Bulletin... SPRING 2008

The Pennsylvania Radiological Society

A Chapter of the American College of Radiology

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Remember, the ***Bulletin*** is available on the Internet at the following home page: http://www.paradsoc.org/

PRESIDENT'S MESSAGE

Richard N. Taxin, MD, FACR
Upland, PA

I've recently been thinking about the following quote from Ian McEwan's novel, *Saturday*, "On a recent Sunday evening Theo came up with an aphorism: The bigger you think, the crappier it looks. Asked to explain he said 'When we go on about the big things, the political situation, global warming, world poverty, it all really looks terrible, with nothing getting better, nothing to look forward to. But when I think small, closer in … then it looks great. So this is going to be my motto – think small.'"

"There are fears of the increased commoditization of medical imaging. But there is one thing we certainly can do about it – start paying better attention to 'customer care.'"

When we in medicine in general and radiology in particular look at the "big things" – the political situation, the increasing power of insurance companies, pharmaceutical companies, and hospitals at the expense of physicians, the radiologist shortage, the increased role for RBMs, the failure of tort reform in Pennsylvania, etc., one can easily become discouraged. However, when we "think small" and look at the exciting things many of us are doing in our individual practices, be it diagnostic imaging or radiation oncology, or be it private practice or academics, "things" look much better. The problem is one of a sense of control, or rather a lack of control. However, there is much that we radiologists have in our control that we as individuals (including me) can do much better – and improve the situation for radiologists as individuals and for radiology in general.

Diagnostic radiology has always been a high-tech/ low-touch specialty, but with the advent of the explosion of digital imaging, PACS, voice recognition, etc., our specialty has both for the good and the bad become an even higher tech and lower touch profession. There are fears of the increased commoditization of medical imaging. But there is one thing we certainly can do about it – start paying better attention to "customer care." Sometimes we may be uncertain as to who our "customers" are. In fact, we have many different types of customers – the patients, the referring physicians, the administrators, the members of the board of directors, our partners. We have different customers at different times and must strive to serve all of them equally well.

As president of the PRS all of you (at least for this year) are my customers, and in trying to serve you I've been working on the fall meeting to be held on Saturday, November 15th at the Ritz Carlton in Philadelphia. This meeting will be held in conjunction with the Philadelphia Roentgen Ray Society, whose president, Rick Feld, has been helping Bob Pyatt and me in the planning of this event. As Bob Pyatt will be discussing elsewhere in this issue we have a dynamite group of nationally recognized speakers for the sessions, morning, afternoon and evening. These speakers will be talking about the "big things" and the "small" facing radiologists and radiology today. We believe that the talks will be stimulating, informative, and well worth your Saturday. I look forward to joining you then.

EDITOR'S COLUMN

Thomas S. Chang, MD, FACR
Pittsburgh, PA

First, I'd like to print a letter from Dr. Robert Aria, concerning his Resident's Section article published in the last issue of the *Bulletin*.

> March 9, 2008
>
> Dear Dr. Chang and other members of the Pennsylvania Radiological Society,
>
> I would like to take this opportunity to apologize to all of you in regards to a printing in the most recent publication of the PRS *Bulletin*. The article that is printed under my name was not the article that I intended to be published under my name and is in fact portions of the source article I was using to write my article. Through my misunderstanding and mistake in how the printing process works, this error was committed, to which I take full responsibility. I sincerely and with the utmost humility apologize again to you all.
>
> Sincerely,
> Robert Aria MD, MBA

Imitation: Flattery or Thievery?

This got me thinking: how much borrowing of words or ideas is acceptable? Where should we draw the line between reasonable reliance on other sources, which happens all the time, and theft from those sources? My wife, a college professor, says she occasionally sees blatant plagiarism. The more common problem is the liberal use of someone else's phrases and sentences mixed in with their own words. This is harder to detect, but still plagiarism nonetheless. In this age of computers and the Internet, cutting and pasting is so simple, even a child could do it. In fact, we've already had to give the plagiarism talk to our daughters when they ended up cutting and pasting a little too much from their Internet sources (I wonder how many other parents give their kids "the plagiarism talk"). The girls wanted to know if it's okay to borrow a few words here or there, just because they happen to be the perfect words. I suppose that's acceptable, as long they're words they might have used anyway.

