

Alliance of Clinician-Educators in Radiology

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Newsletter Volume 3, Issue I

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Welcome!

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. If interested in being an officer in ACER or serving on a committee, please contact Jocelyn D. Chertoff, chair of nominating committee: (jocelyn.d.chertoff@hitchcock.org)

Members are also invited to send their contributions to the upcoming ACER newsletters. Contributions may be sent to Editor-in-charge Puneet Bhargava: (bhargp@uw.edu)

ACER's Mission and 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.

Creating RadLinks: An indexing application for Internet resources in radiology

by Puneet Bhargava, MD bhargp@uw.edu

In the last few years there has been an explosion of educational content including radiology resources on the Internet. It is difficult for to organize these resources in a manner that they are not only quickly accessible but also friendly to use on our portable devices. Organizing a collection of radiology websites started as a personal hobby many years ago as a trainee. I organized



these as bookmarks on my computer and kept them synchronized on my various devices using a service called Xmarks. With the rapid adoption of smart phones and portable devices, in particular iPhones and iPads, there was a need for an application that would have selected resources carefully screened for reliable content and ease of use. With the help of my colleagues at the University of Washington, in particular, Ed Weinberger MD and Andrew Munsell, this application was developed and we have free downloadable versions of this application both on the App Store and Google Play.

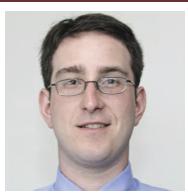
This application is designed in a way that the administrator can alter its contents as websites often change addresses and newer ones are created. We also have an inbuilt search function which is able to parse through the titles of the links but not the content of the websites itself. There is capability to read the content in full-screen mode and share the links as an automated email sent via your own email account. A video illustrating the functions of the application is embedded in the "About" section of the application. As subspecialty radiologists, it is difficult for us to keep adding content in all areas. We welcome contributions in the way of resources that are not included currently or reorganizing currently existing resources such that they are more user-friendly. The website to access this resource is www.radlinksapp.com and the links to download this application are App Store and Google Play.
Comments, suggestions, and contributions are welcome.

Reference: Bhargava P, Robinson TJ, Iyer RS, et al. Sharing an organized collection of radiology educational websites as bookmarks among radiologists. Journal of American College of Radiology 2013 Feb 28 Published online

Novel iPad Teaching Apps

by Seth J. Berkowitz, MD sberkowi@bidmc.harvard.edu

Radiology educators have been enthusiastic about the potential uses of the iPad as a teaching tool. Recently published survey data indicate that 33% of radiology residents own an iPad and 37% own any type of tablet (Korbage & Bedi, 2012). The utility



of the iPad as an educational tool hinges on the unique applications, casually referred to as "apps", which harness the iPad's capabilities to produce compelling learning experiences. At the time of this writing, a search for "Radiology" iPad apps in the Apple App Store produces 171 results. Countless other medical and general-purpose apps may be useful for the radiology educator and trainee. The following list is inherently incomplete and purposefully excludes the broad category of e-books.

The iPad excels as the ideal replacement for printed journals. Most of the major journals have dedicated apps, including *Radiology* and *Radiographics*. However, many use these simply as a portal to download PDFs of the articles of interest. Although the iPad can display PDFs without additional software, there are better PDF readers that allow annotation of articles, organization, and full text searching. Two favorites are iAnnotate (\$9.99) and Goodreader (\$4.99).

The iPad is a terrific e-reader, but journal articles still represent old media. Numerous apps present content in dynamic, scrollable datasets that engage the learner and more closely mimic the experience at a PACS workstation. "Radiology 2.0: One Night in the ED" (free) is a collection of 65 classic body CT teaching cases. Cases are fully scrollable and accompanied by excellent descriptions ideal for the first year resident preparing for call.

"Radiology Assistant for iPad" (\$5.99) is a tablet version of the similarly named website. The content covers many high-yield topics across radiology sub-specialties. The application offers a few scrollable datasets complimenting the content available on the website. Another popular radiology website, "CTisus," has four free applications, "CTisus iQuiz," "CTisus iLecture Series," "CT Contrast

Novel iPad Teaching Apps

Protocols," and "CTisus: CT of the Foot", which offer question based learning, video lecture links, and reference material.

The "AIRP Syllabus 2012" is a companion to the former AFIP course. The content consists of lecture notes with text content and images presented side by side in independent columns. Tools for highlighting, drawing, and searching the content are provided. The app is free, but lectures must be purchased individually or in section blocks. The entire syllabus costs \$199, but is given free to attendees of the course. However, many attendees of the course, this author included, opt to use the PDF version of the syllabus instead. PDFs can be annotated on the iPad and also viewed on a standard computer.

An App Store query for "Anatomy" returns 679 results at press time! These apps span a wide range of polish, price, and target audience. Many of these teach anatomy at the gross level, and are most appropriate for a medical student. Others are more conducive to teaching radiology. "IMAIOS e-Anatomy" (free download, \$69.99 each for Head and Neck, Body, and MSK modules or \$69/year membership) is a comprehensive radiographic anatomy atlas. Cross sectional datasets are scrollable, zoomable, and liberally annotated.

