Alliance of Clinician-Educators in Radiology

Newsletter Volume 6, Issue 1 March 2016

Inside This Issue:

(From left) Drs. Mark Mullins, Alfredo Bruzzi, Priscilla Slanetz and Eric Stern at the 2015 Congreso Argentino de Radiologia in Buenos Aires.

This newsletter serves to highlight the current ACER goals and available resources and to keep members informed of ongoing projects.

Members and potential new members are encouraged to get involved in the stimulating and worthwhile activities of ACER. One way this can be achieved is through committee membership and organizational leadership, please contact Aine Kelly (ainekell@umich.edu) incoming ACER president.

Members are also invited to send their contributions to the upcoming ACER newsletters. These contributions may be sent to Matthew Heller (hellermt@upmc.edu) or Ana Lourenco (alourenco@lifespan.org).

ACER's Mission & Goals

- Providing a formal organization and forum for clinician-educators to meet, exchange ideas, and learn new skills that promote and advance the careers of clinician-educators.
- Providing programming at the annual AUR meeting targeted towards the needs of clinician-educators.

ACER: Benefits of Membership

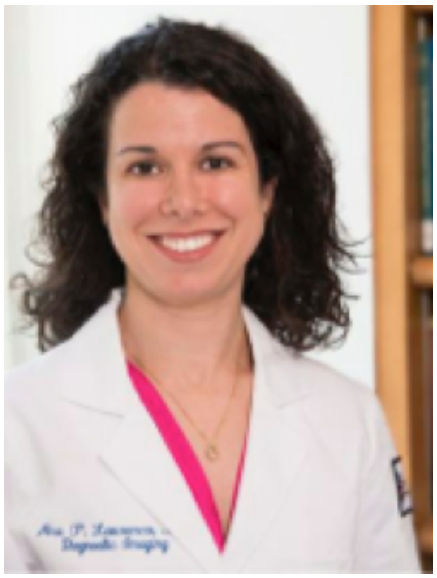
- Access to information and networking database for the benefit, awareness, and nurturing of clinician-educators.
- Opportunities for involvement in educational research activities relevant to clinician-educators.

Membership Update

- The AUR gained 151 members in January and February 2016, bringing the grand total to 1648.
- ACER has 264 members, consisting of 185 full time members and 79 junior members.
- ACER's membership is second only to AMSER's (374) among the AUR Affinity Groups; other Affinity Groups include RRA (177), RAHSR (121) and A^3CR^2 (113).

Generational Divides: Teaching and Working with Millennials

By **Ana Lourenco, MD**



Although I think of myself as a relatively young faculty who still remembers the challenges of residency training (who doesn't, right?), I am squarely in the "Gen X" camp. Many of our trainees are Millenials or Gen Y, and the more I learn about generational differences, the more I think that being aware of these differences will help us be better teachers and better professional mentors. While the exact definition of "Millennial" varies, most agree that this term encompasses those born 1980-2000.

These individuals grew up with widely available and varied technologies and are "digital natives." They expect instant access to information, and have likely never needed to consult an encyclopedia for a research project. This has made them very facile with technology, often using an electronic device of some kind while "multi-tasking" and doing something else at the same time. When that something else is a lecture we are delivering, many of us are upset that their full attention is not on the lecturer. While this has been an issue at our institution as well, when you query the residents, many times they are looking up information relevant to the lecture. Finding ways to incorporate their devices into teaching, using audience response for example, is one way to keep them engaged with the topic.