I recall the case of George Harrison's song, "My Sweet Lord," which was found by the courts to be subconsciously copied from the song, "He's So Fine," recorded by the Chiffons. In doing some reading for this article, I learned they actually have a term for this phenomenon of coming up with something creative, thinking that it's one's own, when in actuality it's the subconscious recalling of something that one has read, heard, or seen in the past. It's called "cryptomnesia." No one has proven that such a condition even exists, but I find its existence entirely plausible. I'm sure it happens all the time.

The title for this article, "Imitation: Flattery or Thievery?", comes from an evolt.org Internet article by Erika Meyer, a former college English professor-turned-web designer. She agrees that blatant plagiarism should be identified and punished, but feels that it's hard to know where to draw the line between reasonable borrowing and outright stealing. Sometimes two works are similar because of coincidence, not imitation. She wonders, "How many writers have worked on an article or song only to find that someone else 'wrote it first?' It has happened to me more than once." She finds that web designers frequently use color combinations, design elements, and wording from other web sites that catch their eyes. If certain designs or colors are successful at drawing a web surfer's attention, why shouldn't other sites use a proven strategy?

Just the other day, I happened to hum the menacing theme music from "Jaws" to my kids. When my wife heard it, she commented, "You know, that sounds a lot like the 'New World Symphony.'" I thought about it for a moment and decided she was right (aren't our wives always right?). Did John Williams come up with the beginning of the "Jaws" theme from a subconscious recalling of the final movement of Dvorak's tribute to America? We'll never know. It's unlikely that he hadn't heard Dvorak's famous music. I was curious to see if other people noticed the similarity and did an Internet search. I can't say I "Googled" it, since I used Yahoo. Anyway, on Wikipedia (everyone's favorite modern-day encyclopedia, despite all the warnings about potential inaccuracies and biases), the discussion group for Dvorak's Ninth Symphony includes an entire section devoted to the similarity between the two pieces. I concluded that you can find just about anything on the Web.

"In this age of computers and the Internet, cutting and pasting is so simple, even a child could do it. In fact, we've already had to give the plagiarism talk to our daughters."

I also remember the lawsuit slapped on Dan Brown by the authors of *The Holy Blood and the Holy Grail*, alleging that Brown stole ideas and plotlines for *The DaVinci Code* from their book. Although the courts ruled in Brown's favor, I also believe that he did borrow significant ideas and plotlines from other sources and then added his own embellishments and narratives to make the novel his own. The interesting part of the lawsuit was that the losing plaintiffs also won in the end, because publicity surrounding the case boosted sales of their book.

As I was reading the March 7 issue of *The Week*, my favorite news magazine, I came across an editorial by Eric Effron that was perfect for the topic at hand. So perfect that I had to include it verbatim. He wrote:

"'A house divided against itself cannot stand.' Stirring words from Abraham Lincoln in 1858 – and also from the New Testament: 'If a house be divided against itself, that house

cannot stand' (Mark 3:25)… And when John Kennedy urged Americans in 1961 to 'ask not what your country can do for you, but what you can do for your country,' he may have been channeling Oliver Wendell Holmes, who in an 1884 Memorial Day address said it was time to recall 'what our country had done for us, and to ask what we can do for our country.' All this brings to mind a line attributed to Albert Einstein (though who knows where he got it): 'The secret to creativity,' Einstein said, 'is knowing how to hide your sources.' In the age of YouTube and Google, unfortunately, that's easier said than done."

They say that imitation is the sincerest form of flattery, but I'm not sure what degree of imitation is flattery versus thievery. I would venture to say that almost all creative works, ranging from radiology journal articles to books to speeches to art, contain elements that are borrowed or inspired by other works, whether the borrowing be conscious or subconscious. Creativity demands that we take these borrowed elements and incorporate them into a work that is uniquely our own. We need to keep in mind that the rules against plagiarism are more stringent for the written word over the spoken word and for scholarly works over casual missives.

Advice for Authors

My advice to all authors is this: Always err on the side of caution. Start your first draft with your own words. Do not cut and paste phrases and sentences from other sources. Be aware that even paraphrasing is a form of plagiarism. If you must borrow others' ideas, always cite the source. And if you use their words, enclose them in quotation marks. When in doubt, cite and quote. Finally, don't believe everything Einstein says. Do not hide your sources; only Woodward and Bernstein and their brethren are allowed to have anonymous sources.

I hope to see many of you at the ACR meeting in D.C. in May.

