergency (BLUE) protocol. Learners also felt more confident identifying relevant pathology on ultrasound after the course.

METHODS
The course is one week in duration and includes 1-2 students and/or trainees at a given rotation. Reading material and online references are provided prior to and during the course. Selected US examinations are performed in clinical context to the following organ systems: chest, abdomen, and cardiac. Chest US includes assessment of vessel access and diaphragm, lung US includes evaluation of atelectasis, cardiac: assessment of ventricular function and ventricular size, abdominal US includes evaluation of pleural effusion, Quad sign, Sinusoid sign, consolidated lung, pneumothorax, and/ or trainees must present a journal article review and produce an US protocol for these simulated cases: 5:51, 3:40, 7:32, 5:32, and 6:14 minutes. The program includes didactic lectures, small group hands-on sessions, and simulation case assessments. After the completion of the course, learners demonstrated increased knowledge in ultrasound interpretation, confidence in performing ultrasound exams for acute respiratory failure, and adherence to a Bedside Lung Ultrasound in Emergency (BLUE) protocol. Learners also felt more confident identifying relevant pathology on ultrasound after the course.

DISCUSSION
This blended learning design course for learners with baseline ultrasound experience was well received and resulted in tangibly improvements in knowledge, skill acquisition, and image interpretation skills with increased confidence in performing an algorithmic method to rapidly assess acute respiratory failure through bedside point-of-care ultrasound.

REFERENCES

Effective Critical Care Ultrasound Education For Internal Medicine Residency, Through An Ultrasound Consults Elective Rotation

Presenter / Author: Vijayani Mukherjee, M.D.
Bishoy Zakhary, M.D.
Harald Sauthoff, M.D.
New York University School of Medicine

Author: Deepak R. Pradhan, M.D.
New York University School of Medicine

INTRODUCTION
Acute respiratory failure results in nearly 2 million yearly hospitalizations in the United States, with associated mortality over 20%. It requires expeditious diagnosis and treatment, and is not well served by many clinical groups, including pulmonologists, intensivists, hospitalists, and emergency physicians. Point-of-care ultrasound provides rapid, bedside information on the etiology of acute respiratory failure that is non invasive and without waiting radiation. The Bedside Lung Ultrasound in Emergency (BLUE) protocol is an example reproducible algorithm utilized ultrasonography for the assessment of acute respiratory failure with an overall diagnostic accuracy of 80-90%. However, many providers lack competency in performing the BLUE protocol and effective educational methods are lacking. We present our novel one-day course with a blended learning design to teach learners to correctly and rapidly use ultrasound for assessment of acute respiratory failure.

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ABSTRACT PRESENTATION
Learner completed pre- and post-course surveys recording learner characteristics, confidence in performing ultrasound exams for acute respiratory failure, confidence identifying relevant pathology on ultrasound, and adherence to the BLUE protocol. Learners also felt more confident using ultrasound and BLUE protocol; all p<0.02, Figure 1. Learners also felt more confident using ultrasound and BLUE protocol; all p<0.02, Figure 1.

RESULTS
There has been 100% positive feedback from medical students and residents taking the course. There has been noted improvement on this course and residents’ skills at subsequent simulation courses. 100% of residents have completed the course. The significant majority (79%) were current 3rd year learners with an overall diagnostic accuracy of 90.5%. However, many providers lack competency in performing the BLUE protocol and effective educational methods are lacking. We present our novel one-day course with a blended learning design to teach learners to correctly and rapidly use ultrasound for assessment of acute respiratory failure.

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A significant positive result suggests that a new program to teach ultrasound skills for acute respiratory failure is feasible and well received with expected improvements in IM residents’ US knowledge. In the future, this project will be expanded to include other IM residents and IM residents outside of New York. The lesson learned is that bedside point-of-care ultrasound should be taught in a comprehensive manner with a structured training program. This intervention will be continued in future years.

