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## Quality Management & Patient Safety

### Interventional Radiology Teamwork Training Pilot at MGH and BWH wins Partners in Excellence Award

Congratulations to the Interventional Radiology Teamwork Training Project team from MGH and BWH for winning the 2007 PHS Partners in Excellence Award for "Teamwork"! The Award Ceremony took place on Monday, December 10, 2007, at the Back Bay Events Center.

In partnership with the Partners Office of Patient Safety, headed by Allan Frankel, M.D., Partners Radiology, under the leadership of Scott Gazelle, M.D., began this pilot project with both the MGH Vascular and Neuro Interventional divisions and the BWH Vascular Interventional division in July 2006.

The objective is to enhance patient safety in Interventional Radiology (IR) by improving teamwork and establishing effective communication. According to the JCAHO report in 2003, 60% of all reported sentinel events were caused by failures in communication. Perhaps more than any other factor, teamwork and effective communication affect patient safety. The rationale behind doing this project in IR is that it is a high-risk modality, where teamwork and communication is integral to patient safety. In addition, this project helps in setting an example of successful high-level multidisciplinary interaction within and between departments. The IR departments of both MGH and BWH are amongst the first in radiology nationwide to participate in a unique and important initiative like this. This is greatly attributed to identifiable and committed leaders at both institutions. Furthermore, the initiative is in line with High Performance Medicine 2 - Patient Safety (formerly known as Signature Initiative 2).

Prior to the training, Safety Attitudes Surveys and Observations were successfully completed. The success of this is greatly attributed to strong projects teams at both institutions that have been sincerely committed to patient safety. This was especially seen when the collaborative observations were done at both MGH and BWH. The observers from MGH went to BWH and vice versa. The observers worked very well together. In addition, the leadership support of both Stephan Wicky, M.D and Richard Baum, M.D has been critical to the success of this initiative.

Next steps include; Post training Safety Attitudes Survey, Observations (half being collaborative), establishment of outcomes and process measures and sharing the success of this initiative by rolling this it out in IR departments of FH, NWH and NSMC.

Team: *Partners Office of Patient Safety*: Allan Frankel M.D.; Andrea Kelly RN, JD; and Richard Adamski, RRT, MBA *MGH Steering Committee*: Millie Leblanc RN, BSN; Tom Brady M.D.; Robert Sheridan RT(R); Hani Abujudeh M.D.; Stephan Wicky M.D.; Joshua Hirsch M.D.; Kelly Hartnett RN *BWH Steering Committee*: Richard Baum M.D.; Cassandra Earley; Carol Upson RT(R); Richard Foley RN; David Rosenthal P.A.-C.; Eileen Bozadjian RN, BSN; Barbara Bauman, RN *MGH Observers*: Kimberly Carvalho RT(R); Joanne Nutting RN *BWH Observers*: De'Ann McNamara RN; Eileen Bozadjian RN, BSN *Partners Radiology*: Scott Gazelle M.D, MPH, PhD.; Prerna Kahlon BDS, MPAH, CPHQ

For further information please contact Prerna Kahlon BDS, MPAH, CPHQ, Project Manager QM & Patient Safety at [pskahlon@partners.org](mailto:pskahlon@partners.org)

### **Partners Radiology CT Contrast Media Project**

The Partners Radiology CT Contrast Team started this initiative in 2003 with an objective to improve patient safety by developing uniform policies and procedures for use of contrast media in CT. Since there was a Partners-wide variation in CT Contrast policies and procedures, the team first standardized CT Contrast reaction definitions and the CT Contrast Media Administration Policy. Thereafter, the team worked towards standardization of the CT Contrast IV Patient Questionnaire and the Adverse Drug Event Form. Simultaneously, a CT Contrast Reaction monitoring dashboard was created on the Partners Radiology web site.