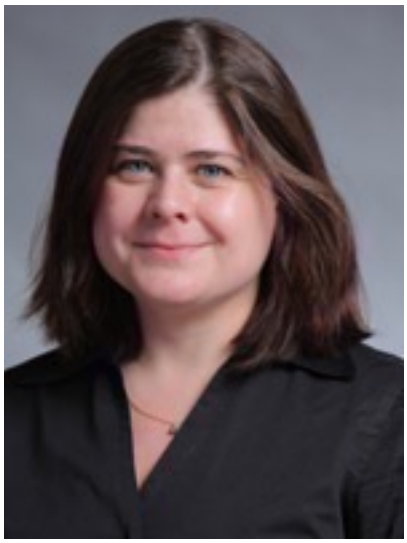
Millennials were raised by parents who were extensively involved in planning and conflict resolution for their children from the very first playdates to perhaps even first jobs (1). As a result, this group as a whole needs and is looking for more feedback and communication than previous generations. Unfortunately, though most agree that feedback is critical in medical training, there is a real paucity of effective feedback and varied concerns about how best to deliver it (2,3). Increasing feedback and keeping communication clear and frequent will likely improve our abilities to successfully teach and mentor Millennials. This generation wants to do "meaningful" work. In medicine, we are fortunate that they are involved with important work from the beginning of their training. Nonetheless, highlighting why the work is important is critical to keeping them engaged. Lastly, a word of thanks goes a long way. In medicine, we rarely pause to acknowledge a job well done but are quite prompt to point out QA issues. Take a moment to recognize when someone does well – it can make a huge difference.

<u>References</u>:

1. Caraher L. Millennials & Management 2014 Bibliomotion.
2. Cantillon P, Sargeant J. Teaching Rounds: Giving feedback in clinical settings. BMJ 2008; 1292-4.
3. Archer JC. State of the science in health professional education: effective feedback. Medical Education 2010:44:101-8.

Radiology Report for the 21st Century

By **Maria Shiau, MD, MA**



If you have not recently thought about it- it is time. Are your radiology reports the same quality as when you began your training? Clinicians today expect a higher quality report and it is our job to deliver. There are many ways we can enhance our reports, thus improving communication in a visually appealing format. Small changes as listed below can make a world of difference.

1. **Standardized reports**. Reports with headers make it infinitely easier for clinicians to find specific details that they need to know. Although this approach may not work for complicated cases with disease extending across compartments, for the cases you do use it for, the clinicians will be appreciative.
2. **Hyperlinked images (with annotations)**. Sometimes specifying the series and image number may not be enough to help clinicians identify subtle abnormalities. A hyperlink to an image with an arrow and/or measurement saves time localizing the lesion and will ensure reproducible measurements on follow-up studies.
3. **Tables** are particularly helpful for oncology studies. A chart at the bottom of the report summarizing the lesions and tracking their measurements is a God send for the oncology team and will obviate phone calls asking for additional measurements.
4. **Proof reading**. Left and right mistakes and typos, can undermine the professionalism of any report.
5. **Be concise**. Additional verbiage stating what has already been said wastes everyone's time.
6. **Clinical correlation**. One of the most despised phrases in radiology reports. In the era of electronic medical records- we can do the clinical correlation. Many of our questions can be answered with a detailed history and physical, selected laboratory values and pathology reports. In addition, instead of ordering additional tests for incidentalomas- the radiologist should check to see if recent imaging has already been performed.
7. **Correlate with other cross sectional imaging**. This is particularly helpful when interpreting portable chest radiographs. If the patient recently had a chest CT, all of those vague shadows and opacities begin to make sense. Similarly, lesions in the upper abdomen on a non-contrast chest CT may be better depicted on a recent prior contrast enhanced abdomen CT.
8. **Compare, compare, compare**. Nothing helps more than reviewing the evolution or stability of a lesion to help arrive at a diagnosis.
9. **Follow up**: Adding Imaging recommendation section at the end of report for the identified finding would be something to consider for better visibility by clinicians.
10. In this world of uncertainty, **assigning a probability** to descriptors can be incredibly helpful. An example of the probability rubric we use at my institution is listed below:

    - Consistent with/compatible with or no modifier - greater than 98%
    - Most likely - greater than 90%
    - Likely/probably - greater than 75%
    - Possibly 50%
    - Less likely - less than 25%
    - Unlikely - less than 5%

Incorporating Electronic Resources into Radiology Resident Classroom Teaching

By **Zachary Mikes, DO and Paula Germaine, DO**

The traditional textbook is becoming obsolete, as more residents prefer easily accessible and more up-to-date resources available on mobile devices and computers. While most of us still depend on digital or printed textbooks for a bulk of our radiological knowledge, we are discovering and incorporating many new applications, websites and other technological resources into our education. At our program, we have been using a multifaceted web-based resource as a supplement to our didactic curriculum.