REFERENCES

Figure 1. Confidence in Performing Ultrasound Exams: Pre- vs. Post-Course

Figure 2. Confidence Identifying Pathology on Ultrasound: Pre- vs. Post-Course

OBJECTIVE Blended Learning Design Course for Rapid Assessment of Acute Respiratory Failure

ABSTRACT Presentation
Learner completed pre- and post-course surveys recording learner characteristics, confidence in performing ultrasound exams for acute respiratory failure, confidence identifying relevant pathology on ultrasound, and adherence to the BLUE protocol. Learners also felt more confident using ultrasound and BLUE protocol; all p<0.02, Figure 1. Learners also felt more confident using ultrasound and BLUE protocol; all p<0.02, Figure 1.

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In its inaugural year, the APCCMPD Emerging Educator Award honors an up-and-coming clinician educator. The recipient is selected for his/her work in delivering and promoting medical education in Pulmonary and/or Critical Care Medicine through various means at the local and regional level.

Congratulations to the 2017 awardee:

Rosemary Adamson, M.B.B.S.
Assistant Professor
Associate Program Director
University of Washington

Dr. Rosemary Adamson has a BA from Cambridge University, UK, and received her medicine degree from Guy’s, King’s and St. Thomas’ School of Medicine, London, UK. She started her graduate medical training with two years at Guy's & St. Thomas’ Hospitals, London. Rosemary then moved to New York University, New York, for internal medicine residency, where she stayed as a chief resident and then a fellow in pulmonary & critical care medicine. She transferred to the University of Washington to complete her fellowship. She became a staff physician at the Seattle VA and an assistant professor of medicine, clinician-educator track, at the University of Washington in 2014. She became the associate program director for the UW PCCM fellowship program in 2015. Along the way, she married and had two children. Rosemary is very interested in the use of technology in medical education and is a proponent of making educational tools freely accessible. She is part way through developing a series of educational videos on bronchoscopy for fellows and works on many other educational projects within pulmonary & critical care medicine. She is thrilled to receive this award.

The APCCMPD honors the contributions of all 2017 nominees:

Sahar Ahmad, M.D.
Assistant Professor
Stony Brook University Hospital

Gabriel Bosslet, M.D.
Associate Professor of Medicine
Assistant Professor of Clinical Medicine
Director, Pulmonary and Critical Care Fellowship
Indiana University

José Cárdenas-García, M.D.
Assistant Professor
Associate Program Director
Pennsylvania State College of Medicine and The Milton S. Hershey Medical Center

Nirav Shah, M.D.
Assistant Professor
Program Director, Pulmonary and Critical Care Fellowship
University of Maryland School of Medicine
APCCMPD Outstanding Educator Award

APCCMPD members work diligently to foster excellence in education through the training and mentoring of the next generation of educators in Pulmonary and/or Critical Care. The annual Outstanding Educator Award (OEA) recognizes clinicians who are exemplary clinician educators. The recipient is chosen by his/her peers for demonstrating excellence in the development of future physicians.

Congratulations to the 2017 awardee:

Dr. Edward F. Haponik, M.D.
Professor of Medicine
Wake Forest School of Medicine

Dr. Edward Haponik is a Professor of Medicine at Wake Forest University School of Medicine. He was born in Fall River, MA, completed premedical training at Providence College, and graduated from Bowman Gray School of Medicine of Wake Forest University in 1974. Following internship, residency and chief residency at North Carolina Baptist Hospital, he had pulmonary fellowship training at Johns Hopkins Hospital, where he joined the faculty.

Medical education has been a focus of his career path, and personal mentors have included Drs. Warren Summer, Ko Pen Wang, and William Hazzard. Dr. Haponik has served as the Internal Medicine Residency Program Director at Louisiana State University School of Medicine in New Orleans, and APCCMPD Fellowship Director at LSU and Wake Forest. He has been the Director of Clinical Operations in the Pulmonary/Critical Care Divisions at Wake Forest and Johns Hopkins Universities.

