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To: All Primary Care, Cardiologists, Pediatric Cardiologists,
Orthopedics, Neurologists, Neurosurgeons and Radiologists
Contracts Affected: All Lines of Business

Radiation Safety Awareness Initiative

We are pleased to inform you that BlueCross BlueShield of Western New York will begin a Radiation Safety Awareness Initiative in September in conjunction with National Imaging Associates (NIA), our nationally recognized Radiology Benefits Manager. We are taking this proactive approach in order to improve patient safety and raise awareness regarding radiation exposure.

As you know, radiation exposure from medical imaging is a rapidly growing patient safety issue. Patients are exposed to nearly **six times** more radiation from medical diagnostic tests than they were in 1980. The largest contributors to the increase in medical radiation exposure are CT scans and nuclear medicine.

How is your patient identified?

At-risk patients are identified through radiology claims which are provided to NIA by BlueCross BlueShield twice a year for analysis of radiation exposure based on those claims.

“At-risk” patients are those with cumulative radiation exposure equal to, or over, a level that has been identified as detrimental to long-term health, thus, putting them at an increased risk of developing radiation-associated complications such as cancer.

How am I notified if one of my patients is identified at risk?

You will be notified by telephone, or by an online alert at the time a radiology procedure is reviewed for preauthorization. A provider alert letter will also be sent via fax or mail.

Note: The patient’s level of radiation exposure does **not** impact the preauthorization or decision-making process for requested imaging studies.

How can I use this information when ordering diagnostic testing?

- Consider the risk versus the benefit of the radiology study.
- Consider how the results of this study will help in managing this patient.
- Consider if this ionizing radiation study is the best one to perform.
- Consider if there are other tests such as ultrasound, lab or endoscopy testing which would be a more appropriate initial investigative study.

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- Carefully consider the necessity of repeating a CT scan, especially in young girls and young women due to the radiation dose to breasts and ovaries.
- Be aware of a patient's prior history of imaging studies. Discuss this with the radiologist.
- Consider discussing this information with the patient as this may enable them to take a more active role in their health care.

How radiation exposure is measured

Radiation exposure estimates are measured in milliSeiverts (mSv). Radiation effective dose is the amount of radiation received by the patient and depends on many factors including distance from the source, time of exposure, overall body and organ size, location and nature of tissue exposed. There is some variation in the amount of radiation received. Studies suggest a significant increase in risk of cancer at radiation effective dose estimates of 50 mSv. Reaching this effective dose is not uncommon in patients having multiple CT and/or nuclear imaging studies.

The following table illustrates the estimated effective radiation dose of common medical procedures:

Table 1. - Radiation Dose Comparison ¹		
Diagnostic Procedure	Typical Effective Dose (mSv)	Number of Chest X rays (PA film) for Equivalent Effective Dose
Chest x ray (posterior/anterior film)	0.02	1
Skull x ray	0.07	4
Lumbar spine	1.30	65
I.V. Urogram	2.50	125
US Background Radiation	3.00	150
Upper G.I. exam	3.00	150
Barium enema	7.00	350
CT head	2.00	100
CT abdomen	10.00	500

If you have any questions regarding this bulletin, please contact Project Coordinator Lorri Hagner, RN, at 1-716-887-8964 or National Imaging Associates at www.radmd.com. Should you receive a provider alert, NIA peer discussion, contact information will be included.

¹ U.S. Food and Drug Administration, Center for Devices and Radiological Health. Adapted from European Commission, Radiation Protection Report 118, "Referral guidelines for imaging." Directorate-General for the Environment of the European Commission, 2000.