Monster Anatomy Lite – Knee (free) is a well-done app that correlates annotated multiplanar MRI images of the knee with semitransparent volume renderings. Similar presentations of upper and lower limb anatomy come at a premium (\$18.99 each). Stanford University School of Medicine has teamed up with the company 3D4Medical to create a series of visually stunning anatomy applications. Skeletal Head and Neck Pro III (free) focuses only on gross skeletal anatomy and really serves as an advertisement for the company's other offerings which range in price from \$1.99 to \$99.99. Several apps including Visual Anatomy Lite (free) and Gray's Anatomy Student Edition for iPad (free) provide access to the now copyright free classic collection. "Brain MRI Atlas" (free) is an annotated collection of axial brain MRI images with an interface lacking the polish of other apps. "3D Brain" (free) focuses on surface and functional neuro-anatomy.

"Dynamic Approach to Abdominal Radiology" (free) offers a glimpse at the ultimate potential for the iPad in radiology education.

Novel iPad Teaching Apps

This sample application contains only I case of malignant ascites. However, the case is presented as a fully scrollable multiplanar CT exam. What really sets this application apart is that the image annotations are provided in the context of the scrollable image set and hyperlinked from the textual description of the findings. Thus, the learner is freed from the traditional image / annotation model, and taught to think about pathology in multiple imaging planes. A paid version (\$44.99) contains 31 similarly presented cases of abdominal pathology.

The "Radiopaedia" App (free) contains 4 sample cases. Additional case packs containing 15-32 cases can be purchased a-la-carte from \$1.99 to \$4.99. Although cross sectional imaging sets are scrollable, annotations are not hyperlinked to the volumes in the same way as in the app above. The "Case Review Series" (free) by Elsevier has an app with over 200 images. Images have annotations and multiple-choice questions, but there are no scrollable image sets. Additional discipline-specific apps are available for \$19.99 each.

The full list of radiology teaching apps available for the iPad is too extensive to cover in its entirety here. Although some paid resources are excellent, these apps can get expensive quickly, especially for the trainee.

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Mobile Technology in Radiology Resident Education

by Harprit S. Bedi, MD hbedi@tuftsmedicalcenter.org

All of us have experienced evolving technologies during and after our radiology training. For most of us, giant leaps in technology occurred with advancements in MRI, CT, and PET-CT. PACS came into the scene as another major technological advancement, which allowed us to



tackle the new workflow required by the hundreds of images for each study. Although we have seen the benefits of technology in patient care and clinical workflow, we have not experienced the same rate of progression and incorporation of technology into teaching and academic environment. Advances in mobile technology and social media platforms have the potential to revolutionize teaching in the same way as advanced imaging and PACS did in the clinical practice. These techniques have already been utilized and proven beneficial in other educational environments such as elementary grades to high school, universities, and graduate and medical schools. Yet education of radiology residents has been slow in taking advantage of these technological advancements.

Tablet devices, such as the iPad in particular, possess many strengths that are applicable to radiology training. The compact and mobile, can be readily carried to the workstation. The ability to read electronic textbooks and journals on a more convenient medium allows the trainees to study a larger volume of material more frequently. This reference material would also be more readily available for review at the workstation during read-out sessions. Trainees can also take advantage of portability of the device and read on a train or even while waiting in line at the grocery store. There are now a multitude of applications ("apps") and web-based resources available for radiologists. The mobility of a tablet allows a trainee to explore these resources away from a desk-top computer. Another strength of most tablet devices is their superb image quality. The image resolution for viewing CT and MR imaging is within the same resolution parameters of diagnostic PACS screens. Although for now only few people attempt dictating studies from tablet devices, viewing images on these devices during call is becoming

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increasingly common.

But we as educators must go beyond the more obvious benefits of compactness, mobility, and resolution. We need to explore how the device can improve the ways we teach our trainees. Throughout our careers we have read numerous books, heard countless lectures, and dictated thousands of cases. In other words, we have been collecting and organizing content. This content is unique to our own interests, initiatives, and experiences. Traditionally this content would be delivered to our trainees in the setting of formal or at least semi-formal lectures with the hopes that they would retain the majority of the presented material. Gunderman et al. in a recent article described this method of learning as "teacher-centered". They suggest that this method allows only for a shallow level of learning, and provides no real indication on how well the learner actually understands the material, or can effectively use it in the clinical setting. If the trainees can reiterate the three main points of our lecture, we feel they've learned the content, and more importantly, we have been able to successfully deliver the content. In reality, formal didactic lectures tend to be less effective in delivering content, and provide no real indication of the learner's degree of understanding.

"Learner-centered" teaching challenges the degree of understanding of content by urging the learner to achieve a higher level of comprehension, analysis, and synthesis of the material. Learner-centered techniques foster discussions among learners as well as the learner and the educator. It is a better indicator of the learner's degree of understanding and effective utilization of the material.

Mobile devices promote learner-centered education through several useful tools, which allow trainees to more actively explore a deeper level of understanding of the educational material. Airsketch and similar apps permit trainees or the teacher to interact with images during a lecture. These apps allow trainees to "draw" on an image on their mobile device. Their annotations can then be projected on the lecture screen as well as everyone else's tablets. A case-based exercise can also be facilitated by mobile devices. A large group of trainees can easily be divided into smaller groups and

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assigned a case. They can review pertinent information on their mobile devices and share their results with the rest of the group through a wireless environment. Audience-response system is another useful tool that can be utilized by a group of trainees during a lecture. There are currently numerous available apps for audience-response such as eClicker, and Polleverywhere.

The possibilities are endless. We must embrace these advances in mobile technology and learn to apply them to improve trainee education. This can be accomplished by modifying our traditional teacher-centered curriculum to a more learner-centered model.

A decade from now, we may view our current teaching techniques similar to viewboxes in the age of PACS!