Particular areas of clinical research have included bronchoscopy, obstructive sleep apnea, respiratory complications in burn patients, liberation from mechanical ventilation and respiratory problems of the elderly. Because of the dedicated efforts of junior faculty and fellows Dr. Haponik has contributed over 220 journal articles and book chapters and has edited a book on acute inhalation injury. Works have included 12 articles focused upon aspects of medical education. Dr. Haponik’s NIH-funded research has included a Preventive Pulmonary Academic Award and a Sleep Academic Award for curricular development. Teaching approaches have underscored use of small group instruction, standardized simulated patients promoting sleep histories, and use of simulation for hands-on bronchoscopy training in transbronchial needle aspiration. Dr. Haponik has received over 30 teaching awards, and has twice received Wake Forest University’s Leonard Tow Humanism in Medicine Award.

All of these endeavors have been made possible by the inspirational scholarly productivity of fellows and their passionate, unconditional commitment to patients. Dr. Haponik’s career in medicine has been possible because of their continuing achievements and, above all the loving support of his wife Claire, sons Ed and John, and grandchildren.

The APCCMPD honors the contributions of all 2017 nominees:

Stacey M. Kassutto, M.D.
Assistant Professor of Clinical Medicine
University of Pennsylvania

Anthony Saleh, M.D.
Associate Clinical Professor of Medicine
Director, Pulmonary and Critical Care Fellowship
New York Methodist Hospital, Weill Cornell Medicine

David Schulman, M.D., M.P.H.
Associate Professor of Medicine
Director, Pulmonary and Critical Care Fellowship
Emory Medical Center

Tisha Wang, M.D.
Associate Clinical Professor // Program Director,
Pulmonary and Critical Care Fellowship
UCLA Department of Pulmonary and Critical Care Medicine
The APCCMPD, ACCP, and ATS Education Research Award is a monetary grant that is bestowed to fellows-in-training, junior faculty members, Associate Program Directors, and Program Directors to fund a project that furthers Pulmonary and/or Critical Care Medicine fellowship training. Congratulations to the 2017 awardees:

1ST PLACE

**Effie Singas, M.D.**
Associate Professor
Hofstra Northwell School of Medicine
Validation of a Novel Training Method to Assess Pulmonary Critical Care Medicine (PCCM) Fellows’ Competence to Perform Thoracentesis

2ND PLACE

**Stacey Kassutto, M.D.**
Assistant Professor of Clinical Medicine
University of Pennsylvania
The Impact of a Novel Ambulatory Curriculum on Pulmonary Fellowship Training

The APCCMPD honors the contributions of all 2017 applicants:

**Stephanie Maximous, M.D.**
University of Pittsburgh
Piloting A Targeted, Spaced, Mastery-Learning Global Health Point-of-Care Ultrasound Curriculum For Internal Medicine Residents

**Luke Seaburg, M.D.**
University of Washington
Leveraging 3D Printing for Low-Cost High-Fidelity Advanced Bronchoscopic Technique Training and Endobronchial Ultrasound Simulation

**Sahar Ahmad, M.D. & Rajeev Patel, M.D.**
Stony Brook University Hospital
A Standardized Paradigm for Fellowship Ultrasound Education
The Accreditation Council for Graduate Medical Education (ACGME) guidelines for pulmonary and critical care medicine (PCCM) fellowship programs require that fellows achieve competency in the performance of various invasive procedures including thoracentesis, central venous access, chest tube placement, bronchoscopy, and medical thoracotomy.1 However, the ACGME has not defined criteria for establishing competency in these procedures, aside from requiring at least 100 bronchoscopies by the end of fellowship training. Traditionally, fellows have been trained by supervisory attendings following the medical tradition of the apprenticeship model. Determination of competency has been based on subjective faculty opinion and the number of procedures performed. However, performance of a set number of procedures does not ensure achievement of competency. Furthermore, there is a consensus regarding the fact that this may not be the best approach.2 One means of improving procedural training and competency assessment is through the increasingly popular use of simulation models, although this approach does not fully replicate the real-world experience encountered when performing procedures on patients.

