



Shielding Position Statement

In April 2019, the American Association of Physicists in Medicine (AAPM) released a position statement that stated, “Patient gonadal and fetal shielding during X-ray based diagnostic imaging should be discontinued as routine practice.” This position statement led to a very large discussion among the imaging community nationwide. While many institutions have changed shielding practices within their imaging departments, we must remember that state law supersedes all institutional policies. Ohio is one of the most regulated states and has established laws that require shielding human patients not passed the reproductive age and anyone exposed to radiation.

Ohio law: [3701:1-66-02 General administration requirements for handlers of radiation-generating equipment.](#) states:

(2) Gonadal shielding of not less than 0.5-millimeter lead equivalent material shall be used for human patients, who have not passed the reproductive age, during radiologic procedures in which the gonads are in the useful beam, except for cases in which this would interfere with the radiologic procedure.

(3) Except for patients who cannot be moved out of the room, only the staff, ancillary personnel or other persons required for the medical procedure or training shall be in the room during the radiologic procedure. Other than the patient being examined:

(a) All individuals shall be positioned such that no part of the body shall be struck by the useful beam unless protected by not less than 0.5-millimeter lead equivalent material;

(b) The x-ray operator, other staff, ancillary personnel, and other persons required for the medical procedure shall be protected from the direct scatter radiation by protective aprons or whole-body protective barriers of not less than 0.25 millimeter lead equivalent material; and

(c) Human patients who cannot be removed from the room shall be protected from the direct scatter radiation by whole body protective barriers of not less than 0.25 millimeter lead equivalent material or shall be so positioned that the nearest portion of the body is at least two meters (6.5 feet) from both the tube head and the nearest edge of the image receptor.

(4) If performing a radiologic procedure requires auxiliary support for holding a patient or an image receptor, the handler shall ensure the following:

(a) Mechanical holding devices shall be used when the procedure permits their use in lieu of having an individual hold the patient or image receptor;

(b) Written safe operating procedures required by paragraph (B)(4) of rule [3701:1-66-04](#) of the Administrative Code shall indicate the requirements for selecting someone to hold a patient or image receptor, and the procedure that shall be followed. All individuals holding a patient or image receptor during radiation exposures shall be at least eighteen years of age; and

(c) No individual shall routinely hold patients or image receptors during radiologic procedures.

(5) The facility shall have protective aprons and gloves available in sufficient numbers to provide protection to anyone who is involved with x-ray operations.

(6) Any radiation worker participating in fluoroscopic, veterinary, or mobile or portable x-ray procedures shall be required to wear an individual monitoring device unless the registrant demonstrates it is unlikely the radiation worker will receive in excess of the doses specified in paragraphs (B)(1)(a) to (B)(1)(c) of rule [3701:1-38-14](#) of the Administrative Code.

Due to the impact of the position statement, the AAPM has assembled a Communicating Advances in Radiation Education for Shielding (CARES) Committee, made up of stakeholders within the imaging community, including members from the ARRT and ASRT, to discuss the research and ramifications of changing shielding practices. The CARES Committee is dedicated to investigating shielding practices and updating the imaging community as new research and statements are released.

We, in the Ohio imaging community, must remember that our state law regarding shielding is very rigorous and specific, and technologists are required to follow it. Until the Ohio Department of Health makes revisions, technologists are required to follow the current state regulations. The Ohio Society of Radiologic Technologists supports advanced research regarding this issue, and we urge all Ohio radiologic technologists to comply with state regulations and continue to provide lead shielding for patients.

Position statement approved on October 20, 2019 by the OSRT Board of Directors.