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Creating the new ACER website

by Mahesh Thapa, MD thapamd@uw.edu

As co-chair of the Electronics Communications committee, I was asked to revamp the ACER website. We wanted to ensure the site reflected the goals of our organization, providing useful information for our members and a valuable resource for clinician educa-

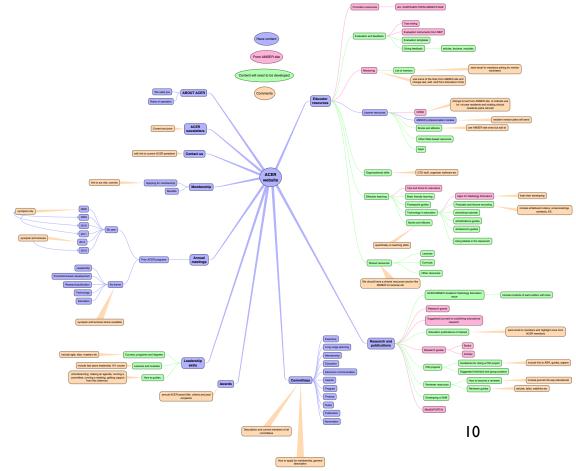


tors and for our trainees. It is a work in progress, and I've received tremendous help from our current president, Petra Lewis. Petra and I started by creating a Mind-Map (see figure) of what we felt needed to be included in the new website. We received valuable input from members of the Executive Committee along with other leaders in education. Helping create the website for our sister organization, Alliance for Medical Student Educators in Radiology (AMSER) provided me with a foundation for organizing the ACER site. In fact, much of content we gathered for AMSER was useful for ACER.

The next step was to ask for help from our Electronics

Communication Committee members to assemble content. Many volunteered and contributed greatly. However, much still needs to be done. The general outline and pages of the website have been generated, and we have content for approximately half of the site.

I would like to appeal to our members at large to examine the website and offer suggestions for improvement, provide content, and comment on its usefulness. Here is a temporary link to the site: Radeducator.com/ACER



Teaching Goes 24/7: Creating a New Fellowship in Emergency Radiology

by Lily Belfi MD and Keith Hentel MD lib9050@med.cornell.edu

Advances in imaging, combined with increasing numbers of patients presenting to Emergency Departments has resulted in the need for uninterrupted real-time service provided by radiologists. Institutions have responded to this call in various ways including dedicated emergency radiology sections, rotating call, and teleradiology services. The ability for radiology practices to provide rapid and high quality imaging services for emergency patients



around the clock is becoming standard of care. As educators, it is important that we provide radiology trainees with the education and skills needed to meet this growing demand.

Training in Emergency Radiology presents challenges and opportunities that differ from other subspecialties in several ways. Education must occur in real time, often outside of the "normal" working day, as emergency patients present. Often, there is not time to pause for traditional teaching. Imaging acquisition and interpretation, in the trauma patient, for example, requires immediate and accurate interpretation as well as rapid and effective communication with other members of the medical team. A radiologist covering an emergency department is required to triage and protocol cases rapidly and manage workflow-related issues all the while interpreting a wide range of imaging studies on patients of all ages.

Emergency radiology experiences provide an opportunity to teach these interpretive, as well as the equally important non-interpretive skills to radiology residents. As part of our effort to meet these educational goals, the Department of Radiology at Weill Cornell Medical College/ NewYork Presbyterian Hospital has developed and is now offering a fellowship in Emergency Radiology. This one-year fellowship emphasizes the core curriculum of the American Society of Emergency Radiology. It includes real-time

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training by attendings on all aspects of emergency radiology through participation in all shifts of Emergency Department coverage. To foster further expertise, ED radiology shifts will be supplemented with scheduled rotations through selected subspecialties in radiology (i.e., neuroradiology, musculoskeletal, abdominal imaging, etc.) Elective time will also be provided for fellows to focus on specific areas of interest.

As emergency radiologists, we are dedicated to providing timely, high-quality imaging services for our patients. As clinician educators in Emergency Radiology, we are dedicated to providing real-time, comprehensive training of residents and fellows. Creating a dedicated Emergency Radiology fellowship has compelled our emergency radiologists to examine and define the important elements of such an education. Certainly, other programs will develop their own solutions to take advantage of the educational opportunity that emergency radiology provides.

However, one thing is clear, education is now a 24/7 endeavor.

Peer Observation - A Tool to Enhance Teaching Skills

by Priscilla J. Slanetz MD, MPH; Justin Kung MD; Ron L. Eisenberg MD pslanetz@bidmc.harvard.edu

Whether in private or academic practice, all radiologists are teachers. Yet few radiologists receive any formal training on educational theory or teaching skills. Despite the need to develop radiologists with strong teaching skills, a recent survey of radiology residency



programs indicated that less than one-third of programs offer dedicated programs to enhance the teaching skills of residents. In reality, residency programs focus most of their energy on residents as the learner rather than the teacher, even though most residents consider teaching to be an important component of their training. Hence, few residents feel adequately prepared to teach. Although most residency programs are building more robust resident-asteacher programs, the most common approach is to create a didactic program based on educational theory and adult learning principles.

A newer approach to improving teaching skills focuses on peer observation. Peer observation allows a teacher to obtain constructive feedback on his teaching from a colleague in a safe, non-judgmental way. During the debriefing session, the teacher gains insight and new perspectives on his teaching, whereas the observer has the opportunity to reflect on his own teaching beliefs. Such a program has been shown to improve teaching skills of both the teacher and the observer.

