

# Prepublication Requirements

• Issued June 25, 2018 •



## Standards Revisions for Organizations Providing Fluoroscopy Services

The Joint Commission has approved the following revisions for prepublication. While revised requirements are published in the semiannual updates to the print manuals (as well as in the online E-dition®), accredited organizations and paid subscribers can also view them in the monthly periodical The Joint Commission Perspectives®. To begin your subscription, call 800-746-6578 or visit <http://www.jcrinc.com>.

**Please note:** Where applicable, this report shows current standards and EPs first, with deleted language struck-through. Then, the revised requirement follows in bold text, with new language underlined.

### APPLICABLE TO HOSPITALS

**Effective January 1, 2019**

#### Standard EC.02.04.03

The hospital inspects, tests, and maintains medical equipment.

#### Elements of Performance for EC.02.04.03

21. For diagnostic computed tomography (CT) services: At least annually, a diagnostic medical physicist conducts a performance evaluation of all CT imaging equipment. The evaluation results, along with recommendations for correcting any problems identified, are documented. The evaluation includes the use of phantoms to assess the following imaging metrics:
- Image uniformity
  - ~~Slice thickness accuracy~~
  - ~~Slice position accuracy (when prescribed from a scout image)~~
  - Alignment light accuracy
  - Table travel accuracy
  - Radiation beam width
  - High-contrast resolution
  - ~~Low-contrast resolution~~
  - Geometric or distance accuracy
  - CT number accuracy and uniformity
  - Artifact evaluation



Note 1: This element of performance does not apply to dental cone beam CT radiographic imaging studies performed for diagnosis of conditions affecting the maxillofacial region or to obtain guidance for the treatment of such conditions.

Note 2: Medical physicists are accountable for these activities. They may be assisted with the testing and evaluation of equipment performance by individuals who have the required training and skills, as determined by the physicist. (For more information, refer to HR.01.02.01, EP 1; HR.01.02.05, EP 20; HR.01.02.07, EPs 1 and 2; HR.01.06.01, EP 1; LD.03.06.01, EP 4.)

Key: **D** indicates that documentation is required; **R** indicates an identified risk area

21. For diagnostic computed tomography (CT) services: At least annually, a diagnostic medical physicist conducts a performance evaluation of all CT imaging equipment. The evaluation results, along with recommendations for correcting any problems identified, are documented. The evaluation includes the use of phantoms to assess the following imaging metrics:
- Image uniformity
  - Scout prescription accuracy
  - Alignment light accuracy
  - Table travel accuracy
  - Radiation beam width
  - High-contrast resolution
  - Low-contrast detectability
  - Geometric or distance accuracy
  - CT number accuracy and uniformity
  - Artifact evaluation

Note 1: This element of performance does not apply to dental cone beam CT radiographic imaging studies performed for diagnosis of conditions affecting the maxillofacial region or to obtain guidance for the treatment of such conditions.

Note 2: Medical physicists are accountable for these activities. They may be assisted with the testing and evaluation of equipment performance by individuals who have the required training and skills, as determined by the physicist. (For more information, refer to HR.01.02.01, EP 1; HR.01.02.05, EP 20; HR.01.02.07, EPs 1 and 2; HR.01.06.01, EP 1; LD.03.06.01, EP 4.)



34. For hospitals that provide fluoroscopic services: At least annually, a diagnostic medical physicist conducts a performance evaluation of fluoroscopic imaging equipment. The evaluation results, along with recommendations for correcting any problems identified, are documented. The evaluation includes an assessment of the following:
- Beam alignment and collimation
  - Tube potential/kilovolt peak (kV/kVp) accuracy
  - Beam filtration (half-value layer)
  - High-contrast resolution
  - Low-contrast detectability
  - Maximum exposure rate in all imaging modes
  - Displayed air-kerma rate and cumulative-air kerma accuracy (when applicable)

Note 1: Medical physicists conducting performance evaluations may be assisted with the testing and evaluation of equipment performance by individuals who have the required training and skills, as determined by the physicist.

Note 2: This element of performance does not apply to fluoroscopy equipment used for therapeutic radiation treatment planning or delivery.



## Standard HR.01.05.03

Staff participate in ongoing education and training.