In August last year, Partners Radiology received access to LMR. This greatly helped in entering and checking system-wide patient CT Contrast reaction information. This step is especially essential when a patient goes from one hospital in the Partners system to another as their reaction information is retrievable via LMR at any site in the system. Technologists and nurses have been successfully trained in each department on this new process and are now entering and viewing patient CT Contrast reaction information with ease. Next steps include incorporating the ACR CT Contrast reaction classification in LMR and incorporating the CT Contrast decision support in radiology order entry. Preliminary meetings with MGH Radiology have begun to address this step.

BWH – Eileen Bozadjian RN, BSN; MGH – Joseph Fay M.M. RT (R); Peg Houghton RT (R) (CT), NSMC (Salem) – Irene Tate RT (R); NSMC (Union) – Linda Plouffe RT (R); NWH – Brian McIntosh RT (R); Michele Rogalski RT (R); FH – R. Jason Webb; Partners Radiology – Prerna Kahlon BDS, MPAH, CPHQ

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### **Partners CT Dose Project**

Under the leadership of Mannudeep Kalra MD, the Partners CT Dose Committee is scheduled to have the project kick-off meeting in January 2008. The objective of the project is to standardize Partners CT Dose protocols from the radiation dose perspective. The committee is going to work towards first sharing and implementing the MGH Pediatric CT Dose Protocols with other Partners hospitals. Thereafter, adult CT Dose protocols will be addressed.

*BWH* -Stuart Silverman MD; Joeseeph Burke RT (R) (CT);

*NSMC Salem* – Tim Hough MD; Julie Stiles MD; Irene Tate RT (R);

*NSMC Union* - Harold Weintraub MD; Linda Plouffe RT (R)

*NWH* - Marla Polger MD; Michele Rogalski RT (R)

*FH* - Jim Mastromateo MD; Richard Schofield MD;

*Partners Radiology*: Scott Gazelle M.D, MPH, PhD.; Prerna Kahlon BDS, MPAH, CPHQ; Lucy Harrison, MPH

For further information please contact Prerna Kahlon BDS, MPAH, CPHQ, Project Manager QM & Patient Safety at [pskahlon@partners.org](mailto:pskahlon@partners.org)

## **Partners Radiology Leads Collaborative Effort for First System-wide Guidelines for Critical Results Reporting**

Chaired by Scott Gazelle MD, this collaborative group of physicians from each Partners hospital is working to create a system-wide standard for the communication of critical results in diagnostic imaging. Critical results are defined as unexpected findings on an imaging study that are either life-threatening or require an immediate change in treatment.

The group has reviewed a current status assessment of the current processes for critical results reporting at each hospital and compared them with the specifications required by the Joint Commission (JCAHO), the American College of Radiology (ACR), and the Massachusetts Coalition for the Prevention of Medical Errors. From the different components of the processes at each hospital, a best practice process for reporting was identified and codified into a draft standard. The standard includes:

- Six defined conditions that are always viewed as critical results;
- A 60 minute timeline for immediate interruptive communication of the ordering physician or responsible caregiver
- Requirements for documentation
- Specifications for quarterly monitoring of compliance with the standard

After a weeklong draft revision process, the group ratified the standard. The Partners Standard for Communication of Critical Results has been distributed to the Chiefs of Radiology and administrative leadership at each hospital.

*Committee Members*: James Mastromatteo, MD, Faulkner Hospital

Steve Miller, MD, Newton-Wellesley Hospital

Peter Doubilet, MD, Brigham and Women's Hospital

Andetta Hunsaker, MD, Brigham and Women's Hospital

Chris Semine, MD, North Shore Medical Center

Hani Abujudeh, MD, Massachusetts General Hospital

For further information please contact Lucy Harrison, MPH at [Lharrison5@partners.org](mailto:Lharrison5@partners.org)

## **Reduction of Sentinel and Adverse Events in Radiology (Partners Radiology Patient Safety Road Shows)**

This project began in 2004, with the formation of the system-wide Partners Radiology Patient Safety Team (PRPST). The PRPST is a multi-disciplinary group comprising of a radiology manager, a nurse manager, a quality program manager, a clinical education/safety coordinator, and a project manager for quality management and patient safety. The objective of the project is to improve patient safety in radiology by sharing patient safety best practices, promoting a blame-free reporting environment, and establishing patient safety educational and awareness programs.