Implementing a peer observation teaching program can be challenging, as the culture must be able to cultivate a level of openness that traditionally does not exist. Newman et al. published their peer observation handbook on MedEdPortal which can serve as a resource to ensure effective observation and exchange of ideas. In brief, there are four key components to a successful peer observation program. First, peer observers need to be appropriately trained to identify and measure teaching behaviors in a standardized way, and to provide feedback constructively. Second, the teacher and observer must meet prior to the teaching session

Peer Observation - A Tool to Enhance Teaching Skills

to identify specific goals and objectives for the observation. Third, using a validated observation form with well-defined criteria, the observer should provide non-judgmental feedback and be less influenced by his own teaching beliefs. Finally, ongoing peer observation must be supported in order to promote the continued exchange of ideas and the opportunity to reflect on each others' teaching.

Thanks to a recent RSNA grant, we are currently developing a peer observation teaching program in the diagnostic radiology residency at Beth Israel Deaconess Medical Center, Boston, MA. Formal assessment of our program is ongoing. However, based on other peer observation programs at institutions across the country, we expect that by embracing peer observation, the quality of teaching by our residents and staff radiologists is sure to improve and that their teaching will become more satisfying.

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Reflective Practice as a Tool to Teach Professionalism

by Priscilla J. Slanetz MD, MPH; Justin Kung MD; Ron L. Eisenberg MD pslanetz@bidmc.harvard.edu

As one of the core ACGME competencies, professionalism remains one of the most challenging components to teach and evaluate during radiology residency training. Unlike many medical subspecialties, radiology poses specific challenges to assessing professional



capacities of residents, as trainees rotate through multiple services working with multiple attending physicians for relatively short periods of time and often have little patient and/or referring physician contact. Yet, fostering professional and humanistic behaviors is critical, since unprofessional behavior during medical school and residency training has been linked to disciplinary action by medical boards.

Professionalism can be defined as "a commitment to carrying out professional responsibilities, adherence to ethical principles and sensitivity to a diverse patient population" (ACGME 2004). Professional physicians need to embrace patient-centered care, paying particular attention to the following components: competency, commitment to continuous learning, honesty, empathy, respect and responsibility. Based on these principles, most residency programs foster professional behavior by employing a multi-faceted approach. Most often, role-modeling and targeted didactic and case -based sessions aim to cultivate residents with ethically appropriate behavior. Assessment of the effectiveness of these interventions is limited, but most residency programs have begun to incorporate multisource feedback from peers, attending physicians, nurses, and patients as a means to measure the level professionalism among its residents. Use of these $360\square$ evaluations is time-consuming and labor intensive, and given that radiology residents often have only brief encounters with multiple staff members, such evaluations may not be entirely reliable. However, this type of evaluative process has been linked to improved communication skills and more professional behaviors.

A promising approach to teach professional attributes is

Reflective Practice as a Tool to Teach Professionalism

reflective practice, a process whereby an individual thinks critically about a thought, experience or action, with the ultimate outcome being increased self-awareness and professional competence. Several training programs have successfully implemented narrative writing as a means to reflect on clinical interactions and learning. By reflecting on specific clinical encounters, residents became more self-aware of their own values, priorities and learning needs. A recent study in which case-based reflection was incorporated into a family medicine residency showed that residents who participated in self reflection demonstrated greater clinical knowledge, deeper understanding of the patient-doctor relationship, and enhanced personal professional growth.

Thanks to a professionalism and ethics grant from the Association of University Radiologists, we recently developed and implemented a series of reflective case-based sessions to teach professional and ethical behaviors. Residents were provided the opportunity to reflect and openly discuss radiology-specific scenarios related to a wide array of professional dilemmas. Topics to date have included patient-centered radiology, unprofessional behavior within and outside of the department, impaired/ incompetent colleague, informed consent, mentor-mentee relationships, managing the poor outcome, accountability, and digital professionalism. The sessions occur approximately every two months as part of the formal didactic curriculum, with discussion of cases over breakfast. Initially, residents were somewhat reluctant to participate, but now participation is high. Residents even offer topics for discussion based on their experiences during training. A detailed assessment of the digital professionalism session can be found in the November 2012 issue of Academic Radiology. We also will be offering an interactive workshop at the annual meeting for those interested in learning more about the curriculum.

In summary, this reflective approach provides comprehensive strategies to navigate the multitude of ethical and professional challenges that residents, and even attending radiologists, may encounter during clinical practice. It provides an engaging way to "teach" professionalism and hopefully will lead to more empathetic and satisfied radiologists.

Reflective Practice as a Tool to Teach Professionalism

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Radiology Educator Career Development (Part I)

by Mark E. Mullins MD, MPH memulli@emory.edu

It was a pleasure to be asked to produce some contributions to the ACER Newsletter based on talks that I give on career development for residents and faculty members. In this initial offering, I will focus on a bit of strategic planning and overall structure.

It is commonplace and traditional to organize things in terms of classical tripartite medical missions: clinical practice, teaching, and research – the



"triple threat". In the past few years I have become fond of adding another category: administration. It is my opinion that individuals can no longer be, in and of themselves, this "triple threat" or "quadruple threat"...at least not for very long; it would appear that I am not alone in this sentiment and several publications in the literature have explored this. That being said, I expect programs, divisions, departments, etc., to strive towards this ideal - and many achieve it.

One of my primary motivations in discussing this is to help people to not feel like a failure when they do not achieve "triple threat" status, especially when they, like I, were trained to do so. My take on this is that individuals should be outstanding in 2 of the 3 (or 4) categories above. When you are a medical doctor, I think that one of these categories needs to be clinical practice. That leaves some choice regarding the 2nd focus. Obviously, as members of ACER, we'll focus on teaching here. However, of course, you cannot be "bad" at the subject(s) not chosen. For example, in the case of research, one should still know how to construct and critique research protocols, support colleagues that focus on research and are able to employ journal club-type skills in assessing the Literature.

