CT-DEEP Notice of Interest

Last year several organizations contacted the DEEP Radiation Division regarding the necessity of using GS (gonadal shielding) for x-ray diagnostic procedures. At that time, we clarified that there are no requirements in the Regulations of Connecticut State Agencies (RCSA) that require the use of patient shielding. CT DEEP does, in conjunction with the CT Department of Public Health (DPH), conduct surveys of facilities to ensure that they meet or exceed the Medicare standards for Conditions of Participation (CoP) as set forth in 42 CFR part 482. In particular, 42 CFR 482.26, a“Conditions of Participation: Radiologic Services” requires “The radiologic services, particularly ionizing radiology procedures, must be free from hazards for patients and personnel” including appropriate use of shielding, including types of personal protective shielding (e.g., lead aprons) to be used, under what circumstances, for patients. As the interpretive guidance provided for the ASPEN: Regulation Set (RS) by the Agency for Health Care Administration requires protocols and procedures to be based on “professionally approved standards,” DEEP recommended that facilities wait for the National Council on Radiation Protection (NCRP) to complete their scientific consensus review of the discontinuation of the requirements for the use of gonadal shielding prior to modifying protocols. The NCRP committee, including representatives from federal, state and professional entities has published its evaluation and recommendations in NCRP Statement No. 13, January 12, 2021, “Recommendations for Ending Routine Gonadal Shielding During Abdominal and Pelvic Radiography.” The NCRP has concluded that in most circumstances GS is not justified as a routine part of radiological protection based upon the following considerations:

* The risks of heritable genetic effects are now considered to be much less than previously estimated.
* Improvements in technology since the 1950s have resulted in up to a 95% reduction in the absorbed dose to pelvic organs from radiography.
* GS can interfere with the use of automatic exposure control (AEC) and thereby cause an increase in dose to other pelvic and abdominal organs that may be more radiosensitive.
* GS obscures portions of pelvic anatomy and may obscure important findings on radiographs. This limits the practical dimensions and area of the shield.
* Despite adherence to practice guidelines by technologists, GS may not completely shield the gonads in the majority of patients due to the limited area of the shield and the normal variations in patient anatomy.
* A substantial portion of gonadal dose to the ovaries is delivered by scattered x rays that are not attenuated by GS.

It should be noted that the NCRP position applies to specific situations and ***not*** a general position that all patient shielding is not necessary.

DEEP Radiation Division has reviewed the consensus findings of the NCRP. DEEP Radiation Division considers the NCRP position to be a professionally approved standard, and, therefore, does not object to facilities adopting the recommendations of NCRP Statement No. 13, January 12, 2021 to modify their procedures and protocols for the use of patient GS for diagnostic x-ray exams. However, there may be cases (including consideration of significant patient anxiety and concerns) where gonadal/fetal shielding is appropriate, and those cases shall be evaluated and determined by each organization/facility. Facilities are reminded that consistent with ASPN RS interpretive guidance, facilities should ensure the specific NCRP recommendations are incorporated into procedures and policies that are approved per facility protocol and reviewed by oversight functions including, where appropriate, the facility’s Radiation Safety Committee. Any changes to radiographic procedures, including the bases, should be clearly communicated to staff in accordance with RCSA section 19-24-10(a), Instruction of Employees.

If you have any questions regarding this notice of interest you can contact Kirsten Davies at (860)424-3690.