RADIATION DOSAGE IN CHILDREN: THE IMAGE GENTLY CAMPAIGN

Eric N. Faerber, MD
Philadelphia, PA

There has been an enormous increase in public awareness and media coverage of radiation exposure, especially from computed tomography (CT), over the past few years. Recent estimates state that the number of CT examinations performed in the United States may exceed 60 million per year, including 4 million for children. These estimates do not include the impact of multi–detector row CT scanners, which are now widely available and increasingly utilized. Children are more susceptible to radiation than adults, have a longer lifetime to manifest radiation-induced cancers (which can take decades to develop), and have been routinely exposed to an excess amount of radiation from CT. It is noteworthy that CT is the single largest source of radiation after background (including radon) exposure.

On Jan. 22, 2008, the charter members of the Alliance for Radiation Safety in Pediatric Imaging – the Society for Pediatric Radiology (SPR), the American College of Radiology, the American Society of Radiologic Technologists, and the American Association of Physicists in Medicine – launched the highly anticipated Image Gently campaign, a national initiative that will educate providers of pediatric imaging care about the importance of "child-sizing" radiation doses. The phrase, "Image Gently," was coined by Jennifer Boylan, Executive Director of the SPR. The chair of the Alliance for Radiation Safety in Pediatric Imaging is Marilyn Goske, who is chair of the SPR Board and Silverman Chair of Radiology Education, Cincinnati Children's Hospital.

Nine other major societies have now joined the four founding Alliance organizations. These include the American Academy of Pediatrics, the American Osteopathic College of Radiology, the American Registry of Radiologic Technologists, the American Roentgen Ray Society, the Association of University Radiologists, the Conference of Radiation Control Program Directors, the National Council on Radiation Protection and Measurements, the Radiological Society of North America (RSNA), and the Society of Computed Body Tomography and Magnetic Resonance.

Arl Van Moore Jr., M.D., FACR, chair of the ACR Board of Chancellors has stated, "The Image Gently campaign is an important opportunity for radiologists to help referring physicians and medical imaging professionals understand which exams may be most appropriate for children and how these exams may be carried out in a safe, effective manner."

ACR, with permission

The Image Gently campaign will initially focus on CT scans, since the number performed in this country in children has tripled in the last five years. This is endorsed by Donald P. Frush, M.D., chair of the ACR Pediatric Radiology Commission and Professor of Radiology and Pediatrics at Duke University School of Medicine, who said, "This makes sense, because the utilization of this powerful imaging technology has increased substantially in the last five years. CT is among the higher dose examinations we perform." He noted that the campaign provides radiologists with general guidelines: It does not impose standards or define what constitutes an appropriate exam. "We are offering a reasonable range of practices to help radiologists modify their techniques," he said. "Once the radiologist decides a CT needs to be done and will potentially provide useful clinical information, the Image Gently guidelines let them know they are within a reasonable range of practices as seen among experts in pediatric CT."

The Alliance has also been involved with producing articles for professional society journals, especially a rebuttal to the widely quoted study about the dangers of CT use, published in the *New England Journal of Medicine* at the end of 2007

(Reference 1 below). The link to this paper is http://content.nejm.org/cgl/content/full/357/22/2277. The rebuttal may be found in the *New England Journal of Medicine* 2008; 358:850-853.

Alliance chair Marilyn Goske has stated that the Image Gently campaign will target three groups. These are:

1. Radiologists, medical physicists, and technologists who primarily work in adult hospitals or imaging centers and who image children as a very small part of their patient volume.
2. Referring ER physicians, pediatricians, pediatric orthopedists, and other physicians.
3. Parents. After the medical core is educated, the campaign will reach out to parents.

Radiologists who perform imaging exams on children are urged to:

- "Child-size" the scan; this often reduces the amount of radiation used
- Not overscan
    - Scan only when necessary
    - Scan only the indicated region
    - Scan once; multi-phase scanning (pre- and post-contrast, delayed exams) is rarely helpful
- Be a team player
    - Involve medical physicists to monitor pediatric CT techniques
    - Involve technologists to optimize scanning

The Image Gently Alliance web site (www.imagegently.org) contains the latest research and educational materials to aid radiologists, radiologic technologists, medical physicists, and other imaging stakeholders in determining the appropriate radiation techniques to be used in the imaging of children and how the radiation received from these exams may affect pediatric patients over time. A key feature of the new web site is a library of helpful protocols that can be used for the imaging of children. **Radiologists and other imaging providers are urged to visit the Image Gently Web site and pledge to do their part to "child-size" the radiation dose used in children's imaging.**

Radiation dosage in children has been featured as a prominent issue in the proceedings of the Pennsylvania Radiologic Society. At the behest of current PRS president, Richard N. Taxin M.D., the pediatric radiology subcommittee will form an advisory board for radiation dosage and techniques in the pediatric population. Further information will appear on the PRS web site and in future Bulletins.