In this context, what is outstanding? When I stratify this, I like to organize it into 2 questions: what constitutes success to your system (boss)? & what constitutes success to you? A relatively

Radiology Educator Career Development (Part I)

simple yet useful construct is what I refer to as "objective success criteria." For example, published peer-reviewed manuscripts, book chapters, extra-mural funding, etc. These are frequently found in discrete, quantifiable aliquots and this can be very enticing—to measure one's productivity in terms of metrics.

Hopefully you will agree with me that this is not usually the whole story. I espouse balance (or at least trying to achieve balance) and part of this is, I believe, trying to achieve synchrony between expectations and my ability to deliver. In no small way does this depend on the value structure(s), not only of my boss & the system but also of me. I encourage our graduating residents and fellows to try and choose a job in a place that has a value system akin to their own; personally, I hope this gives them their best chance for long-term success. What does your boss/system value? RVUs & RO Is (only)? What about teaching medical students? How about book chapters? How about advising/ mentoring residents?

See what I mean?

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How RadioGraphics chooses educational material for publication

by Jeffrey S. Klein MD Editor, RadioGraphics, RSNA

RadioGraphics, the RSNA's journal of continuing medical education in radiology, publishes educational material in all subspecialties of radiology and in radiation oncology and medical physics. This piece describes the processes we use to identify the high-quality educational material for which our journal has been known for since first published in 1981.



The journal's annual editorial process begins in January with the RSNA's call for online submission of educational exhibit and quality storyboard abstracts. Following the submission deadline in late March or early April, these abstracts are reviewed by members of the RSNA's Education Exhibits Committee, which notifies authors of acceptances in late spring. In 2012, approximately 2100 of 5300 education exhibit abstracts were selected for digital, poster, or computer-based presentation at the RSNA annual meeting. The journal's 19 subspecialty panels, each chaired by a member of the journal's editorial board, receive the list of abstracts to be presented as exhibits and, based on the topic of the exhibit, assign them to over 370 panelists. Each exhibit is reviewed by at least 2 panelists, with exhibits covering overlapping topics reviewed by multiple panels. Panelists then score all exhibits for content using an electronic exhibit review program and meet in committee at the annual meeting to select approximately 10% of the exhibits for which the authors will be invited to submit a manuscript to the journal early the following year. Those exhibits that contain a large number of images or video content or are computer-based or interactive are invited as online-only submissions. New in 2012 was the solicitation of Powerpoint[™]-based education exhibits that are appropriate for radiology residents and fellows in training and will be published in the online journal beginning in 2013. In addition to identifying material for our bimonthly issues, the guest editor of our seventh annual monograph issue

How RadioGraphics chooses educational material for publication

focusing on a particular topic or subspecialty solicits education exhibit material for consideration in the monograph.

Although approximately 90% of the material published in RadioGraphics derives from annual meeting exhibits, the journal does consider unsolicited manuscripts on topics deemed of interest to the readership. These submissions are initially evaluated by the editor and the editorial board member for the appropriate subspecialty and a determination is made if the paper merits undergoing peer-review as do manuscripts solicited from the annual meeting exhibits. While the acceptance rate for unsolicited manuscripts is lower than that for solicited material, high quality content that complements solicited exhibits does constitute a small but important component of published RadioGraphics material.

Members of the Alliance of Clinician-Educators in Radiology have as one of their primary focuses the education of members-intraining and practicing radiologists. Continuing medical education publications such as *RadioGraphics* provide an important vehicle for the scholarly output of radiologists, radiation oncologists, and medical physicists whose professional focus is radiology education.

A Resident's Perspective on MedEdPORTAL

by Sumir S. Patel MD, William T. Randazzo MD

For many clinician-educators, the dissemination of teaching and mentoring techniques and strategies can occasionally be underemphasized in the quest for meaningful contribution in the realm of medical knowledge. The Association of American Medical Colleges (AAMC) aims to fill this void, and they need our help!

The AAMC's MedEdPORTAL is a

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educators in health care. Not just limited to Radiology,
MedEdPORTAL accepts submissions in the fields of Medicine,
Osteopathy, Dentistry, Public Health, Nursing, and Pharmacy and
encourages multidisciplinary-focused resources for team-based and
collaborative care, ever more relevant in modern medicine. The
types of publications in MedEdPORTAL include core competency
tutorials for residents, application guidelines for medical students,
novel curricular methods, and even clinical learning modules.
Medical students, residents, and fellows can confer their
experiences and insight during training and the application process
to foster an early spark in an academic career.

The submission process to MedEdPORTAL is completely benign, with easily digestible step-by-step instructions for submission and in the end a peer-reviewed publication is furnished. Useful for most Radiology submissions, images, presentations, and web-based formats are easily accommodated. The website is easy to navigate with material sorted by specialty, competency, academic focus, professional interest, organ system, intended audience, and instructional methodology. A great resource for all involved in Radiology training from students to attendings, MedEdPORTAL has only scratched the surface of collaborative education.