Before a lecture on a given topic, we are assigned a germane lesson in the aforementioned resource, which includes a pre-test and a post-test, and reading topics with accompanying practice questions to test the acquired knowledge. Lessons cover over 3,500 topics and are comprised of modules categorized into overviews, anatomy, specific diagnoses, and differential diagnoses. For example, we were recently assigned the 'Kidney Basic' lesson that included topics on kidney anatomy, renal cell carcinoma and differential diagnoses of solid renal masses. Each topic is presented in a bulleted format, providing information on imaging findings, pathology, epidemiology, prognosis, treatment, etc. In addition, modules included many diagrams and imaging cases from all over the world. The pre- and post-tests are comprised of a small subset of over 7,000 available board-style questions, each of which provides an explanation. The combination of modules with relevant practice questions is one of this particular resource's unique advantage.

There are several other ways this online tool sets itself apart as a valued resource. The modules are concise and present high yield information, which is important when preparing for a lecture, especially when you have one almost every day. It is possible to complete these lessons relatively quickly to simply familiarize oneself to the topic of discussion, which promotes better retention and encourages lecture participation. For higher level residents, it offers an additional opportunity to increase their depth of knowledge on a specific topic. What I like the most about the program is how image intensive it is. There are innumerable amount of pictures which help with pattern recognition and commitment to memory.

While the program is a valuable tool for lecture preparation, it does have its limitations. One of its downsides is each lesson's limited customizability. For example, our recent lecture was devoted to renal cell carcinoma and its subtypes. Although the 'Kidney Basic' module covered this information, it also included additional subtopics on pyelonephritis and renal trauma, which are important to know but were not relevant to this specific presentation. Unfortunately, the option to assign more lecture-specific modules and questions is not yet available. However, one of our educators contacted the support team who revealed that this capability will be included in a future update. The potential for frequent updates is one of the greatest strengths of software-based tools.

Electronic resources are valuable to the current generation of residents and play an important and an ever increasing part in our education process. These include multiple textbook and reference materials in full and abridged versions, compilations of case presentations to reinforce the material and data banks of questions to solidify knowledge and prepare for various examinations. Regular software and information updates provide electronic resources like the one we have been using an advantage over traditional study materials and offer a variety of teaching styles to the current generation of residents.

Introducing the New ACER Inter-specialty Liaison Committee

By **Jack Porrino, MD**

The practice of medicine in the academic setting has become more complex as a result of major societal, economic, and demographic forces that are independently affecting the healthcare system and the university-based system of higher education. The role and expectations of the physician-educator are subject to these forces and are under continual change.

ACER was formed so that radiologists practicing in the academic setting as physician-educators would be able to support each other and disseminate best practices. The ACER Inter-specialty Liaison Committee is an extension of the ACER mission in that physician-educators across other specialties can learn from their counterparts.

Our committee is focused on reaching out to and corroborating with similar organizations of physician-educators across other specialties in effort to identify best practices and opportunities for cross-pollination. Organizations will benefit from exposure to practice methods utilized by other fields, ultimately permitting the betterment and promotion of all physician-educators.

Committee members must also be members of ACER, and will be assigned with the task of investigating physician-educator resources amongst each core (6) specialty of medicine. Target specialties include: general surgery, obstetrics and gynecology, psychiatry, family medicine, pediatrics, and internal medicine.

Specific objectives for Committee members include:

1. Explore the websites that are currently utilized and sponsored by the aforementioned ACER-like committees that exist in alternative medical specialties, and identify practical and unique strategies being implored for physician education that may be adaptable to ACER.

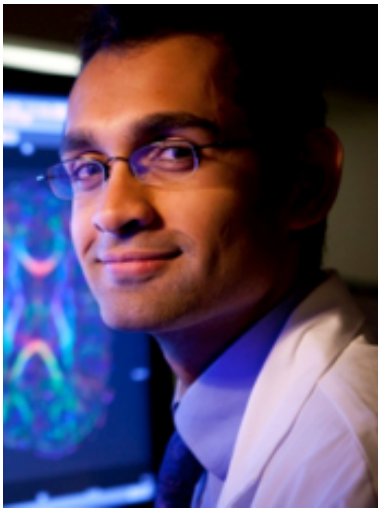
2. Identify a journal amongst the 6 core specialties of medicine that is synonymous with JACR and review useful articles that pertain to best practices in physician education that may be applicable to ACER.