The team began its work by first examining existing radiology patient safety practices through interviews with patient safety personnel, surveys, and observation. Key radiology patient safety issues were identified. The team met on a biweekly basis and meetings consisted of simple story telling and sharing of real incidents that happened in the system. Incidents were analyzed in detail to understand what the cause of the incident was, what were the failure points, and what strategies were put in place to prevent the incidents from happening. The PRPST also shared policies, procedures, and risk reduction strategies employed as preventive measures in response to the incidents.

The team has successfully delivered educational training modules via annual Patient Safety Road Shows for "Patient and Site Identification" (2005), "Patient Falls" (2006) and very recently "Patient Safety in Radiology" targeting the JCAHO's National Patient Safety Goals. Nursing and Technologist CEUs are awarded at successful completion of each module. In addition to the modules the team has created a unique forum to share valuable patient safety information. Next steps include work around "Monitoring of Patient and Transfer Communication" focusing on Safe Handoff.

PRPST – BWH - Eileen Bozadjian RN, BSN; NWH - Charlotte Roy BSEd, RT(R)(N), CNMT; MGH - Mildred Leblanc RN, BSN; FH - R. Jason Webb; Partners Radiology - Prerna Kahlon BDS, MPAH, CPHQ

For further information please contact Prerna Kahlon BDS, MPAH, CPHQ, Project Manager QM & Patient Safety at [pskahlon@partners.org](mailto:pskahlon@partners.org)

### **Prerna Kahlon earns Certified Professional in Healthcare Quality (CPHQ) Certification**

Prerna Kahlon successfully passed the CPHQ Certification examination in September 2007. The Healthcare Quality Certification Board and the National Association of Healthcare Quality administer and sponsor the examination. The granting of CPHQ status recognizes professional and academic achievement by individuals in the field of healthcare quality management. The comprehensive body of knowledge includes quality management, quality improvement, case/care/disease/utilization management, and risk management at all employment levels and in all healthcare settings. The CPHQ program is fully accredited by the National Commission for Certifying Agencies of the National Organization for Competency Assurance in Washington, D.C. It is the only international voluntary certification program in the field of healthcare quality management to achieve this accreditation.

For further information please contact Ron Doncaster at [rdoncaster@partners.org](mailto:rdoncaster@partners.org)

## **Radiology Operations**

### **Partners Radiology Provides Expertise to Network Contracting; Successful Change to P4P Measure Effective 1/1/08**

The network's contracting with Tufts Health Plan (THP) is under re-negotiation for the contract years 2008 and 2009. As background, the radiology measure asks that Partners' utilization of high-cost imaging procedures, including CT, MRI, PET and Nuclear Medicine, match or decrease the trend of other providers in THP's market. This target has been increasingly difficult to make over the past two years, and the network stands to lose \$2M in withhold on this measure.

Partners Radiology has worked closely with the Contracting team to provide clinical expertise and assistance in developing a negotiation strategy. We are pleased to announce that although negotiations are still underway, our initial task to change the measure has been successful. This new change accommodates Partners' position as early adopters of the best clinical practice: if a high-cost imaging procedure has replaced an older technology as the best way to assess and diagnose a condition, Partners physicians should not be penalized for doing the right thing. With this in mind, Partners Radiology suggested four diagnosis-procedure pairings and asked THP to exclude them from the counting of our utilization.

CT Abdomen/Pelvis for renal calculus

MRI Shoulder for joint pain/rotator cuff syndrome

MRI Knee for sprain, meniscal tear or derangement, or knee effusion

Breast MRI for abnormal mammogram, previous history or family history of breast malignancy, or malignant neoplasm in the breast

Taken together, these pairings represent 1285 individual imaging procedures, reducing by 11% the total imaging counted to Partners in 2006. The impact on our withhold return, however, is difficult to assess, as we do not know THP's market utilization of these pairings. Even if these exclusions are not advantageous in our P4P contract, we have adopted them because we should not penalize physicians for providing the best care.