### Elements of Performance for HR.01.05.03

- |     |   |   |  |   |
|-----|---|---|--|---|
| 14. | <p>The hospital verifies and documents that <del>technologists</del> who perform diagnostic computed tomography (CT) examinations participate in ongoing education that includes annual training on the following:</p> <ul style="list-style-type: none"> <li>- Radiation dose optimization techniques and tools for pediatric and adult patients addressed in the Image Gently® and Image Wisely® campaigns</li> <li>- Safe procedures for operation of the types of CT equipment they will use</li> </ul> <p>Note 1: Information on the Image Gently and Image Wisely initiatives can be found online at <a href="http://www.imagegently.org">http://www.imagegently.org</a> and <a href="http://www.imagewisely.org">http://www.imagewisely.org</a>, respectively.</p> <p>Note 2: This element of performance does not apply to CT systems used for therapeutic radiation treatment planning or delivery, or for calculating attenuation coefficients for nuclear medicine studies.</p> <p>Note 3: This element of performance does not apply to dental cone beam CT radiographic imaging studies performed for diagnosis of conditions affecting the maxillofacial region or to obtain guidance for the treatment of such conditions.</p>                       | <table border="1" style="border-collapse: collapse; width: 40px; height: 20px;"> <tr> <td style="width: 15px; height: 15px;"></td> <td style="width: 15px; height: 15px; text-align: center;">D</td> </tr> </table> |  | D |
|     | D   |   |  |   |
| 14. | <p><b>The hospital verifies and documents that <u>individuals</u> who perform diagnostic computed tomography (CT) examinations participate in ongoing education that includes annual training on the following:</b></p> <ul style="list-style-type: none"> <li>- Radiation dose optimization techniques and tools for pediatric and adult patients addressed in the Image Gently® and Image Wisely® campaigns</li> <li>- Safe procedures for operation of the types of CT equipment they will use</li> </ul> <p><b>Note 1: Information on the Image Gently and Image Wisely initiatives can be found online at <a href="http://www.imagegently.org">http://www.imagegently.org</a> and <a href="http://www.imagewisely.org">http://www.imagewisely.org</a>, respectively.</b></p> <p><b>Note 2: This element of performance does not apply to CT systems used for therapeutic radiation treatment planning or delivery, or for calculating attenuation coefficients for nuclear medicine studies.</b></p> <p><b>Note 3: This element of performance does not apply to dental cone beam CT radiographic imaging studies performed for diagnosis of conditions affecting the maxillofacial region or to obtain guidance for the treatment of such conditions.</b></p> | <table border="1" style="border-collapse: collapse; width: 40px; height: 20px;"> <tr> <td style="width: 15px; height: 15px;"></td> <td style="width: 15px; height: 15px; text-align: center;">D</td> </tr> </table> |  | D |
|     | D   |   |  |   |
| 15. | <p>The hospital verifies and documents that individuals (including physicians, non-physicians, and ancillary personnel) who use fluoroscopic equipment participate in ongoing education that includes annual training on the following:</p> <ul style="list-style-type: none"> <li>- Radiation dose optimization techniques and tools for pediatric and adult patients addressed in the Image Gently® campaign</li> <li>- Safe procedures for operation of the types of fluoroscopy equipment they will use</li> </ul> <p>Note 1: Information on the Image Gently initiative can be found online at <a href="http://www.imagegently.org">http://www.imagegently.org</a>.</p> <p>Note 2: This element of performance does not apply to fluoroscopy equipment used for therapeutic radiation treatment planning or delivery.</p>  | <table border="1" style="border-collapse: collapse; width: 40px; height: 20px;"> <tr> <td style="width: 15px; height: 15px;"></td> <td style="width: 15px; height: 15px; text-align: center;">D</td> </tr> </table> |  | D |
|     | D   |   |  |   |

### Standard LD.04.01.05

The hospital effectively manages its programs, services, sites, or departments.

#### Elements of Performance for LD.04.01.05

25. The hospital designates an individual to serve as the radiation safety officer who is responsible for making certain that radiologic services are provided in accordance with law, regulation, and organizational policy. This individual has the necessary authority and leadership support to do the following:
- Monitor and verify compliance with established radiation safety practices (including oversight of dosimetry monitoring)
  - Provide recommendations for improved radiation safety
  - Intervene as needed to stop unsafe practices
  - Implement corrective action

--	--

### Standard PC.01.02.15

The hospital provides for diagnostic testing.

#### Elements of Performance for PC.01.02.15

13. For hospitals that provide fluoroscopic services: The cumulative-air kerma or kerma-area product are documented in a retrievable format. For fluoroscopy equipment that cannot display or provide cumulative-air kerma or kerma-area product, fluoroscopy time and number of images acquired are documented in a retrievable format, such as a picture archiving and communication system.
- Note:** This element of performance does not apply to fluoroscopy equipment used for therapeutic radiation treatment planning or delivery.

	D
--	---

### Standard PC.01.03.01

The hospital plans the patient's care.

#### Elements of Performance for PC.01.03.01

25. The hospital establishes or adopts diagnostic computed tomography (CT) imaging protocols based on current standards of practice, which address key criteria including clinical indication, contrast administration, age (to indicate whether the patient is pediatric or an adult), patient size and body habitus, and the expected radiation dose index range.
- Note:** This element of performance does not apply to dental cone beam CT radiographic imaging studies performed for diagnosis of conditions affecting the maxillofacial region or to obtain guidance for the treatment of such conditions.

--	--

25. The hospital establishes or adopts diagnostic computed tomography (CT) imaging protocols based on current standards of practice, which address key criteria including the following:

--	--

- Clinical indication
- Contrast administration
- Age (to indicate whether the patient is pediatric or an adult)
- Patient size and body habitus
- Expected radiation dose index range

Note: This element of performance does not apply to dental cone beam CT radiographic imaging studies performed for diagnosis of conditions affecting the maxillofacial region or to obtain guidance for the treatment of such conditions.

### Standard PC.02.01.01

The hospital provides care, treatment, and services for each patient.

#### Elements of Performance for PC.02.01.01

30. For hospitals that provide fluoroscopic services: The hospital identifies radiation exposure and skin dose threshold levels, that if exceeded, trigger further review and/or patient evaluation to assess for adverse radiation effects.

--	--

Note 1: Information on radiation exposure thresholds can be found in the National Council on Radiation Protection (NCRP)'s report number 168 and on the Food and Drug Administration's (FDA) Center for Devices for Radiological Health (CDRH) website.

Note 2: Radiation exposure thresholds may be established based on metrics such as reference-air kerma, cumulative-air kerma, kerma-area product, or fluoroscopy time. (See also PI.02.01.01, EP 20)

### Standard PI.02.01.01

The hospital compiles and analyzes data.

#### Elements of Performance for PI.02.01.01

20. For hospitals that provide fluoroscopic services: The hospital reviews and analyzes instances where the radiation exposure and skin dose threshold levels identified by the organization are exceeded.

--	--

Note: Radiation exposure thresholds may be established based on metrics such as reference-air kerma, cumulative-air kerma, kerma-area product, or fluoroscopy time. (See also PC.02.01.01, EP 30)