3. Determine if the core specialty utilizes a web resource similar to our “Aunt Minnie”. If so, investigate this resource in effort to gain ideas that may be applied to ACER.

In an era of difficult and hostile healthcare as a result of evolving societal expectations related to a variety of factors, including but not limited to, the effects of the Affordable Care Act, declining reimbursements for medicine, and a declining role of diagnostic radiology among the medical specialties, there is an ever increasing need for all parties of medicine to collaborate, or at least communicate and share knowledge and experiences. If you are interested in becoming a member of this newly formed committee, please contact me directly: jporrino@uw.edu.

Getting Started Late with Core Physics Review? Give Your Residents These 5 Essential Strategies

By **Ram Srinivasan, MD, PhD**



If some of your R3 residents have only finally started reviewing physics for the ABR Core Exam, this article is for you.

Procrastination is a perfectly natural human behavior. Some researchers even think procrastination could increase productivity. With exam day fast approaching, I've put together 5 tips to help you guide your R3 residents to make the most of their remaining Core physics study time.

1. Know that your residents are not alone
If your residents have been putting off studying for Core Physics until now, they aren't alone. Many residents start ramping up their Core physics review around mid-January. Positive procrastination is a major factor here. Some residents will front-load their PGY-4 year with clinical work in order to make room for studying in the second half of the year. Other residents are fearful of Core physics. In polling 100+ residents, we found that upwards of 60% experienced moderate to severe symptoms related to Core physics.

2. Tell them to procrastinate a little bit more
If your residents have items on their checklists with pressing deadlines that demand their attention, let them get those items out of the way so that they can focus on studying for the exam. I first learned this survival skill nearly one decade ago from the lead guidance counselor at Harvard Medical School while getting ready to study for the USMLE Step 1.

3. Turn their physics study plan upside down
If your residents are starting now, have them tackle the most intensive topics first – nuclear medicine and MRI – so that they have enough time to understand these more involved topics.

4. Have them be selective with RSNA physics modules
We've also found that while some of the RSNA/AAPM modules are exceptional, others represent works in progress. Guiding their attention to the best RSNA modules will help your residents make the most of their time.

5. Remind them to reach out for help
This might be the most important tip amongst all. Your residents are not alone in this battle, and your R4's have a great handle on efficient study practices.

Parting Thoughts Hopefully, you'll be able to leverage some of these tricks to help your residents de-stress and streamline their study. Meanwhile, I'll be working with you on my new personal resolution – to see the National Core Exam pass rates hit 100%.

Using High Fidelity Simulation to Train Residents in Ultrasound-Guided Breast Biopsies

By **Ryan Woods, MD, MPH**
and Susan Harvey, MD

Ultrasound-guided needle biopsy is a common interventional procedure within breast imaging as well as other radiology subspecialties. The competent performance of image-guided biopsy procedures is an important component of radiology residency training and clinical practice. Simulation experiences can address some of the flaws of the traditional "master-apprentice" model—a time based measure of proficiency, biased trainee evaluation by attending physicians, passive learning, and limited duty hours resulting in decreasing experience with infrequent procedures or events. Simulation also offers improved patient safety as residents can practice on inanimate trainers with no negative consequences of poor performance in addition to providing a defined metric that can be assessed.

Many studies have demonstrated the use of simulation as an educational tool in radiology including simulation of image interpretation, curriculum assessment, and in the performance of ultrasound-guided needle biopsy and endovascular techniques. Mannequin-based simulation has been primarily used for training focused on management of contrast reactions.

In our department, we created a high fidelity breast biopsy simulation experience in the Simulation Center at our institution. To achieve this, we constructed a high fidelity "patient" by attaching commercially-available Breast Biopsy Ultrasound Training Models onto a CPR mannequin in anatomic positioning (see photo). Each breast model (Blue Phantom) includes 14 sonographically visible masses measuring 4-11mm at varying breast depths. The model is made of ultra-durable simulated human tissue that can automatically expel injected liquids (so that skin and deep anesthetic technique can be practiced) and withstand core biopsy with minimal damage.