For further information please contact Ron Doncaster at [rdoncaster@partners.org](mailto:rdoncaster@partners.org)

### **Partners Radiology Creates First-Ever Site of Service Reporting for High-Tech Procedures**

Site of Service Reporting is a new data analysis effort by Partners Radiology to produce quarterly reporting by entity showing high-cost diagnostic imaging procedures by ordering physician and rendering provider. This report will allow detailed examination of referral patterns both in and out of the Partners network, identify and eliminate access and care coordination issues that contribute to unnecessary studies, and improve quality of imaging operations. The goal is to create quarterly reporting that incorporates all three managed care health plans. **The final format has been approved and the first reports will be delivered before the end of the year.**

For further information please contact Ron Doncaster at [rdoncaster@partners.org](mailto:rdoncaster@partners.org)

### **System-wide Radiology Prior Authorization Process Audit (PAPI)**

Partners Radiology has conducted a system-wide audit of processes to acquire the prior authorization, notification, or certification that many regional and national health plans require for diagnostic imaging services in the outpatient setting. The goal of this project is to map the process of prior auth acquisition at every hospital, identify key metrics required to analyze the cost and benefit of these processes from the network perspective, and identify a best practice standard for the network. We have identified that as a system we forego \$9.8 million in denied charges (Approx. \$3.25 mil in revenue) at a cost of \$1.5 million in infrastructure cost.

Collaboration fostered by Partners Radiology on this project includes building bridges between system and hospital finance, Physician and Hospital administrative departments, electronic order entry system managers, frontline staff and managers in patient registration, eligibility, and scheduling, and HPM5 and PCHI Radiology's utilization management efforts across the network.

On December 14, we hosted a retreat of all process stakeholders across the system and are in the process of determining the ROI for these processes and the identification of best practices. **It was widely approved as a successful collaborative and all members unanimously voted to meet every other month until we have improved our processes.**

For further information please contact Lisa Ewing RT(R), BSM, Project Manager at [lewing@partners.org](mailto:lewing@partners.org)

### **Radiology Practitioner Assistant/Radiologist Assistant**

The RPA or RRA is a fairly new role to the Partners system. This role is an extension of the RT(R), and has been created to help fill a need that has developed for several reasons. A nationwide shortage of radiologists, along with an increase in the amount of studies needing to be read has radiologists stretched to their limits. This leaves less

The RPA/RRA role was developed to allow the radiologist to work in a supervisory capacity for these procedures for staff that have advanced training to perform some common radiology exams. Depending on the exam being performed and the hospital's established guidelines, the RPA/RRA can perform the fluoroscopy portion of the exam and then report their findings to the radiologist who then completes the interpretation of the study.

Because the role is still developing, Partners and many other facilities have not yet created a practice model. The Radiology Administrators Committee (RAC) asked Partners Radiology to look into creation of a Partners model so that each of our sites would not have to reinvent the wheel. There are several components to consider, including how to employ the position, which exams the radiology group might want the technologist to perform, and how to develop the role in a way that is beneficial to the hospital, the employee, the radiology group, and most of all, the patients.

