

DERMATOLOGY TEACHERS EXCHANGE GROUP 2015 Abstract Session

4:30 – 6:30 Zurich Room, Swissotel, Chicago, IL

4:30 Introductions: Erik Stratman, MD, Moderator

4:40PM SPECIAL THEME 2015

"Faculty Development: Topics, Targets, Tactics"

Faculty Development in the form of Faculty Performance Radar Plots

Erik Stratman, MD. Marshfield Clinic, Marshfield, WI

8 min

Peer Observation of Teaching: A Powerful Faculty Development Tool

Susan Burgin, M.D. Harvard Medical School; Department of Dermatology, Beth Israel Deaconess Medical Center (BIDMC), Boston, MA **8 min**

Improving time-use in clinic with the use of standardized patient templates

Andrea Murina MD, Brittany Stumpf MD, Jessica Clark MD, Erin Boh MD, PhD Tulane University, New Orleans, LA **8 min**

Patient Perceptions of Workplace Based Formative Assessment

Joslyn Kirby, MD, MEd, MS, Department of Dermatology, Penn State Hershey Yousif Yonan, M.D., Mayo Scottsdale David Baird, M.D., Dermatology Associates, LLC 8 min

A Mobile Application for Direct Observation Evaluation of Dermatology Residents.

Daniel M. O'Connor, ¹ Arjun Dayal, ² William D. James, ³ and Misha A. Rosenbach ³ School of Medicine; ³Department of Dermatology; University of Pennsylvania, Philadelphia, PA. ² School of Medicine; University of Chicago, Chicago, IL. **8 min**

EXCHANGE 10 min

5:30 Medical Student Education

A pilot study on motivating medical students to actively participate and interact with faculty utilizing dermatology oriented online quizzes.

Elaine Kunzler, BS; Jacqueline Graham, BS; Eliot Mostow, MD, MPH; Northeast Ohio Medical University, Rootstown, OH

5 min

5:35 Dermatology Resident Education

Effectiveness of a New Learning Application for Dermatology Resident Education Andrea Murina MD. Tulane University, New Orleans, LA

5 min

EXCHANGE 5 min

Perceptions of U.S. Dermatology Residency Program Directors (PDs) Regarding the Adequacy and Efficacy of Phototherapy Training during Residency

Kavita Goyal¹ Rachel Reynolds² Arash Mostaghimi¹ Jeffrey Cohen¹ Elizabeth Buzney¹ ¹ Brigham and Women's Hospital, Boston, MA² Beth Israel Deaconess Medical Center, Boston, MA

5 min

Education on Total Body Skin Examination in Dermatology Residency

Marissa Milchak, BA; Jeffery Miller, MD; Cheryl Dellasega, PhD.; Joslyn Kirby, MD Penn State College of Medicine and Hershey Medical Center, Hershey, PA **5 min**

EXCHANGE 5 min

Using Cadavers to Enhance Surgical Training

Larissa Larsen, MD. University of California Davis, Sacramento, CA **5 min**

Skin Rejuvenation—a Multi-site Dermatology Curriculum

Jay C Vary, Jr, MD PhD. Division of Dermatology, Department of Medicine University of Washington, Seattle, WA

5 min

EXCHANGE 5 min

Quality Improvement Education and Practice in Dermatology Residency

Lisa E. Maier MD,¹ Cindy Priddy,² Heather Chubb,¹ Yolanda Helfrich MD,¹ Thy Thy Do MD,¹ Kelly McClean MD¹ University of Michigan Department of Dermatology;¹ Michigan Quality System, University of Michigan Health System², Ann Arbor, MI **5 min**

Submitting Focused QI Modules to the ABD to accomplish Resident QI Milestones, Institutional CLER requirements, and MOC Credit for involved faculty

Erik Stratman, MD, American Board of Dermatology **5 min**

EXCHANGE 5 min

6:30PM Program Concludes

Faculty Development in the form of Faculty Performance Radar Plots

Erik Stratman, MD, Marshfield Clinic, Marshfield, WI

Providing faculty with objective feedback summarizing individual teacher performance and contribution to a department's education mission is challenging yet important for benchmarking, goal-setting, and faculty development. Residency programs want to provide objective data to teachers but may not be providing this in a summative or multisource fashion. Teachers may only receive learner-assigned teacher ratings as the only feedback source. Marshfield Clinic Dermatology Residency began with a process to identify all sources of currently collected teaching data. In addition, we identified other desired but not yet collected objective data to provide teachers based on the education needs of the department as determined by the program director and chairman. Excel was used to create spreadsheets and radar plots. Scales were created and calibrated so each measure was represented as a spoke on a faculty performance radar plot. The program set goal performance levels for each measure and calculated faculty averages in each category. These 3 plots (individual, minimal goal, and average faculty) were provided in a single radar plot and given to faculty. Performance plots were explained and then used during annual faculty performance evaluations. Faculty found it useful to see how they compared to the mean and found the plots useful when goal-setting.