Good Citizenship on Committees

by Mariam Moshiri MD, Puneet Bhargava MD

Why join a committee:

- To share your skills, abilities and experience at a national level
- To meet colleagues with similar goals and interest, especially outside your subspecialty
- Committees are excellent networking opportunity!
- Opportunity to find external mentors
- To learn leadership skills
- Membership and involvement is valuable addition to your CV
- To earn national recognition for your work



Member responsibilities:

- Understand the purpose, direction, function, and bylaws of the committee
- Recognize the scope of the responsibilities of the committee shared by all members
- Identify true areas of interest that align with the committee's function and future goals
- Commit to appropriately prepare and attend most, if not all committee meetings and contribute effectively
- Complete the specific task assigned to you on time and add value
- If unable to contribute effectively, ask to be relieved of the commitment and find another avenue that better suits your skills/expertise

Good Citizenship on Committees

What committee members should avoid:

- Over commitment to multiple organizations/committees which can result in difficulty keeping up with the assigned tasks and duties
- Join committees that are not of interest to that particular member which could result in disinterest in the committee's functions

How committees work:

- All members volunteer their time and expertise due to their commitment to a shared goal/objective
- All members get support and encouragement from other committee members to achieve larger goals
- Tasks are fairly and appropriately distributed between the committee members based on their expressed degree of involvement with the committee
- Constantly strive to identify newer members especially those with leadership qualities
- Those members who are unable to contribute effectively are recognized early. These members are first encouraged to closely participate in the committee's activities. Ineffective or disinterested members are replaced by others who are interested

ACER-SMRI Clinician Educator Program



The Alliance for Clinician Education in Radiology (ACER) together with the Sociedad Mexicana de Radiologia e Imagen co-organized a first of its kind, one day, Radiology Educational Symposium in Mexico City, January 29 2013, dedicated to the training of advanced educational skills to academic radiologists.

This innovative symposium was organized by Dr. Eric Stern, a previous invited professor in Mexican Society of Radiology annual course, and founding President of ACER, and by Dr Jose Luis Ramirez -Arias, past President of the Mexican Society of Radiology and Imaging, and coordinator of Radiology Postgraduate Education program in the National Autonomous University of Mexico.

The invited symposium speakers were all members of the ACER leadership, and included Dr. Petra Lewis, ACER President; Dr. Jocelyn Chertoff, ACER Past-President; Dr Jannette Collins, ACER Past President; Dr Angelisa Paladin ACER President-Elect; and Dr. Eric Stern. Participating speakers from Mexico included Dr. Guillermo Elizondo-Riojas, Chairman of Radiology in the University Hospital of Monterrey, Dr. Miguel Stoopen-Rometti, Director of Radiology of CT Scanner de Mexico, and Dr. Jose Luis Ramirez-Arias. The SMRI President, Dr. Carlos Rodriguez-Treviño welcomed all the ACER professors and participants to this historic meeting.

The symposium registrants included over 40 academic radiologists involved in postgraduate radiology education programs around the country. The main themes of this new symposium

ACER-SMRI Clinician Educator Program

focused on promoting the concepts of life-long learning, appreciating adult learning theories, improving presentation skills, and effectively using new educational electronic tools, through both didactic sessions and hands-on workshops. Given the enthusiastic reviews of the program by both the participants and professors, it is very possible that a second course will be organized by both institutions next year.

In recognition of the success of this program, Dr. Eric Stern Gratefully received the SMRI Educational Excellence award at the SMRI annual meeting.





Tuesday, April 9, 2013

7:00 am – 9:00 am ACER Executive Committee Meeting

Location: Olimpic I

10:30 am - 12:00 pm ACER Session

Brave New World of Teaching

Location: Platinum Ballroom Salons A and B

Moderator: Achala S. Vagal, MD

10:30 am - 10:50 am Multidisciplinary Collaboration: Breaking Down the Silos

Faculty: Mahesh M. Thapa, MD

Learning Objectives:

Illustrate the importance of a collaborative approach for

academic advancement.

Discuss few techniques to improve interdepartmental collaboration.

10:50 am – 11:10 am Innovations in Residency Physics Education in a Changing

(and Challenging) Environment Faculty: Ionnis Sechopoulos, PhD

Learning Objectives:

Identify the challenges involved in physics education for diagnostic

radiology residents.

Develop novel methods to incorporate physics education for the

residents

11:10 am – 11:30 am Residents at the Quality Improvement Table: An Invitation for

Collaboration

Faculty: Jeffrey P. Kanne, MD

Learning Objectives:

Develop a quality improvement program that actively includes

residents.

Assemble the necessary tools to assist residents with quality

improvement.

Examine ways to encourage residents to initiate their own quality

improvement projects.

11:30 am – 12:00 pm Panel Discussion/Q&A

2:00 pm - 3:30 pm ACER/APDR Session

Ethical Conundrums in Today's Digital Age

Location: Platinum Ballroom Salon D

Moderator: Eric J. Stern, MD

2:00 pm – 2:20 pm Guidelines for Scholarly Use of Images

Faculty: Petra J. Lewis, MD

Learning Objectives:

Comprehend the laws that define medical image copyright and the

potential risks.

Explain who owns the copyright to medical and other images.





Safely use medical images and images from the internet in scholarly products including papers, lectures and electronic media.

2:20 pm - 2:40 pmEthics of Collaboration

> Faculty: Annemarie Relyea-Chew, JD, MD Felix S. Chew, MD, MBA

Learning Objectives:

Identify key components to successful collaboration.

Apply those components to current and future collaborations.

Resolve ethical issues in collaboration.

2:40 pm - 3:00 pm Ethics in Publication

Faculty: Thomas H. Berquist, MD

Learning Objectives:

Identify sources for guidelines in biomedical publications. Apply guidelines appropriately for current and future scientific

Explain ethical issues to colleagues and co-investigators.