As part of the simulation, residents are asked to perform a standard ultrasound-guided breast biopsy from start to finish interacting with the patient and obtaining informed consent as they would during a routine outpatient breast biopsy. A senior resident or breast imaging attending, who also acted as an ultrasound technologist, provided limited help with operating the ultrasound machine and supplied the voice of the patient.

After implementation of this experience to our residency training program, we have found that the residents have improved technical and patient-interaction skills, and are more confident in performing the biopsy with less physician direction. We believe that high fidelity simulation experiences can be used across subspecialties in radiology as an adjunct to standard teaching methods.

2016 ACER Achievement Award - Dr. Angelisa Paladin, MD, MPH

This year's winner of the ACER Achievement Award is Angelisa M. Paladin, MD. Dr. Paladin is currently the Radiology Residency Program Director at the University of Washington. She was the sixth President of ACER and helped to bring faculty development programs abroad. Dr. Paladin has been recognized by the AUR Whitley and Stauffer awards, the ARRS Distinguished Educator Award, a departmental Mentor of the Year Award, and the ACGME Courage to Teach Award. The ACER Achievement Award will be presented to Dr. Paladin during the banquet on Friday, April 1, 2016.

Congratulations Dr. Paladin! Further details will be available on the website (http://aur.org/recognition-awards/) after the 2016 Annual Meeting.

ACER on Facebook

The ACER Electronic Communications Committee is happy to announce that ACER has a Facebook page (https://www.facebook.com/ACER1029). The content reflects topics and webpages which we feel are timely and would be interesting to ACER membership. We hope that you will like us on Facebook and post comments to enrich the content of the page.

ACER Electronic Communications Committee Members:

• Jonathan Chung, MD (Chair)	University of Chicago
• Jessica Robbins, MD	University of Wisconsin
• Brett Carter, MD	MD Anderson Cancer Center
• Mark Ferguson, MD	Seattle Children's Hospital
• Elise Hotaling, MD	University of Vermont
• Shawn Parnell, MD	Seattle Children's Hospital
• Matthew Heller, MD	University of Pittsburgh

ACER Sessions at the Upcoming AUR Annual Meeting

Tuesday, 3/29/16

10:30 AM – 12:00 PM Location: Gaslamp A-C

"Faculty Development: Advanced Teaching Techniques Workshop" (#111)

- Games
  Faculty: Timothy P. Kasprzak, MD
- *Enhancing Your PowerPoint Presentation Skills*
  Faculty: Eric J. Stern, MD and Guillermo Elizondo-Riojas, MD, PhD

2:00 PM – 3:30 PM Location: Seaport Ballroom A-B

"Faculty Development: Pathways in Medical Education—Diversify Your Portfolio" (#118)
Moderators: Mahesh M. Thapa, MD and Rhonda Osborne, MD

- *Development Opportunities for Clinical Educators*
  Faculty: Angelisa M. Paladin, MD
- *RAD-AID Global Health Radiology: Education, Research and Public Service in International Outreach*
  Faculty: Daniel J. Mollura, MD
- *How to Educate Younger People*
  Faculty: Maria C. Shiau, MD, MA

4:00 PM – 5:30 PM Location: Seaport Ballroom A-B

"Faculty Development: What Ladders Do I Need to Climb, and How Can I Climb Them?" (#123)
Moderators: Paul P. Cronin, MBBCh and Timothy P. Kasprzak, MD

- *So You Want to be a Section Head?*
  Faculty: Eric J. Stern, MD and Theresa C. McLoud, MD
- *How to Chair a Committee / Take a Meeting*
  Faculty: Timothy P. Kasprzak, MD
- *How to Be a Good Mentor*
  Faculty: Mark E. Mullins, MD, PhD

ACER Sessions at the Upcoming AUR Annual Meeting

Wednesday, 3/30/16

8:30 – 10:00 AM Location: Seaport Ballroom A-B

"AMSER Lucy Squire and APDR/ACR Keynote Lecture: Differences Matter" (#207)
Faculty: Brenda J. Allen, PhD