Acknowledgments: Grateful acknowledgement is made to Shawn Farley, ACR Public Relations Manager, who supplied the information for the Image Gently campaign and permitted use from their bulletins, and Donald P. Frush M.D., Chair of the ACR Commission on Pediatric Radiology, for his considerable assistance.

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2008 ANNUAL MEETING UPDATE

Robert S. Pyatt, Jr., MD, FACR
Chambersburg, PA

Ritz Carlton Hotel, Philadelphia
Nov. 15, 2008

The program will be accredited for 7.5 hours of Category 1 credit, with all hours in Patient Safety/Risk Management designation to assist with state licensure requirements. Here is a draft of the program ideas, with speakers and times, with all but one speaker confirmed:

Morning Program

8:00-8:30 am	James Thrall, MD, FACR, Chairman, BOC, ACR. "Update on Issues Challenging Radiology & Radiation Oncology Across the Nation." Pending additional/substitute topic: "The Changing Relationships Between Hospitals And Radiologists" (based on two recent articles in Radiology).
8:30-9:15 am	James Borgstede, MD, FACR. "Radiology Commoditization: Creativity or Catastrophe?"
9:15-9:45 am	Ted Burnes, RADPAC. "The Radiological/Political Implications of the New President and Congress"
9:45-10:00 am	Coffee Break
10:00-10:30 am	James Borgstede, MD, FACR & R. Nick Bryan, MD, PhD, FACR. "Issues Facing the ABR"
10:30-11:15 am	Roger Mecum, Executive VP, Pennsylvania Medical Society. "The State of the State of Medicine in Pennsylvania: A Critical Update on the Vital Signs"
11:15-11:45 am	(Pending, not confirmed) Dr. Ana Pujols-McKee, Chair, Pennsylvania Patient Safety Authority. "State-wide Database Results: Radiology and Patient Safety." Discuss the top 10 Radiology patient safety issues, derived from the state-wide database.
11:45-11:55 am	Final Questions and Answers for all morning speakers
11:55 am-noon	PRS Business meeting
12:00-1:00 pm	**Lunch Program**. Arlen Spector, US Senate (Requested, not yet confirmed) "Observations/ Comments on the 2008 Presidential/Congressional Election." Backup Speakers: Eric Faerber, MD, "Update on *Image Gently* Campaign" and Larry Muroff, MD, FACR, topic TBA.

Afternoon Program

1:00-1:45 pm	Larry Muroff, MD, FACR. "Challenges Facing Radiology: Is Chicken Little Correct?"
1:45-2:30 pm	Frank Lexa, MD, MBA, FACR. "21st Century Challenges to the Practice of Radiology"
2:30-2:45 pm	Coffee Break.
2:45-3:30 pm	Laurence Needleman, MD, FACR. "How to Deal with IV Contrast Emergencies"
3:30-4:15 pm	Frank Lexa, MD, MBA, FACR. "Strategic Business Planning for Radiologists"
4:15-4:30 pm	Questions and Answers
4:30 pm	End
7:00 pm	**Evening Program** for the Honored Radiologist: Larry Muroff, MD, FACR. "Would Disney Run Your Practice Better Than You Do?"

CODING & REIMBURSEMENT

Eric Rubin, MD
Upland, PA

"Dr. Rubin, B.F. Skinner Would Like to Review a Study With You"

Just over six years ago I became a first-time father. At that time I realized just how little I knew about raising a child. What I found most difficult (and, to some extent, still find perplexing as we soon expect our third child) was how to condition the child to behave appropriately. Luckily my wife, with a Master's degree in education and pretty impressive natural instincts, made me aware of two very important concepts.

According to Wikipedia, **POSITIVE REINFORCEMENT** is defined as "an increase in the future frequency of a behavior due to the *addition* of a stimulus immediately following a response," while **NEGATIVE REINFORCEMENT** is defined as "an increase in the future frequency of a behavior when the consequence is the *removal* of an aversive stimulus." Most child psychologists (and my wife) will tell you that positive reinforcement is the preferable technique for behavioral conditioning as opposed to negative reinforcement, which can lead to unwanted and unexpected consequences. Just as these techniques can be applied to child-rearing, so can they be applied in a business model and in medical practice, as you will see below.

In 2007 Centers for Medicare & Medicaid Services (CMS) instituted "pay-for-performance" (P4P) measures, which provided physicians with a bonus to their payments for adherence to specific reporting and management techniques for certain defined conditions. I have previously discussed P4P and it can be appropriately viewed as positive reinforcement.