3:00 pm - 3:30 pm Panel Discussion/Q&A

4:00 pm - 5:30 pm **ACER Session**

4:00 pm - 4:30 pm

Defining Your Road to Success: Panel Discussion

Location: Platinum Ballroom Salons A and B

Moderator: Jonathon O. Swanson, MD

Top 5 Things I Learned Being on the Clinician Educator Track Faculty: Teresa Chapman, MD, MA

4:30 pm - 5:00 pm Importance of Mentorship

Faculty: Alexander Norbash, MD Eric J. Stern, MD John Eng, MD

5:00 pm - 5:30 pm Importance of Educational Scholarship

> Faculty: Mark E. Mullins, MD, PhD Jannette Collins, MD, Med, FCCP Mahesh M. Thapa, MD

Learning Objectives:

Identify successful strategies for young faculty to navigate the

seemingly nebulous clinical educator pathway.

Develop an appreciation for the value of a strong mentor/mentee relationship and define a successful approach to becoming and

effective mentor.

Develop an appreciation for the importance of educational scholarship and specify techniques to convert education interest

into academic currency.





Wednesday, April 10, 2013

8:30 am – 10:00 am AMSER/APDR/ACER/APCR/RAHSR Session

AMSER Lucy Squire and APDR/ACR Keynote Lecture

Location: Platinum Ballroom Salon D Moderator: Carl R. Fuhrman, MD Introduction: Robert A. Novelline, MD

Keynote: Sustaining Educational Innovation through Collabo-

rative Academic Entrepreneurship

Faculty: Leslie H. Fall, MD

Learning Objectives:

Develop an understanding of core concepts of innovation and

entrepreneurship.

Describe an effective model for collaborative development of an

education innovation.

Discuss critical elements needed to sustain education innovations

over time.

Synthesize information presented and consider applicability for AUR-

generated ideas and innovations.

10:30 am – 12:00 pm RAHSR/ACER Session

Reporting Guidelines and Appraising the Literature

Location: Platinum Ballrooms Salons H and I

Moderators: Angelisa M. Paladin, MD

Paul P. Cronin, MBBCh

10:30 am - 10:40 am Reporting Guidelines and Appraising Medical Educational Studies

Faculty: Aine M. Kelly, MD, MS

10:40 am – 10:50 am Reporting Guidelines and Appraising Diagnostic Testing Studies

Faculty: Pina C. Sanelli, MD, MPH

10:50 am - 11:00 am Reporting Guidelines and Appraising Screening Studies

Faculty: Janie M. Lee, MD, MS

11:00 am - 11:10 am Reporting Guidelines and Appraising Therapeutic Studies

Faculty: Marta E. Heilbrun, MD

11:10 am — 11:20 am Reporting Guidelines and Appraising Systematic Reviews and

Meta-Analyses

Faculty: Paul P. Cronin, MBBCh

11:20 am - 11:30 am Reporting Guidelines and Appraising Cost-effectiveness Studies

Faculty: Brendan J. McCullough, MD, PhD

11:30 am - 11:40 am Reporting Guidelines and Appraising Guidelines

Faculty: James V. Rawson, MD



11:40 am - 12:00 pm

Panel Discussion

Faculty: Aine M. Kelly, MD, MS
Pina C. Sanelli, MD, MPH
Janie M. Lee, MD, MS
Marta E. Heilbrun, MD
Paul P. Cronin, MBBCh
Brendan J. McCullough, MD, PhD
James V. Rawson, MD

Learning Objectives:

Identify the different types of medical educational studies in the literature.

Evaluate and compare measures of cost effectiveness and apply them to topics in radiology.

Analyze published medical education, diagnostic testing, screening and therapeutic studies, systematic reviews and meta-analyses, cost-effectiveness studies and guidelines for their strength, limitations and validity and appropriateness to your patient population.

Provide a review of the appraisal criteria and be able to critique published medical education, diagnostic testing, screening and

published medical education, diagnostic testing, screening and therapeutic studies, systematic reviews and meta-analyses, cost-effectiveness studies and guidelines and make suggestions to improve them.

2:00 pm - 3:30 pm

Innovative and Collaborative Approaches in Resident and Medical

Student Education

Location: Platinum Ballroom Salons A and B Moderator: Mark E. Mullins, MD, PhD

2:00 pm - 2:20 pm

Innovative Approaches to Resident and Medical Student Teaching including Applications of AMSER Resources

Faculty: Andrea Donovan, MD

Learning Objectives:

Apply principles of adult learning in daily radiology teaching. Engage learners in small and large group learning environment. Incorporate available resources into teaching and assessment.

2:20 pm - 2:40 pm

Innovative Uses of Technology in Teaching

Faculty: Michael L. Richardson, MD

Learning Objectives:

Comprehend the basic principles of "flip" teaching of radiology, wherein traditional active and inactive learning activities are reversed. Identify 3 effective strategies (plus pros and cons) for using audience response systems.

Comprehend the advantages of eBooks over other formats for disseminating teaching materials.

Apply 3 rare and awesome skills that every clinician-educator of the

future should know.



2:40 pm – 2:55 pm Application of Case-based Online Radiology Education (CORE) in

Medical Student (and Resident) Education

Faculty: Erin O'Connor, MD

Learning Objectives:

 $\label{lem:corrected} \textbf{Recognize how CORE fosters self-directed study, independent learning}$

and clinical problem solving skills.

Describe the interactive nature of CORE and how it can help students

achieve the AMSER learning objectives.