10:30am – 12:00 PM Location: Seaport Ballroom H

"Generational and Cultural Diversity" (#212)
Moderators: Pina C. Sanelli, MD, MPH and Puneet Bhargava, MD

- *Generational Differences in Education and Clinical Work*
  Faculty: Ana P. Lourenco, MD
- *Cultural and Socioeconomic Sensitivity*
  Faculty: Gautham P. Reddy, MD
- *Diversity in Collaborative Behaviors: Giving, Taking, and Matching*
  Faculty: Puneet Bhargava, MD

2:00 – 3:30 PM Location: Seaport Ballroom H

"Assessment and Evaluation: What It Is and How to Do It" (#221)
Moderator: Sravanthi Reddy, MD

- *Lifting the Fog: Making Sense of Assessment Tools*
  Faculty: Lonie R. Salkowski, MD
- *The Roles of Formative and Summative Assessment*
  Faculty: Caroline W. Carrico, MD
- *Making Evaluations Relevant: Using the Information to Improve Programming and Courses*
  Faculty: David M. Naeger, MD
- *Difficult Conversations: How to Give Effective Feedback to Students, Residents, and Fellows*
  Faculty: Claudia F. Kirsch, MD
- *Peer-to-Peer Evaluation: Giving Feedback to and Receiving Feedback from Your Peers*
  Faculty: Priscilla J. Slanetz, MD, MPH

ACER Sessions at the Upcoming AUR Annual Meeting

4:00 – 5:30 PM Location: Seaport Ballroom A-B

"Brogdon Panel: Importance of Diversity in the Radiology Workplace - From the Practitioner Viewpoint" (#226)

Moderators: Joseph A. Graves, MD; Ann T. Packard, MD

Faculty: John M. Knudsen MD, Lucy Spalluto MD and M. Victoria Marx MD

Thursday, 3/31/16

7:00 AM – 8:15 AM Location: Seaport Ballroom A-B

"Program Oversight and Evaluation" (#303)

Moderators: Priscilla J. Slanetz, MD, MPH and Kedar Jambhekar, MD

- *Self-Study – Large and Small Program Perspectives*:
  Faculty: Jessica B. Robbins, MD and David S. Sarkany, MD
- *Milestones: Practical Examples—Practice Quality Improvement and Health Care Economics or Professionalism Assessment*
  Faculty: Rebecca Leddy, MD and Kristen L. Baugnon, MD
- *Entrustable Professional Activities – Practical Examples*
  Faculty: Lori A. Deitte, MD

8:30-10:00 AM Location: Seaport Ballroom H

"The Art and Science of Item Writing" (#308)

Moderator: Petra J. Lewis, MD

Faculty: Petra J. Lewis and Nancy J. McNulty, MD

4:00-5:30 PM Location: La Jolla

"Educational Scholarship and Support" (#318)

Moderator: Emily M. Webb, MD

- *Networking*
  Faculty: Ruth C. Carlos, MD, MS
- *Identifying Opportunities for Educational Scholarship: Traditional and Nontraditional Venues for Sharing Educational Material*
  Faculty: Kristopher Lewis, MD

ACER Sessions at the Upcoming AUR Annual Meeting

- *Using Technology to Maximize Organization and Productivity*
  Faculty: Puneet Bhargava, MD
- *Peer Support: Writing Groups*
  Faculty: Christopher M. Straus, MD
- *Educational Portfolio and Your Curriculum Vitae : Getting Credit for What You Have Done*
  Faculty: Eve D. Clark, MD

5:30 – 5:45 PM Location: Grand Hall A

ACER Business Meeting

5:45 – 7:00 PM Location: Grand Hall A

AMSER/ACER Reception and Open House

Friday, 4/1/16

10:30am-12:00 PM Location: Torrey Hills

"Interactive Use of Teaching Technology: iTunes U (Hands-on Workshop)" (#411) – Preregistration Required

- Moderator: Nicole Restauri, MD
- Faculty: Kimi L. Kondo, DO and Lina Lander, ScD

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