To address the issues confronting the role within Partners, we assembled a committee consisting of stakeholders at several levels within the organization. We are lucky to have two very active members of the RA/RPA community on our staff and on our committee. They are Jason Barrett RPA/RA (CBRPA), RT(R) (ARRT) at Newton-Wellesley Hospital, and Rick Dahl RT R.R.A. (ARRT) RPA at North Shore Medical Center. We are also fortunate to have Dr. Steven Miller of Newton-Wellesley Hospital, and Drs. Mark Girard and John Patti of North Shore Medical Center as our physician experts on the committee. Drs. Miller and Girard have been strong advocates of the RPA and RA programs, and have supervised their technologists throughout their training. Dr. John Patti, as a member of the ACR, has been intensely involved in committees working with the CMS to change payment rules so that the work of the RA can be billed appropriately. Richard Guarino, Director of Radiology Services at Newton-Wellesley Hospital, and Robert Sheridan, RT(R), Operations Manager of Interventional studies at MGH round out the team. Because some of the issues surrounding this role have regulatory and legal ramifications, we also enlisted the aid of Partners OGC (Office of the General Counsel), along with Larry Vernaglia of Foley and Lardner, LLP, to assist us in creating some of the documentation.

Thanks to the work put forth by the committee, we now have several working documents on which to base this exciting new role. There are still issues to be worked out at the state and national level, such as billing and scope of practice, but we are in a good position to keep up with these changes as they progress.

The documentation, which includes a general job description, a memo from the OGC, and a letter of support for the position, can be found on our website ([www.partnersradiology.org](http://www.partnersradiology.org)). Please note that these are living documents and will be updated as new legislation and regulations are created. The committee has agreed to meet bi-annually to keep the documentation current.

Thank you to all the committee members for your work!

For further information please contact Lisa Ewing RT(R), Project Manager at [lewing@partners.org](mailto:lewing@partners.org)

## **High Performance Medicine**

### **Imaging Guideline Committees**

Within the decision support tools in place for Radiology imaging, we need to insure that the data used to define whether or not an exam is appropriate is itself appropriate. With regards to MGH ROE, Percipio and NoAH, current practice has been to use a combination of ACR appropriateness criteria and several experts input. To improve on the existing criteria, we are currently working with expert committees to review and update the existing data. By reviewing the existing criteria and recent research data, we are looking to enhance what is available with evidence-based data. This will be an ongoing process by which groups of chosen experts will meet on a regular basis to review current research and update the platforms as needed.

Each team will involve Dr. Scott Gazelle, Dr. Dan Rosenthal, and Dr. Ramin Khorasani, along with medical staff from both Radiology and the area under review.

**We recently completed our first set of guidelines with the Brain Imaging Committee. A fact sheet will be distributed throughout PHS upon completion. Early next year we will begin to address imaging for low back pain.**

For further information please contact Lisa Ewing RT(R), Project Manager at [lewing@partners.org](mailto:lewing@partners.org)

## **Other Notes of Interest**

### **Certificate Programs at Bunker Hill Community College (BHCC)**

In the spring of 2007, Bunker Hill Community College began a first of its kind, web-based, PACS Certificate program. This program is open to both radiologic technologists and people with an information technology background. The goal of the program is to give students information that will fill in the gaps in their background. Courses include both clinical and computer information, and a short internship rounds out the program. Lisa Ewing is teaching two courses in this program, PACS Administration I and PACS Administration II. Students completing the curriculum will receive a certificate and be eligible to sit for the SIIM (Society for Imaging Informatics) CIIP exam.

For further information please contact Lisa Ewing RT(R), BSM, Project Manager at [lewing@partners.org](mailto:lewing@partners.org)

Partners Radiology is also working in conjunction with Human Resources to support two new online certificate programs at BHCC in CT (Computed Tomography) and MR (Magnetic Resonance Imaging). This effort addresses the increasing need for technologists trained in these specialty modalities.

For further information please contact Ron Doncaster at [rdoncaster@partners.org](mailto:rdoncaster@partners.org) or Lucy Harrison, MPH at [lharrison5@partners.org](mailto:lharrison5@partners.org)

### **Radiology Research Grant Awarded**

The 2007 Partners Radiology Research grant was awarded by the Radiology Research Committee to Rajiv Gupta, Ph.D., M.D., from MGH, and Kirby G. Vosburgh, Ph.D., from BWH, whose proposal "A Surgical Guidance and Navigation System for Image-guided Ventriculostomy and Other Neurosurgical Applications" exemplified collaboration across the network.