Operations Bulletin 03-10

Date: May 1, 2010
To: Ordering & Rendering Radiology Providers
Subject: Radiation Safety Awareness Initiative

Geisinger Health Plan[1], in conjunction with National Imaging Associates (NIA)[2], our nationally recognized Radiology Benefits Manager, will begin a Radiation Safety Awareness Initiative June 1, 2010. The goal of this initiative is to improve patient safety by raising awareness regarding radiation exposure.

As you know, cumulative radiation exposure from medical imaging is a rapidly growing patient safety concern. Patients are now 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, provided to NIA by the Health Plan twice a year for analysis of radiation exposure.

"At-risk" patients are identified as those with cumulative radiation exposure equal to, or exceeding, 50 milliSeiverts (mSv) — the occupational radiation exposure limit according to federal health standards. More information on milliSeiverts is available below.

How am I notified if one of my patients is identified at risk?
You will be notified when you request a preauthorization by telephone, or through NIA's provider Web site, RadMD.com. At that time you will be offered a NIA peer discussion should you want to discuss the case with another physician. In addition, a provider alert letter will also be sent via fax or mail with the authorization or denial letter.

Please note: A 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.
- 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 patients as this may enable them to take a more active role in their health care.

[1] Geisinger Health Plan, Geisinger Indemnity Insurance Company, and Geisinger Quality Options, Inc. shall be collectively referred to herein as "Health Plan".
[2] National Imaging Associates, Inc. is an affiliate of Magellan Health Services.

How is 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. Given these variables, there is some variation in the amount of radiation received from similar medical procedures. However, studies suggest a significant health risk at radiation effective dose levels of 50 mSv. Reaching this effective dose is not uncommon in patients having multiple CT and/or nuclear imaging studies. For comparable reference, note that federal health standards limit workers' exposure to whole-body ionizing radiation to 50 mSv per year.

Find more information about radiation exposure on National Imaging Associates Web site at www.radmd.com. Look for *Radiation Safety Information* under *Useful Resources.*

This Operations Bulletin amends the Health Plan's Participating Provider Guide Dev. 10/08. If you have any questions regarding this bulletin, please contact your Provider Relations Representative at the applicable phone number below.

Danville:	(800) 876-5357 (570) 271-5140
Harrisburg:	(888) 281-5338 (717) 909-3340
Scranton:	(800) 350-6486 (570) 341-1754
State College:	(888) 669-4834 (814) 238-0028

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

Table 1. - Radiation Dose Comparison [3]

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
United States background radiation level	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

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[3] 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.