Navigate through the Med-U website and CORE cases.

Examine the Instructors Area for CORE and assess how this resource

can be used.

Analyze how CORE can be integrated into the curriculum at one's own institution in both radiology clerkships/electives, as well as required clinical clerkships such as OB/GYN, surgery, pediatrics,

medicine.

2:55 pm - 3:10 pm Integrating Rad/Path Correlation into Radiology Education for Medical

Students and Residents

Faculty: Matthew S. Hartman, MD

Learning Objectives:

Recognize the limitations that medical students have with respect to

taking radiology and pathology electives.

Identify advantages of incorporating aspects of both radiology and

pathology into the curriculum in a singular course.

Incorporate different strategies for organizing a radiology pathology

elective.

3:10 pm – 3:30 pm Q&A

4:00 pm – 5:00 pm ACER Long Range Planning Committee Meeting

Location: Olimpic 2

4:00 pm – 5:30 pm A³CR²/APDR/SCARD/ACER/AMSER Session

Brogdon Panel: Innovations in Radiology Resident Education

Location: Platinum Ballroom Salon D Moderators: Prasad R. Shankar, MD Faculty: Theresa C. McLoud, MD Richard B. Gunderman, MD. PhD

Colin Strickland, MD

Learning Objectives:

Identify recent innovations in resident education.

Describe teaching methods that address current residency issues.

Explain the use of new technology in education.

Thursday, April 11, 2013

7:00 am – 8:15 am ACER/APDR

So You Decided to Join the Digital Age: Now What?

Location: Platinum Ballroom Salon D

7:00 am – 7:30 am ePublish or Perish

Faculty: Michael L. Richardson, MD



Learning Objectives:Comprehend the pros and cons of self-publication

vs. conventional publication.

Be aware of the advantages of eBooks over other formats for

disseminating teaching materials.

Learn the pros and cons of the leading eBook formats.

Find free software for creating their own electronic books (eBooks).

7:30 am – 8:00 am Web Site Creation for Dummies

Faculty: Mahesh M. Thapa, MD

Learning Objectives:

Explain the basic steps to build a web site using the program

RapidWeaver.

Describe how to use WordPress to create a web site.

List some benefits and drawbacks of using RapidWeaver and Word

Press to create a website.

8:30 am - 10:00 am AMSER/ACER Session

Lecturing for Learning: Innovative Strategies for Improving Your

Lectures

Location: Platinum Ballroom Salons A and B

Moderator: Matthew T. Heller, MD Katherine A. Klein, MD

8:30 am - 8:50 am The Psychology of Effective Lecturing

Faculty: Richard B. Gunderman, MD, PhD

Learning Objectives:

Describe the role of understanding the audience in effective lecturing. Outline approaches for increasing the effectiveness of lectures.

Develop strategies for better tailoring lectures to the needs of

learners.

8:50 am – 9:10 am How Medical Student and Radiology Student Lectures Differ

(or How They Should Differ!) Faculty: Emily M. Webb, MD

Learning Objectives:

List teaching goals that differ between medical student education and

resident education in radiology.

Compare and contrast radiology lecture content as more appropriate

for medical students versus residents.

Describe interactive teaching formats that may be more beneficial than

traditional lecturing in some instances.

9:10 am – 9:30 am Innovative Strategies to make Your Lectures Interesting and the Use of

Feedback and Audience Interaction to Improve Your Lectures

Faculty: Maria C. Shiau, MD

Learning Objectives:

Use intermittent questions to engage audience.

Create an interactive ARS slide from scratch as well as from a

preexisting PowerPoint presentation.

Use an unknown case to open lecture and revisit at the end to test

comprehension of material covered.

Organize a lecture based on clinical questions/applications.

Use games such as jeopardy.



9:30 am – 9:45 am Lectures: Avoiding Common Mistakes

Faculty: Vikas Agarwal, MD

Learning Objectives:

List the most common mistakes in lectures for trainees. Improve lecture organization by selecting appropriate lecture

objectives

Identify simple techniques to increase lecture effectiveness.

9:45 am – 10:00 am Q&A

4:00 pm – 5:30 pm AMSER/ACER Session

Digital Educational Tools (Electronic Exhibits) Location: Diamond Ballroom Salons 9 & 10

Moderator: Sravanthi Reddy, MD

4:00 pm - 4:10 pm Welcome and Overview

4:10 pm - 5:30 pm Demonstrations Learning Objective:

Review and apply electronic exhibits selected from submitted

abstracts.

5:30 pm – 5:45 pm ACER Business Meeting

Location: Olympic 3

5:45 pm – 7:00 pm AMSER/ACER Reception

Location: Olympic 3

Mix and socialize with other radiology educators, learn about benefits of AMSER and ACER membership; sign up for committee membership and

other active participation in ongoing AMSER and ACER projects

Friday, April 12, 2013

7:00 am – 8:00 am ACER Program Planning Committee Meeting

Location: Plaza 3

10:30 am – 12:00 pm AMSER/ACER Advanced PowerPoint PC Workshop

(Pre-registration required)

Innovative PC Applications for PowerPoint Presentations: Advanced

Applications

Location: Olympic 3

Moderator: Carl R. Fuhrman, MD Facilitator: Petra J. Lewis, MBBS Faculty: Stefan Tigges, MD

Registrants will need to bring their PC laptops for this "hands on" interactive session. This workshop requires an understanding of basic PowerPoint (and it is not for those with little or no experience using PowerPoint). Required templates will be emailed to registrants prior to the meeting so that they will be available on your PC laptops for

the workshop.



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