Well, CMS has just recently announced that payments to physicians will be withheld when certain complications arise during the inpatient care of a Medicare beneficiary. Previously CMS allowed for higher payments for care related to complications that arose during inpatient care through the use of a modifier code which was applied to the Diagnosis Related Group (DRG) payment for a hospital admission. Since the additional payment was relatively nominal, as compared to the actual cost of care to the hospital related to the resolution of these complications, CMS remained indifferent as to the cause of the complication and relied on the power of the DRG (same payment for a condition regardless of length-of-stay) to force hospitals and physicians to resolve a complication in a manner which would maximize revenue.

Over the past few years, however, CMS has repositioned its view on these preventable conditions and has gone so far as to adopt the description of 'Never Events' as they were originally described by the National Quality Forum (NQF). The NQF has published a list of 28 'Never Events' (www.qualityforum.org/pdf/news/prSeriousReportableEvents10-15-06.pdf) and CMS

has indicated that 8 of these events will result in non-payment for care related to management of serious harm or death associated "directly" with the occurrence of these complications. It does not indicate that the entire DRG will be denied but, rather, it appears that the additional payment based on the old 'modifier' code will no longer qualify for reimbursement.

Radiologists should be paid the professional fees for complications that we must treat but did not directly cause. Radiology groups that simply provide the professional services to a hospital will typically charge for the service under a CPT code with an attached '-26' modifier which indicates that only the professional service was provided. It would seem logical that, since this reimbursement occurs outside of the DRG it should not be affected by this new policy. In a statement to the House Committee on Ways and Means, Subcommittee on Health, however, Kerry Weems (Acting Administrator, CMS) said the following: "No Medicare payment would be made for services connected to Never Events." I assume that this is the abridged version of the ruling and professional reimbursements for radiologic studies related to these complications will not be affected. I will provide an update in the next PRS newsletter.

In October 2008, additional payment to hospitals for care of the following complications will cease:

1) Catheter-associated urinary tract infections
2) *Staphylococcus aureus* bloodstream infections
3) Surgical site infections
4) Pressure ulcers
5) Objects left in during surgery
6) Air embolism
7) Blood-type incompatibility
8) Hospital injuries

Unfortunately, this type of philosophy falls directly under the definition of **negative reinforcement** and may result in some unexpected and unpredictable behavioral reactions on the part of both physicians and hospital administrators. I would agree that 'preventable' complications are costly to the medical system and, in fact, research related to modification of technique related to insertion and management of central lines has been shown in studies to reduce the incidence of blood-borne infections[1]. Furthermore, I would agree that you should be proactive in your practice. As I see it, three of the above complications could potentially originate directly in the radiology department: *surgical site infections, objects left in during surgery, and air embolism.* You and your hospital administrators should explore means to prevent these complications before they ever occur. This is especially applicable to retained wires and infections after interventional procedures.

However, here is the rub: I have never seen or heard of a case of severe harm or death related to the presence of a small amount of air in the heart or central veins after IV contrast administration. Furthermore, "embolism" refers to a blockage of blood flow by a structure (air in this case) and you sure would have to infuse a large amount of air (research has suggested this number to be 500cc injected at 100 cc/s) in order to cause a complication. I have seen air in the heart after IV contrast injection for CT, but do I now need to report every case of it that I see? Shouldn't the patient be dead or in severe distress clinically before I ever see the study? This, therefore, is where the CMS argument falls short. Definable outcomes, especially with respect to "air embolism" related to radiologic studies will be difficult, if not impossible, to evaluate. This may lead to the unexpected and unpredictable behaviors that I have described above.

My 3-year-old son quickly learned to hide candy in his room after we repeatedly chastised him for requesting it too often. As our CT collimation has fallen to the extreme subcentimeter level, we have begun to see things that we have never seen before, including tiny air bubbles in the heart. With these impending CMS regulations and penalties I am somewhat worried that physicians and doctors will begin to hide the candy and this type of negative conditioning might cause us to overlook the other facets of management which are required for the radiologist to provide the highest level care that has come to be expected by all Americans. Parental oversight by CMS may be cost-effective for our government and may one day prove to be the proper approach, but I see at least one of these penalties as premature and negative reinforcement may lead to gaming of the system. Maybe my wife needs to make a phone call to CMS.