Peer Observation of Teaching: A Powerful Faculty Development Tool

Susan Burgin, M.D. Assistant Professor, Co-Chair Peer Observation Group of the Harvard Academy of Teachers, Harvard Medical School; Department of Dermatology, Beth Israel Deaconess Medical Center (BIDMC), Boston, MA.

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Clinician educators in dermatology are called on to teach in a variety of settings, including in the clinic, at the bedside, in lectures and in small groups. For the majority of clinicians, teaching techniques are learned informally from observation of his/her own teachers. Traditional faculty development programs, such as topic-based lectures or workshop-style sessions, can augment theoretical knowledge of teaching skills. Also, traditionally, while the primary source for feedback on teaching is trainees, a recent study suggests that faculty may not internalize this feedback.¹

How does a good clinical teacher become a great clinical teacher? While cognitive traits (perception, memory, judgment, reasoning, and procedural skills) are important for good clinical teaching, it is the non-cognitive skill set (relationships, emotional activation, self-awareness and competence) that dominates literature descriptions of great clinical teachers.² The literature further asserts that teachers improve by reflecting on their own teaching, but that physicians generally don't do this very well.^{3,4}

Peer observation of teaching programs have been described in medical teaching since the 1980's. Peer-collaborative programs have supplanted evaluative models because of their higher acceptability to participants. After specific and detailed observation, feedback is provided by the observer to the observed attending in a variety of domains that are relevant to the teaching setting. Peer observation of teaching has been noted to enhance teaching performance and professional development. It serves to increase participants' reflection on teaching and sharing of best practices, including those in the non-cognitive realm.⁵

In this presentation, selected clinical and classroom peer observation programs that are in place at BIDMC and more broadly, throughout the Harvard Medical School system, will be discussed and resources shared.

References.

- ¹ Carr T et al. Credibility and (dis)use of feedback to inform teaching: A qualitative case study of physician-faculty perspectives. Southwest J Crit Care 2015; Jun 27.
- ² Sutkin G et al. What makes a good clinical teacher in medicine? A review of the literature. Acad Med. 2008; 83:452–466.
- ³ MacDougall J et al. The development of medical teachers: An enquiry into the learning histories of 10 experienced medical teachers. Med Educ 2005; 39:1213–1220.
- ⁴ Eva KW et al. I'll never play professional football and other fallacies of self-assessment. J Contin Educ Health Prof 2008; 28:14–19.
- ⁵ Finn et al. How to become a better clinical teacher: A collaborative peer observation process. Med Teach 2011; 33: 151–155.

Improving time-use in clinic with the use of standardized patient templates Andrea Murina MD, Brittany Stumpf MD, Jessica Clark MD, Erin Boh MD, PhD

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Introduction: The faculty at Tulane Dermatology staffs 6 separate clinics in different locations in the Greater New Orleans Metro area, with 3 separate Electronic Medical Record (EMR) systems including EPIC, eClinical Works, and CPRS. Residents accompany faculty members to these clinics and assist with documentation of clinic notes. The time required for documentation was excessive, decreased teaching time, and was disruptive to work-life balance. Previous methods to decrease the time spent performing documentation were the use of DRAGON software and scribe.

Objective: The goal of the project was to create 18 templates that all faculty members found acceptable for use on a daily basis. Additionally, we wanted to discourage note cloning.

Methods: The faculty and residents created and approved 18 separate templates of the most common dermatologic encounters for use in clinics in April 2015. The templates were individualized according to disease, and based upon evidence-based guidelines. The templates were uploaded or saved in each EMR, utilizing short-cut features in each program. Since implementation, utilization is higher for resident-initiated notes than for faculty-initiated notes. Overall time spent on clinical documentation has decreased. The number of note clones has also decreased.

Conclusions: Creating an "ideal" set of templates that all faculty members agree upon and that can be replicated across multiple sites improves time-use in clinic and can lead to happier and healthier faculty members.

