

**WAC 246-226-040 Operating procedures.** (1) The registrant shall:

(a) Establish a procedure to record and retrieve  $CTDI_{vol}$ , DLP and, when available on the CT X-ray system, SSDE data from every CT procedure performed; and

(b) If available, send each protocol page that lists the technique factors electronically to the PACS.

(2) The registrant shall provide estimated patient dose for an individual study within ten business days of a patient request.

(3) **Effective July 1, 2017**, the registrant shall establish CT procedures for each CT X-ray system in consultation with a medical physicist and the lead interpreting CT physician, or lead CT technologist to ensure they are correct for the intended dose and image quality. The CT procedures must include:

(a) Pediatric CT protocols for each CT X-ray system used for pediatric patients.

(b) Procedural, software, and engineering measures that prohibit anyone from changing protocols or parameters without approval from the lead CT technologist or the lead interpreting CT physician, such as password protection.

(c) Documentation of protocol or parameter changes must be maintained consistent with the requirements of WAC 246-226-100.

(4) The registrant may not allow the CT manufacturer's technical or applications representatives to make protocol changes or other software changes or upgrades that would impact radiation dose or image quality without the approval of the lead interpreting CT physician, the lead CT technologist, or the medical physicist.

(5) **Effective January 1, 2018**, the registrant shall review CT protocols in consultation with a medical physicist and the lead interpreting CT physician, or lead CT technologist to ensure they are correct for the intended dose and image quality as follows:

(a) Review all CT protocols upon installation of a CT X-ray system;

(b) Annually review the following protocols:

(i) New or changed protocols since the last review;

(ii) Pediatric head;

(iii) Pediatric abdomen;

(iv) Adult head;

(v) Adult abdomen;

(vi) High resolution chest; and

(vii) Brain perfusion.

(c) If the facility does not perform the procedures listed in (b)(ii) through (vii) of this subsection, the registrant shall annually review the most frequently performed or highest dose protocols so that a total of at least six protocols are reviewed annually.

(d) As part of the review, the registrant shall:

(i) Compare current protocols to the dose assessments that were made during the last annual performance evaluation required in WAC 246-226-090;

(ii) Determine whether the protocols from each CT procedure are appropriate, can be modified to lower the  $CTDI_{vol}$  without an unacceptable sacrifice in image quality, or can be eliminated;

(iii) Establish protocols to maintain image quality at the optimal noise level (standard deviation) within dose levels established in WAC 246-226-050.

(iv) Establish guidelines of variability that establish parameter and protocol limits.

(6) The registrant shall limit the use of the CT X-ray system to those permitted by the established guidelines of variability.

(7) The operator may adjust parameters or protocols for a CT procedure as long as they remain within the approved limits established in the guidelines of variability.

(8) The operator shall check the display panel before and after performing each scan to make sure the amount of radiation delivered is appropriate for the CT procedure and individual patient. This may be accomplished by reviewing dose indicator devices if available or dose indices. The operator shall document dose indicators or indices outside expected values and submit the documentation to the lead interpreting CT physician or medical physicist for review.

(9) Each registrant shall create a written policy establishing procedures for retaking CT scans including, but not limited to, how many scans are authorized for a patient and who can authorize additional retakes. The policy must be approved by the lead interpreting CT physician.

(10) When a patient must be held in position for a CT procedure, mechanical supporting or restraining devices must be used unless contraindicated. If the patient must be held by an individual, the individual shall:

(a) Wear protective gloves and a protective apron of at least 0.5 millimeter lead equivalent;

(b) Be positioned so that no part of his or her body will be struck by the useful beam; and

(c) Be positioned so that his or her body is as far as possible from the edge of the useful beam.

(11) If staff routinely working with or around radiation sources hold patients during CT procedures, personnel exposure may not exceed the dose limits established in chapter 246-221 WAC.

(12) Only individuals whose presence is necessary are allowed in a CT X-ray system room during exposure. Each individual, except the patient, shall be protected by at least 0.5 millimeter lead equivalent apron or a whole body protective barrier.

[Statutory Authority: RCW 70.98.050 and 70.98.080. WSR 16-23-030, § 246-226-040, filed 11/8/16, effective 1/1/17.]