[1] Pronovost P, et al. An intervention to decrease catheter-related bloodstream infections in the ICU. *N Engl J Med* Dec 28, 2006; 355: 2725-2732

REPORT FROM THE SPECIALTY LEADERSHIP CABINET

Elaine R. Lewis MD
Reading, PA

There were two main items discussed at the Specialty Leadership Cabinet meeting in February.

The main issue was Resolution 07-405: Primary Care and the Medical Home in Pennsylvania. The cabinet was asked for input on this resolution prior to the Board's developing a position on the medical home concept. The resolution calls on the Pennsylvania Medical Society (PMS) to collaborate with multiple other medical societies to develop a plan to implement a patient-centered, physician-led medical home model. The model is one of a personal physician who coordinates all of a patient's care. This model is based on similar successful models that improved care, provided for more cost-effective care, and decreased utilization. The personal physician would be reimbursed for time spent managing a patient's care. One of the possible impacts on radiology would include decreased emergency room studies and a possible overall decrease in utilization of radiology services. Referral patterns to radiology may also change. The second issue was MCARE and coverage for the uninsured and under-insured. Governor Rendell's Rx for

Pennsylvania includes providing health care coverage for all uninsured citizens in the Commonwealth – Cover All Pennsylvanians (CAP). The governor has tied funding of CAP to the extension of the MCARE abatement for physicians in 2008. The PMS has responded with several potential models that would allow continuing the MCARE abatement while gradually retiring the MCARE fund and paying off the remaining unfunded MCARE liability. Governor Rendell has threatened to veto any legislation that does not also include funding for CAP. Negotiations are continuing. All physicians are urged to contact their legislators to urge them to support both the MCARE abatement for 2008 and the PMS's plan to phase out the MCARE fund.

STRUCTURED REPORTING IN PRIVATE PRACTICE: EARLY EXPERIENCE OF ONE GROUP

Jonathan A. Morgan MD
Upland, PA

A couple of months ago, I was asked by senior members of my practice to derive several structured reports to be used for reports for CT scans and ultrasounds of the body. Structured reports differ from traditional reporting in that there is a defined order in which the observations are made in the body of the report. This is as opposed to traditional reports, in which findings are listed in the body of the report either in the order of relevance to the history, significance, or merely anatomically (cranial to caudal).

Traditional reports, unfortunately, often tend to read like a random set of observations. Often, important information gets buried among far less significant observations, even in the hands of experienced radiologists. Worse yet, radiologists often forget to comment on important organs when distracted by other findings. For these reasons and several others, including the now-common use of voice recognition software, the idea of changing to structured reports has been slowly gaining popularity among radiologists. It has recently been promoted by the ACR to improve the quality of radiologic reporting and to facilitate statistical analysis of data.

I know of at least two leading academic institutions, Massachusetts General Hospital (MGH) and Thomas Jefferson University Hospital (TJUH) that have recently instituted mandatory structured reports for their radiologists— at least for CT scans of the thorax, abdomen and/or pelvis. Two of our recently hired radiologists who were in fellowships at these hospitals report that, although these changes were initially met with resistance by staff radiologists, they have now been warmly received by both radiologists and referring physicians alike. Although these two institutions use very different styles of structured reporting, the results for both have been improved satisfaction with the readability of the reports.

The styles employed by each academic institution differ significantly. The first style, modeled on what is being done at Jefferson, uses a format I call the "Checklist" style. In this format, each organ analyzed is listed within a subheading referring to a specific organ system. The structure is analogous to a checklist that a clinician might use for a physical exam.

An example of a CT scan of the abdomen and pelvis using the **Checklist format** is as follows:

HISTORY: [ ]
TECHNIQUE: [ ]
CONTRAST: [ ]
COMPARISON: [ ]

FINDINGS:
Lung Bases: [ ]

GASTROINTESTINAL:
Liver: [ ]
Gallbladder/Bile Ducts: [ ]
Pancreas: [ ]
Bowel:
  Distal esophagus/stomach: [ ]
  Small bowel: [ ]
  Appendix: [ ]
  Large bowel: [ ]

GENITOURINARY:
Kidneys: [ ]
Adrenals: [ ]
Uterus/Adexa (or Prostate, if male patient): [ ]
Bladder: [ ]

LYMPHATIC:
Spleen: [ ]
Lymph Nodes: [ ]

VASCULAR:
Aorta: [ ]

MUSCULOSKELETAL:
Lumbar spine: [ ]
Soft Tissues: [ ]

Other: [ ]

PELVIS: Evaluation of the pelvic organs is listed under their respective organ systems above

IMPRESSION: [ ]

This type of report can be quite easy to use with one of the currently available Voice Dictation systems. The last statement — regarding the pelvis — is for billing purposes. Although we could have divided the reported into abdomen and pelvis sections, most of us felt that this division was artificial and does not reflect how we or our referring physicians think about the body. The statement is to alert third-party payers that the pelvis was included.