Patient Perceptions of Workplace Based Formative Assessment

Joslyn Kirby, MD, MEd, MS, Department of Dermatology, Penn State Hershey Yousif Yonan, M.D., Mayo Scottsdale David Baird, M.D., Dermatology Associates, LLC

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Workplace based formative assessment (WBFA) is a useful clinical tool that documents residents' observable behaviors, encourages learning from clinical experiences through feedback, and brings faculty into the room with the resident and patient. Patients participating in medical student interactions feel they contribute to the students' education. However, it is unknown how patients perceive their participation during WBFA, with the attending and resident. The objective was to explore patients' attitudes, beliefs, and feelings about WBFA. All patients with WBFA performed during the visit were invited if he/she consented, was competent, and able to read and understand English. The survey instrument was developed based on the existing literature, pilot tested then revised. The final survey was an anonymous 11-item survey. Responses were collected on a 5-point Likert scale from strongly agree to strongly disagree. Completed, anonymous surveys were placed in secure box after visit. Responses were clustered into 3 groups based on rating of WBFA experience: neutral, positive or negative. Positive responses included agreement or strong agreement from positively worded items and disagreement or strong disagreement from negatively worded stems. This was reversed to ascertain *negative* responses. Neutral responses were unchanged. Forty-four patient surveys were collected and 98% of patients felt comfortable with WBFA. Only 2.4% felt the faculty observer was a distraction. All patients stated they would agree to be a part of WBFA at a future appointment. Only a minority of patients had any interest in contributing their opinions about the visit to assessments. This study showed that the vast majority of patients have a positive perception of WBFA. Many patients feel they are helping resident physicians by participating in WBFA.

A Mobile Application for Direct Observation Evaluation of Dermatology Residents Daniel M. O'Connor, Arjun Dayal, William D. James, and Misha A. Rosenbach

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Background: The Dermatology Milestone Project, a joint initiative of the ABD and the ACGME, was implemented in July of 2014 to fulfill the requirements of the ACGME's NAS. This System has the potential to provide residents with more meaningful evaluations—with a focus on directly observed behaviors and skills, as well as frequent and relevant feedback. However, the complexity and rigor of the NAS increases the administrative burden on program directors (PDs), clinical competency committees, and teaching faculty.

Intervention: A mobile software application was developed to allow attending dermatologists to complete resident evaluations in real time using a smartphone, tablet, or computer. Emphasis was placed on making the evaluation process as rapid and simple as possible. The software uses photo-based navigation and allows for voice dictation. Subcompetencies are grouped by clinical setting (e.g. Dermatopathology, Pediatrics, and Surgical Skills). The administrative interface allows the PD to customize evaluations, visually track resident progress, generate summary reports, and export data to residency management suites. The app will be free to members of the AAD and development was partially funded through an AAD Sulzberger Institute grant. We surveyed teaching faculty impressions of ease-of-evaluation before and after release of the app.

Results: This software has been piloted at the University of Pennsylvania since June 2015. To date, over 180 subcompetency evaluations of 16 residents have been completed by nine faculty.

Conclusion: This mobile app-based system offers advantages in real-time evaluation of residents and observed behaviors in line with the goals of the NAS. Mobile app-based evaluations were generally popular with positive feedback from attending physicians. The app offers another tool for efficient resident evaluation and may simplify the NAS Milestone reporting requirements and provide more real-time feedback to trainees.

A pilot study on motivating medical students to actively participate and interact with faculty utilizing dermatology oriented online quizzes

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Background: Online quiz competitions can facilitate extra-classroom communication between faculty and medical students as well as boost students' interest in class topics. Small competitions targeted at motivating students to learn, recall, and interact with faculty are a way to reach those students who may not be attending lectures or are not avid participators.

Aims: This pilot project is aimed to explore if optional online quizzes incorporating social media can result in improved student and faculty engagement outside of the traditional classroom setting. The quiz questions reflected high yield Dermatology principles to prepare students for class and board exams. Small incentives were used to promote enjoyable competition between medical students.

Methods: Online quizzes using Google Forms were promoted via Twitter and email to second year medical students at Northeast Ohio Medical University (NEOMED) over the course of 10 weeks. The first correct respondent for each quiz was able to choose between a Starbucks gift card, movie tickets, and a meet and greet with a physician of their choosing for their prize.

Results: An average of 23.8% of the second year medical student class at NEOMED participated per quiz. A total of 80 individuals (55.9%) submitted 340 responses during the competition. Eight winners choose the Starbucks gift card as their prize, one chose movie tickets, and one chose to meet with Dr. Mostow.

Conclusion: Optional online quizzes with small incentives can foster motivational competition among medical students, increase interactions with faculty, and prepare students for exams.

