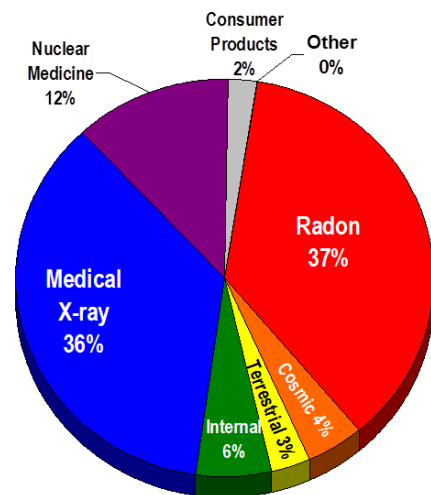


Benefits of an X-ray Registration and Inspection Program

1. Medical X-rays cause the majority of the average person's exposure to man-made radiation. In 2006, Americans were exposed to more than seven times as much ionizing radiation from medical procedures as was the case in the early 1980s.¹ The National Academies' National Research Council² has reported that even low doses of ionizing radiation, such as X-rays, are likely to pose some risk of adverse health effects. State registration and inspection of X-ray equipment is necessary to minimize radiation exposure to the public. The goal and objective of the X-ray program is to ensure that users of X-ray equipment have an effective radiation safety program which reduces the likelihood that individuals receive unnecessary radiation exposure. Effective controls involve the following:

- The X-ray unit performs as designed. This is needed to maintain high quality images and reduce the repeat of X-ray procedures. The result is adequate diagnostic information for appropriate patient care, while minimizing radiation exposure to the patient.
- The training, education and licensing of X-ray equipment operators is evaluated.
- Surveys of radiation levels in and around the X-ray suite are performed to ensure that regulatory limits are not exceeded. Information is collected to evaluate the potential radiation dose to radiation workers (employees) and the public.
- Radiation dose to patients is evaluated so that medical practitioners can provide patients with information about the dose from an X-ray procedure. Comparing this information between facilities can help practitioners and patients evaluate the risk and benefits of an X-ray procedure.
- Radiation safety procedures, concerning a pregnant patient, a pregnant radiation worker, shielding of the patient or staff, and holding or assisting patients, can be evaluated.



2. Contracting with the U.S. Food and Drug Administration to evaluate how mammography facilities meet requirements of the federal Mammography Quality Standards Act helps to ensure high quality films are produced, the patient receives a low radiation dose, personnel making and interpreting films are qualified, and needed procedures exist to track patients when a lump is detected.

3. Assistance to the Utah Department of Health aids the certification and recertification of hospital radiology departments so that they may qualify for reimbursement of services paid from Medicare or Medicaid funding.

4. Participating in the Nationwide Evaluation of X-ray Trends helps in the annual measurement of the X-ray exposure that a patient receives for selected X-ray examinations. The purpose of the program is to establish and analyze national trends in X-ray exposure.

5. On-site evaluations of X-ray equipment can help medical personnel determine if the cause of poor quality images is due to the film development system or the performance of the X-ray equipment.

¹National Council on Radiation Protection and Measurements. *Ionizing Radiation Exposure of the Population of the United States*. Bethesda, MD: NCRP; Report No. 160, 2009.

²BEIR VII: *Health Risks from Exposure to Low Levels of Ionizing Radiation*, National Academies Press, 500 Fifth Street, NW, Washington, DC 20001, March 31, 2006