The second style, similar to the one now in use at Massachusetts General Hospital, uses the organ system approach to report organization, but then relies on prose, rather than the short, notated format of the Jefferson style "Checklist" report.

An example of this type of report is as follows:

HISTORY: [ ]
TECHNIQUE: [ ]
CONTRAST: [ ]
COMPARISON: [ ]

FINDINGS:
LUNG BASES:
Minimal subsegmental atelectasis. No nodules.

GASTROINTESTINAL:
The liver, gallbladder, bile ducts and pancreas are all normal in appearance. A small sliding hiatal hernia is noted. The stomach and small bowel are normal. The appendix is normal and retrocecal in location. A few scattered diverticula are noted in the descending colon and sigmoid colon. The colon is otherwise normal.

GENITOURINARY:
The kidneys, adrenal glands, and prostate gland are normal. The bladder is normal.

LYMPHATIC:
A few shotty retroperitoneal lymph nodes are noted but there are no enlarged nodes in the abdomen or pelvis. The spleen is normal.

VASCULAR:
Moderate atherosclerotic plaque noted in the aorta. No evidence of aneurysm.

MUSCULOSKELETAL:
Mild degenerative disc disease of the lumbar spine. A mild, stable, chronic compression fracture is noted at L2 with appearance favoring a benign etiology.

PELVIS: Evaluation of the pelvic organs is listed under their respective organ systems above

IMPRESSION: [ ]

"Many of our radiologists now enjoy dictating in this structured format, as it improves confidence that the findings have been covered.

In our private practice group, radiologists were split between which style they preferred to use. We also sent out a questionnaire to a number of our referring physicians, asking for their opinions. Included in the questionnaire were three examples of a single radiology report — a phony report of a CT scan of the abdomen and pelvis I created, which specifically included an incidental but critical finding, a renal cell carcinoma, and several incidental findings potentially requiring follow-up. I used the exact same information in three formats: a traditional, free-form prose report, a Checklist-style (TJUH) report, and a Hybrid MGH-style report. Of the approximately thirty referring physician groups responding, 66% expressed a clear preference for the Checklist reports, 33% preferred the Hybrid, and none preferred the traditional reports.

As both our radiologists and our referring physicians were divided in their style preferences, we opted to allow our radiologists to choose between the two structured report styles — i.e. the Checklist and the Hybrid.

For both styles, we have left it up to the individual radiologists what level of detail they wish to include in each large organ-system section. Only the organ system divisions and their order are uniform. For example, under GASTROINTESTINAL, some radiologists use a combined Liver/Bile ducts section, whereas others separate the two. Some radiologists use only the heading Bowel to refer to all parts of the bowel, rather than dividing it into sections. Also, we have left it up to the individual radiologists how they wish to describe the normal organs, e.g. "Normal," "Within normal limits," "Unremarkable," etc.

We are now in the process of gathering follow-up responses from referring physicians regarding their opinions of the new structured reports. Preliminary feedback has all been positive. Also, many of our radiologists now enjoy dictating in this structured format, as it improves confidence that the findings have been covered.

One potential pitfall of this system is regarding reports for specific indications that do not conform to organ systems. For example, a CT scan obtained on a patient with ovarian carcinoma to assess for metastatic disease. In order to make the report more user-friendly to the oncologist, I typically include a prose paragraph specifically commenting on areas of potential metastatic disease. The remaining information stays in the structured format.

For example, for a surveillance CT scan of the chest, abdomen, and pelvis on a patient with lymphoma, rather than making the oncologist plow through each section to assess for lymphadenopathy, one can begin the FINDINGS section with prose regarding the state of disease above and below the diaphragm. The remaining findings, the vast majority of which are incidental for the oncologist, but of potential importance to the patient and his/her primary care physician, are organized in one of the two structured formats.

Any radiologists interested in getting examples of our two structured reporting styles should feel free to contact me at jonmorgan5@aol.com.