Effectiveness of a New Learning Application for Dermatology Resident Education Andrea Murina MD, New Orleans, Louisiana

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Introduction: Medical residents now rely more on online learning resources than ever before. Online books, online medical photographs, and online journals allow most of medical education to be learned from a digital screen. New electronic learning (e-learning) software is able to utilize some of the most effective learning methods to increase learner engagement and give immediate feedback.

Objective: The goal of the study was to assess the efficacy of an online software application for Dermatology board preparation.

Methods: Twelve dermatology residents were asked to participate in a multiple choice pre-test in order to participate in the study. Ten completed the pre-test and half were randomized to receive the study tool and the others were asked to study using their usual methods. The participants had 2 weeks to use the tool prior to the post-test. Pre- and post-test results were compared in both groups.

Results: Ten dermatology residents completed the study. Multiple choice pre-tests and post-test showed no statistically significant differences within the test and control groups. In an educational survey of 10 residents, all residents find instructor-made content most helpful compared to online resources.

Conclusions: The creation of specialty specific content using the latest education online software may help residents with long-term retention and test performance. The best way to engage our residents may be to encourage them to create content on their own and share multiple accounts as a single class.

Perceptions of U.S. Dermatology Residency Program Directors (PDs) Regarding the Adequacy and Efficacy of Phototherapy Training during Residency

Kavita Goyal¹,Rachel Reynolds²,Arash Mostaghimi¹,Jeffrey Cohen¹,Elizabeth Buzney¹

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Background: Studies of dermatology residents have reported discomfort in prescribing phototherapy.

Objectives: Determine if dermatology residency program directors (PDs) consider their program's phototherapy training adequate and effective; examine which factors impact perceived adequacy of training.

Methods: Electronic REDCap survey of U.S. dermatology PDs; analysis of response with Fisher's exact tests.

Results:

42 of 121 PDs responded. 92.9% reported in-office phototherapy center access. 19.0% stated phototherapy training was completely adequate, and 26.2% reported complete prescribing comfort among residents. 41.0% reported ≤5h of phototherapy training time during residency; training time was the only variable significantly associated with PDs classifying their program as completely adequate (p=0.002). Among PDs classifying training as completely adequate vs. not completely adequate, 50.0% vs. 29.4% of programs offered UVA-1 training, 100.0% vs. 76.5% offered oral psoralens + UVA (PUVA) training, and 75.0% vs. 47.1% reported excimer laser training (p=NS). 59.5% cited lack of curriculum time as the most common barrier to phototherapy education; an online module, mobile app, or resident courses at national meetings (76.2%, 73.8%, and 64.3%, respectively), were favored as additional educational modalities.

Limitations: Sample size, potential reporting bias.

Conclusions: Fewer than 1 in 5 dermatology PDs report completely adequate phototherapy training. Improving training time and access to advanced modalities may be opportunities for improving training. Phototherapy training may benefit from delineating ACGME core competencies.

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Education on Total Body Skin Examination in Dermatology Residency

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Total body skin examination (TBSE) is a crucial examination skill for physicians. Variability in TBSE education among medical students has been established, but little is known about methods used to teach TBSE techniques to dermatology residents. Our study aimed to assess TBSE education and practice during residency training.

A ten-question de-identified survey was distributed via listservs to dermatology residency program directors and residents; responses were collected using REDCap. It was found that 61.7% of participants received formal instruction on TBSE technique at some point during their education or professional career, but 38.3% were self-taught. Of the participants who received formal instruction, most occurred during medical school and residency. Observing others was felt to be extremely important to most participants (68.8%) in developing TBSE technique. Two-thirds (66.7%) felt it was extremely important to perform TBSE consistently, yet a substantial proportion of participants did not examine all locations suggested by the American Academy of Dermatology when performing a typical TBSE. When asked to rank confidence in performing TBSE, 4.7% were not, 65.9% were somewhat, and 29.5% were extremely confident.

Our results indicate that variability in TBSE education and practice exists among dermatology residents, and that education during residency through observing others is crucial in TBSE technique development. We propose that situated learning, with observation and practice components, be implemented in residency curriculums. Those teaching TBSE should emphasize completeness. Future studies may develop an efficient and ergonomic standardized TBSE technique to be used in resident education.

Using Cadavers to Enhance Surgical Training

Larissa Larsen, MD, Assistant Program Director University of California Davis, Sacramento, CA

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Every program has deficiencies or gaps in training that they work hard to fill. We have implemented a resident training session using cadavers to help ameliorate our lack of resident exposure to nail surgery. Nail surgery is uncommonly practiced in our dermatology department. Typically it is saved for the occasional nail matrix biopsy for atypical melanonychia or erythronychia. Many complete or partial toe nail avulsions are treated by podiatry. To improve this gap we provide a hands-on training session using the extremities of cadavers. Physicians trained in nail surgery are recruited to guide the training session. In addition to practicing general surgical procedures on the cadavers, the residents practice various nail procedures including techniques for anesthesia, partial and complete nail avulsions, matrix biopsies, nail bed biopsies, and reconstruction after surgery. The use of cadavers is not new to medicine, but in dermatology training it is seldom utilized as a resource to advance resident surgical skills.

