



Exposing Safety: Putting Patients First in Imaging Departments

By Rachel Giliotti, MBA, RT(R)(T)

“Innovative” was the first thought that came to mind when I learned of the AHRA and Toshiba Putting Patients First grant. Never before had I known of a collaboration between a professional association and a vendor in the form of a grant to be offered to hospitals and imaging facilities. St. Vincent’s Medical Center in Bridgeport, CT, a member of Ascension Health, is a 473 bed community teaching hospital. We are a level 2 trauma center providing a full range of services with centers of excellence in cardiology, surgery, women’s imaging, cancer care, orthopedics, and behavioral health. The imaging department performs over 100,000 procedures annually and was named a top imaging facility for 2012 by *Imaging Economics* magazine. The hospital also just received Magnet designation for excellence in nursing. At our medical center, the focus is on safety and high reliability. This means keeping the safety and best interest of our patients and associates in the forefront of all that we do. The intent of this grant would align perfectly with that goal.

In today’s healthcare environment, budgets are shrinking while an emphasis on patient safety is growing. In order to sustain awareness of both basic and advanced radiation safety practices, continuous education is needed and educational materials that come in various forms and tools are effective.

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The radiation safety program at St. Vincent’s was already interdisciplinary and strong, but the grant allowed it to become even more robust. It did so by addressing both the challenge of reduced budgets and the need to heighten awareness of safety for the best interest of patients and associates.

Before applying for the grant, the management team and Radiation Safety Committee collaborated on what the grant funding could best be applied towards to raise awareness and acquire additional tools to keep radiation exposure as low as reasonably achievable (ALARA). We were thrilled to be awarded the grant and our “putting patients first” program resulted in three effective approaches. First was the development of an online educational tool that would be assigned to all film badge/dosimeter wearers. This tutorial would be required as an annual competency for all radiation workers as a condition of employment. In collaboration with our staff education office and physicist, the electronic tutorial and content was developed

and loaded into an application called “Ascension Health University” which allows continuing education modules to be assigned to specific employees. Costs associated with this endeavor related to physicist fees for the overall content development. By assigning this important educational practice to all radiation workers in the form of an online tool, it truly hardwired the process which, in turn, elevated overall awareness for technologists and physicians. The tutorial takes approximately 20–30 minutes to complete and touches on types of radiation exposure, the difference between radiation and radioactive materials, various methods of monitoring and dosimetry, as well as best practices to protect both patients and the radiation worker.

A second part of the program was the development of print materials to further educate patients and healthcare workers in the radiology department and beyond. Two pamphlets were developed with the support of the grant. Radiology management worked with our marketing team and an outside printing company

to design the layout and content for each brochure. One was specifically geared towards patients and what they needed to know to keep themselves safe during imaging tests and the other was for caregivers and touched on basic principles and guidelines for dose reduction. These have been widely distributed throughout the organization and are readily available in the imaging suites. By placing these printed materials in the waiting areas, it helps educate the public, affirms that an active radiation safety program is in place, and has prompted questions from patients who in turn become proactive about their own radiation exposures and protection. For staff, the pamphlets serve as a constant reminder to maintain awareness of safety and apply ALARA principles at all times for themselves and others.

The third way in which the grant funds were utilized was towards the purchase of various shielding devices, including patient aprons and longer lead adjustable shields on wheels that could be moved around to various imaging rooms (eg, x-ray, interventional radiology suites). We have benefited from the devices in a few ways. Having the rolling shields on wheels to place behind a patient's back during a chest x-ray instead of strapping a lead apron around them has been advantageous, especially when imaging the elderly or pediatric populations. The aprons are heavy and create the need for bearing additional weight. The rolling shields do not touch the patient and are quick and easy for staff. In the interventional radiology suite, we have used the rolling shields for the physician standing closest to the beam in addition to a lead apron being worn. Having the smaller lap lead aprons for supine or portable imaging has helped increase usage by simply having them more accessible. Each of our rooms and portable units are equipped with the smaller, light-weight shields. There was a time when a tech may not have shielded the pelvis on an 80 year old patient if the device was not readily on hand. Now all patients are

shielded regardless of age. Just recently, when the tech was placing the shield on an elderly male patient, he asked "What is that for?" The tech replied "This is just one way that we are keeping you as safe as possible during your exam today."

Being awarded the grant has made us further appreciate the need for continued radiation safety awareness. By educating our physicians, staff, and patients and providing them with the proper tools, we have seen compliance with shielding and film badge wearing increase, while exposure rates have decreased. By "putting patients first" with use of the grant, ultimately everyone wins. ☸

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