Program directors and trainees would benefit from improved methods for establishing competency in these procedures, aside from requiring at least 100 bronchoscopies by the end of fellowship training. Traditionally, fellows have been trained by supervisory attendings following the medical tradition of the apprenticeship model. Determination of competency has been based on subjective faculty opinion and the number of procedures performed. However, performance of a set number of procedures does not ensure achievement of competency. Furthermore, there is a consensus regarding the fact that this may not be the best approach.2 One means of improving procedural training and competency assessment is through the increasingly popular use of simulation models, although this approach does not fully replicate the real-world experience encountered when performing procedures on patients.

We propose a more objective and novel means of assessing procedural competency in a PCCM fellowship program using video recording of fellows’ performance of procedures during an actual patient encounter, with objective scoring of the procedure by an independent faculty observer using a validated procedural performance checklist. This methodology allows for standardized assessment of procedural competency using a checklist. In addition to the checklist assessment, review of the video following the procedure for the supervising faculty allows the fellow to receive valuable visual feedback to the trainee who can identify potential problems and improvements to achieving competency. The video can be available for repeated review, and thus can be an effective training tool for PCCM fellows. The methods described in this proposal can also be applied to other procedures that are part of the fellow’s training. More objective offline scoring of the procedure by independent reviewers.10 This report to the best of our knowledge, is the first that applies video recording for determination of procedural competency in a PCCM fellowship program. In addition to competency assessment, video recording of procedures facilitates the formation of a video library of scenarios, near misses, and unexpected findings that can serve as a learning repository. Each fellow will have a finite number of procedures during their training; the video library can significantly increase their exposure to difficult or unusual situations that can help fortify the fellow’s expertise.

REFERENCES

1. ACGME program requirements for graduate medical education in pulmonary and critical care medicine. Accreditation Council for Graduate Medical Education. Website: http://www.acgme.org.

The Accreditation Council for Graduate Medical Education (ACGME) guidelines for pulmonary and critical care medicine (PCCM) fellowship programs require that fellows achieve competency in the performance of various invasive procedures including thoracentesis, central venous access, chest tube placement, bronchoscopy, and medical thoracotomy. However, the ACGME has not defined criteria for establishing competency in these procedures, aside from requiring at least 100 bronchoscopies by the end of fellowship training. Traditionally, fellows have been trained by supervisory attendings following the medical tradition of the apprenticeship model. Determination of competency has been based on subjective faculty opinion and the number of procedures performed. However, performance of a set number of procedures does not ensure achievement of competency. Furthermore, there is a consensus regarding the fact that this may not be the best approach. One means of improving procedural training and competency assessment is through the increasingly popular use of simulation models, although this approach does not fully replicate the real-world experience encountered when performing procedures on patients.

We propose a more objective and novel means of assessing procedural competency in a PCCM fellowship program using video recording of fellows’ performance of procedures during an actual patient encounter, with objective scoring of the procedure by an independent faculty observer using a validated procedural performance checklist. This methodology allows for standardized assessment of procedural competency using a checklist. In addition to the checklist assessment, review of the video following the procedure for the supervising faculty allows the fellow to receive valuable visual feedback to the trainee who can identify potential problems and improvements to achieving competency. The video can be available for repeated review, and thus can be an effective training tool for PCCM fellows. The methods described in this proposal can also be applied to other procedures that are part of the fellow’s training. More objective offline scoring of the procedure by independent reviewers. This report to the best of our knowledge, is the first that applies video recording for determination of procedural competency in a PCCM fellowship program. In addition to competency assessment, video recording of procedures facilitates the formation of a video library of scenarios, near misses, and unexpected findings that can serve as a learning repository. Each fellow will have a finite number of procedures during their training; the video library can significantly increase their exposure to difficult or unusual situations that can help fortify the fellow’s expertise.

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