Skin Rejuvenation—a Multi-site Dermatology Curriculum

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The University of Washington serves a geographically broad and multisite area through the "WWAMI program" which encompasses academic sites in Wyoming, Washington, Alaska, Montana, and Idaho. Changes in the structure of the University's curriculum necessitate Dermatology be taught in 6 academic sites across 3 time zones and 5 states which account for over 25% of the land mass of the United States, often with no local Dermatologist. In addition to the widespread geography, an additional challenge has been to use the same instructional materials, educational strategies, and evaluation tools at all sites concurrently.

Similar challenges have been addressed in other programs in Australia, Michigan, Ontario, and most comparably in British Columbia, but not specifically for Dermatology. The "Basic Dermatology Curriculum" developed by the AAD and APD is an excellent online adjunct to a clerkship in Dermatology, but does not cover basic science and structure and function of the skin in enough detail for USMLE step I proficiency. A multisite curriculum for pre-clinical Dermatology was developed for the UW which may help serve as a model to similar challenges in other institutions.

The new curriculum provides a syllabus, vodcasts, and case studies for Dermatology to be given concurrently in all the WWAMI sites. This will utilize a "flipped classroom" model in which students will be expected to review relevant didactic material prior to class so that higher order learning can occur during the sessions.

The lack of dermatology specialists in some of the locations has required that this course be accessible for instruction by generalist clinicians or possibly even by non-clinician scientists such as Microbiologists or Biochemists. With the exception of a 1 hour instruction of morphology and the skin exam, the need for local experts is not necessary.

Quality Improvement Education and Practice in Dermatology Residency

Lisa E. Maier MD,¹ Cindy Priddy,² Heather Chubb,¹ Yolanda Helfrich MD,¹ Thy Thy Do MD,¹ Kelly McClean MD¹

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The ACGME mandates resident participation in institutional Quality Improvement (QI) projects. Dermatology milestone PBLI3 (Integrate quality improvement concepts and activities in practice) also requires residency programs to assess resident efforts in QI projects. We created a structured QI course for dermatology residents in order to meet CLER and milestone objectives. We sought first, to provide knowledge of QI vocabulary, concepts and methods; and second, to provide practical experience on small-scoped projects to improve actual work processes. The course was structured as a flipped classroom experience, with 4 didactic online modules on QI methodology and A3 Problem Solving, and 4 in-class sessions. Residents participated in guided team work on 1 of 5 projects, which they had identified through their daily work. The program ran from February to June 2015, culminating in resident project presentations to the faculty and staff.

Residents were surveyed on their knowledge and confidence in QI methodology before and after the course including: Select an appropriate process; Create a background statement; Observe the process in action; Grasp and display the current situation on the A3; Craft a clear problem statement; Develop SMART goals; Analyze root causes; Identify countermeasures; Monitor and adjust and experiment; Use A3 Structured problem solving; and, Use PDCA cycles to solve problems. Survey response rate was 78%. Residents reported a statistically significant improvement in both self-reported knowledge and confidence in all topics listed (p<.0001). The course was well received with 70% of responding residents rating the course somewhat, very or extremely useful.

Submitting Focused QI Modules to the ABD to accomplish Resident QI Milestones, Institutional CLER requirements, and MOC Credit for involved faculty.

Erik Stratman, MD. American Board of Dermatology.

In 2015, the American Board of Dermatology (ABD) announced that it would begin a 2-year pilot period during which it would host focused Practice Improvement activities to simplify the Quality Improvement project requirements of its Maintenance of Certification program. Dermatology residency clinical competency committees (CCCs) perform regular resident milestone assessments that include assessing a resident's understanding and participation in quality improvement activities. All institutions that host dermatology residencies participate in the ACGME's Clinical Learning Environment Review (CLER), which includes expectations of integrating quality improvement and patient safety activities into resident education. The ABD seeks to recognize programs, residents, and board-certified faculty that participate in creating focused QI modules. Approved projects will receive Program Recognition that can help an institution meet CLER requirements, help CCCs identify resident-related QI milestone performance, and help faculty and senior residents who authored the modules earn MOC credit. The process will be explained.