PATIENT QUALITY AND SAFETY

Robert S. Pyatt, Jr., MD, FACR
Chambersburg, PA

RADPEER

The PRS Patient Quality and Safety Committee **very strongly** encourages Pennsylvania radiologists to adopt the use of the ACR RADPEER process as the best way of performing peer review. The ACR RADPEER program allows for benchmarking and more than meets the new requirements of JCAHO. Updated versions for use with PACS and speech-recognition systems are in development. This will allow for peer review to be done even faster, seamlessly, and more completely, while simultaneously meeting medical staff requirements, and ACR accreditation requirements. The ACR RADPEER program is available in paper version or electronic version (eRADPEER). The cost is miniscule. Currently over 10,000 radiologists in the US (out of 30,000 total) use RADPEER, with over 700 radiologists in Pennsylvania using RADPEER. To discuss the use of RADPEER further with a RADPEER user, please contact Dr. Robert Pyatt (bob_pyatt@hotmail.com), Chair of this committee. Phone contact: (W) 717-263-5955. **This effort is strongly supported as a Quality Initiative by our President, Dr. Richard Taxin:**

LETTER TO THE MEMBERSHIP

Richard N. Taxin, MD, FACR
President, PRS

Dear Colleague:

The mission of the Pennsylvania Radiological Society is advancing the science of Radiology, improving radiology services to patients and the medical community, studying the economics of radiology, encouraging continuing education for radiologists, and establishing and maintaining high medical and ethical standards in the practice of radiology.

To improve radiology services, we must address patient safety initiatives including the evaluation of the accuracy of our interpretations. The American College of Radiology's peer review program, RADPEER™**,** in which over 700 Pennsylvania radiologists participate, offers a very user-friendly tool to help you with this process. We are findings RADPEER™ helpful in our own practice.

RADPEER™ allows radiologists to participate in an online or paper-based peer review program that incorporates peer review into the routine interpretation of current images, so no additional work on the part of the radiologist, beyond what is already done, is required. If there are prior images of the same area of interest when a new study is being interpreted, the report of the previous study and its related image is reviewed and scored by the current reviewer using a standardized 4-point rating scale, with **one** being agreement with the previous interpretation to **four** being misinterpretation of the previous findings.

I strongly encourage all Pennsylvania radiologists to consider implementing RADPEER™ in their practices. RADPEER™ is a simple, cost-effective tool that will provide:

- Summary statistics and comparisons for each radiologist by modality
- Summary data for the group by modality
- Data summed across all participating facilities

Please visit the ACR's web site at www.acr.org for more information or to try out the RADPEER™ program.

ANNOUNCEMENTS

Radiologist Opening

A Radiology practice in a suburb of Pittsburgh is looking for a full-time Radiologist to join their practice. Partnership track offered. For more information please call Dr. Scheid at 724-226-7862.

Breast Imaging Seminar

August 7-10, 2008: 26th Annual Pittsburgh Breast Imaging Seminar to be held at the David L. Lawrence Convention Center, with all events on one floor, Pittsburgh, PA. New this year: special day-long Stereotactic Biopsy session for physicians and technologists on Friday, August 8, held at Allegheny General Hospital. Featured speakers to include Robyn Birdwell, M.D., FACR; Stamatia Destounis, M.D.; Beth DuPree, M.D., FACS; Elsie Levin, M.D., FACR; Michael Linver , M.D., FACR; Jay Parikh, M.D., FRCP; Edward Sickles, M.D., FACR; Margarita Zuley, M.D; William Poller, M.D., FACR. Course Director: William R. Poller, M.D., FACR. For further information please call 412-359-4952 or e-mail Cheri Jackel at cjackel@wpahs.org.

Breast Imaging Fellowship (Funded)

The Department of Human Oncology at Allegheny General Hospital has a Breast Imaging Fellowship position available January 1, 2009 to June 30, 2009. Enjoy the comforts of a 10,000 square foot breast center that is fully digital. In addition, there are two stereotactic units, state-of-the-art ultrasound units, the hand-held Mammotome, the Intact biopsy device, MRI, and CAD. Twenty-four thousand (24,000) total breast imaging studies are performed yearly. Research opportunities are also available, either with the NSABP (National Surgical Adjuvant Breast Project) or the ACRIN (American College of Radiology Imaging Network) trials associated with breast imaging. There is direct interaction with dedicated breast surgeons who are associated with the NSABP.

For further information, please contact and send a resume and two letters of reference to William R. Poller, M.D., FACR, Allegheny Cancer Center, 5th Floor, Allegheny General Hospital, 320 East North Avenue, Pittsburgh, PA 15212-4772. Telephone: 412-359-8366, FAX: 412-359-8685, Pager: 412-359-8220 ID 4544, E-mail: wpoller@wpahs.org.