

R.A.R.E.: Radiation Awareness to Reduce Exposure

By Susan Tate-Potanovic, RT(R)(MR)(CT), CRA

Back in the Fall of 2015, I received an email from AHRA regarding the AHRA & Toshiba Putting Patients First grant. After looking further into the application process, I knew it was a great opportunity for our hospital, Holy Name Medical Center, and our patients. Holy Name is a community hospital located in northern New Jersey with just over 360 beds. Our radiology services include general diagnostic x-ray, CT, MRI, ultrasound, vascular lab, interventional, mammography, nuclear medicine, and PET CT. We average about 175,000 procedures per year.

As a member of the Radiation Safety Committee, I was responsible for presenting the data we received back from our submission of exams to the ACR Dose Index Registry (DIR). I often thought, rather questioned, what are we supposed to do with this data? It did not seem adequate to just report the statistics; there had to be a bigger purpose. Holy Name joined the ACR DIR in 2012 to be included in the process to establish reference doses across the nation. The dose summaries from the CT scanners are directly sent to the ACR DIR. Bi-annually, we receive aggregated reports comparing Holy Name regionally and nationally. Those reports are then discussed at the radiation safety meetings and the committee determines if any protocol changes are indicated. At our meetings, we talked at length about ways

to use the data to educate staff, patients, and physicians on the importance of safe medical radiation practices. We were also in the process of preparing for our Joint Commission visit, while simultaneously incorporating the ACR Appropriateness Criteria link into our HIS, when the email came about the grant.

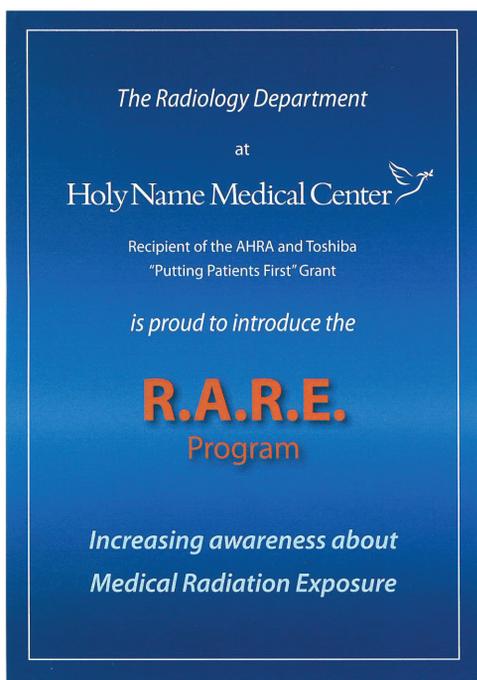
Our R.A.R.E. program (Radiation Awareness to Reduce Exposure) was a vision driven by our manager of nuclear medicine and PET/CT services at Holy Name Medical Center. She served as the radiation safety officer designee and, together, we shared a vested interest in delivering a program to promote radiation safety within our organization through education and awareness in order to bring it to the community we serve.

The R.A.R.E. program was further developed in conjunction with the application for the grant since we had discussions during the radiation safety meetings to offer an educational program. The initial goal of the program was to raise awareness within our organization that we are advocates for safe medical radiation practices while reducing dose. Knowing that there was a potential opportunity for financial assistance through the grant, it became the motivator to move ahead and develop the program. The vision and planning was to create an interactive lab with a location

large enough to accommodate several modality stations, as well as visitors being able to freely move about from one station to another. The money we received from the grant was applied to the cost of the hall rental, booth and curtain rentals, support staff, photographer, design and printing of the passports, the give-away tote bags and pens, posters and signage, marketing assistance, and refreshments for the visitors. See Figure 1.

The R.A.R.E. program was designed to be an interactive lab that, upon entering, the patient would receive a passport with a scenario, or story, of how you presented to the emergency department. The ten most common admitting diagnoses from the ACR website were used in the program. On that passport, four modalities were checked off at random. You then visited the modality stations that were checked off on the passport and received information regarding that modality. The modality stations each had two volunteers who would give a simple description of that modality, mainly if they were receiving radiation or not. Patients were also given an information packet pertaining to that modality to take with them.

If they received radiation, the passport was stamped with the radiation fan symbol. If they did not receive radiation, they received a stamp with the Image Wisely Owl, or Image Gently Butterfly



History A 15-year-old patient hospitalized for severe anorexia nervosa presents with multiple pituitary hormone abnormalities and hematuria. Patient denies trauma and pain.

Diagnostic Imaging Orders

- Ultrasound of Kidney and Bladder
- X-Ray Voiding Cystogram   
- CT Abdomen/Pelvis w/ & w/o Contrast
- X-Ray Abdomen and Pelvis   
- Nuclear Renal Scan   

Holy Name Medical Center 

Figure 1 • An example of one of the passports distributed as part of the program.

if it was a pediatric patient. At the end of the visit through the modality stations, the patient then received a card at the check out desk with the correct order of exams that reflected the ACR Appropriateness Criteria tool for that diagnosis on the passport. Therefore, the patient learned if the exams were ordered correctly utilizing a clinical decision support program.

We had tremendous support from all levels within our organization. Everyone we reached out to for help and guidance were readily available and fully engaged in our plight. On the day of the event, we had thirty radiography students, the radiology modality managers, and radiology nurses navigating visitors through the program.

In all, one hundred visitors ranging from nurses, physicians, support staff, and real patients attended. Upon entering, each guest received a tote bag and pen with the program logo. It was a huge success and we accomplished it as The Joint Commission was in our hospital! Our goal is to share this program

with other organizations because, in the end, we are all here to serve and educate our communities utilizing safe radiation practices.

Although we did not use the official data reports as part of the program itself, it still served a greater purpose since we often questioned what good is the data if it is only discussed at committee meetings? Therefore, the data was used to assure our organization, our patients, and the community we serve that we are committed to promoting and implementing safe radiation practices where there is ionizing radiation.

The feedback we received from staff and visitors was extremely positive and rewarding. The nursing staff that attended requested additional radiation education on the nursing units to capture the entire staff. The medical director of radiology requested the R.A.R.E. program be presented at medical grand rounds as we move forward in our quest to raise awareness and reduce exposure when applicable by utilizing the ACR Appropriateness Criteria link incorporated in our

HIS. The event was held on the last day of our Joint Commission Survey, and while they were not able to attend, the surveyor that we spoke with the day prior to the event embraced the idea of the program and stated it was a great tool to use in our radiation safety endeavors.

The R.A.R.E. program would not have been possible had it not been for the AHRA & Toshiba Putting Patient's First grant. Presently, most hospital organizations are experiencing fiscally challenging times and capital for educational programs is not at the top of the purchase list. I would strongly urge those that have a vision to improve a process or overall patient experience in your organization to apply for the grant. Being involved in this process and program was one of the highlights of my professional career. 

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