

Measure #T144: Radiology: Computed Tomography (CT) Radiation Dose Reduction

DESCRIPTION:

Percentage of final reports for CT examinations performed with documentation of use of appropriate radiation dose reduction devices OR manual techniques for appropriate moderation of exposure.

INSTRUCTIONS:

This measure is to be reported each time a CT is performed in a hospital or outpatient setting during the reporting period. There is no diagnosis associated with this measure. It is anticipated that clinicians who provide the physician component of diagnostic imaging studies for CT examinations will submit this measure.

This measure can be reported using CPT Category II codes:

CPT procedure codes are used to identify patients who are included in the measure's denominator. CPT Category II codes are used to report the numerator of the measure.

When reporting the measure, submit the listed CPT procedure code and the appropriate CPT Category II code **OR** the CPT Category II code **with** the modifier. The reporting modifier allowed for this measure is: 8P- reasons not otherwise specified. There are no allowable performance exclusions for this measure.

NUMERATOR:

Final reports for CT examinations that include documentation of use of appropriate radiation dose reduction devices OR manual techniques for appropriate moderation of exposure.

Numerator Instruction: Physician will need to document that radiation dose reduction device (i.e., automated exposure control) was turned on for each scan or that the ALARA protocol was followed for manual techniques (ie, patient-size-specific scan parameters), while maintaining the necessary diagnostic image quality.

Numerator Coding:

Radiation Dose Reduction Documented in CT Report

CPT II 6040F: Use of appropriate radiation dose reduction devices OR manual techniques for appropriate moderation of exposure, documented.

OR

Radiation Dose Reduction not Documented in CT Report, Reason not Specified

Append a reporting modifier (**8P**) to CPT Category II code **6040F** to allow the reporting of circumstances when an action described in a measure's numerator is not performed and the reason is not otherwise specified.

8P: Final reports for CT examinations does not include documentation of use of appropriate radiation dose reduction devices OR manual techniques for appropriate moderation of exposure, reason not otherwise specified.

DENOMINATOR:

All final reports for CT examinations performed.

Denominator Coding:

A CPT procedure code is required to identify patients for denominator inclusion.

CPT procedure codes: 0042T, 0066T, 0067T, 0144T, 0145T, 0146T, 0147T, 0148T, 0149T, 0150T, 0151T, 20982, 70450, 70460, 70470, 70480, 70481, 70482, 70486, 70487, 70488, 70490, 70491, 70492, 70496, 70498, 71250, 71260, 71270, 71275, 72125, 72126, 72127, 72128, 72129, 72130, 72131, 72132, 72133, 72191, 72192, 72193, 72194, 72292, 73200, 73201, 73202, 73206, 73700, 73701, 73702, 73706, 74150, 74160, 74170, 74175, 75635, 76380, 76497, 77011, 77012, 77013, 77078, 77079, 78814, 78815, 78816

RATIONALE:


While the use of CT in adults and children has increased nearly 7-fold in the past 10 years, data suggests that the lifetime risk for cancer can be increased, albeit by a small amount, with frequent or repeated exposure to ionizing radiation. (NCI, 2002) The BEIR (Biological Effects of Ionizing Radiation) report concluded that "the linear no-threshold model (LNT) provided the most reasonable description of the relation between low-dose exposure to ionizing radiation and the incidence of solid cancers that are induced by ionizing radiation." (NRC, 2006) Although dose-reduction techniques, such as automated exposure controls, have been shown to reduce radiation dose by 20-40%, broad use of procedures or protocols is not in place to tailor CT examinations to the patient for dose reduction. (Frush, 2004) As children are more sensitive to radiation and have a longer anticipated lifespan over which time cancerous changes may occur, the ALARA concept is of particular concern in this population. The National Cancer Institute has noted "adjustments are not frequently made in the exposure parameters that determine the amount of radiation children receive from CT, resulting in a greater radiation dose than necessary." (NCI, 2002)

CLINICAL RECOMMENDATION STATEMENTS:

Radiologists, radiologic technologists, and all supervising physicians have a responsibility to minimize radiation dose to individual patients, to staff, and to society as a whole, while maintaining the necessary diagnostic image quality. This is the concept "As Low As Reasonably Achievable (ALARA)." (ACR, 2006)

Facilities, in consultation with the medical physicist, should have in place and should adhere to policies and procedures, in accordance with ALARA, to vary examination protocols to take into account patient body habitus, such as height and/or weight, body mass index, or lateral width. (ACR, 2006)

The dose reduction devices that are available on imaging equipment should be active or manual techniques should be used to moderate the exposure while maintaining the necessary diagnostic image quality. (ACR, 2006)



Measure #T145: Radiology: Exposure Time Reported for Procedures Using Fluoroscopy

DESCRIPTION:

Percentage of final reports for procedures using fluoroscopy that include documentation of radiation exposure or exposure time.

INSTRUCTIONS:

This measure is to be reported each time fluoroscopy is performed in a hospital or outpatient setting during the reporting period. There is no diagnosis associated with this measure. It is anticipated that clinicians who provide the physician component of diagnostic imaging studies for fluoroscopy examinations will submit this measure.

This measure can be reported using CPT Category II codes:

CPT procedure codes or G-codes are used to identify patients who are included in the measure's denominator. CPT Category II codes are used to report the numerator of the measure. When reporting the measure, submit the listed CPT procedure code(s) or G-code and the appropriate CPT Category II code OR the CPT Category II code with the modifier. The reporting modifier allowed for this measure is: 8P- reasons not otherwise specified. There are no allowable performance exclusions for this measure.

NUMERATOR:

Final reports for procedures using fluoroscopy that include documentation of radiation exposure or exposure time

Numerator Coding:

Radiation Exposure or Exposure Time Documented in Fluoroscopy Report

CPT II 6045F: Radiation exposure or exposure time in final report for procedure using fluoroscopy, documented

OR

Radiation Exposure or Exposure Time not Documented in Fluoroscopy Report, Reason not Specified

Append a reporting modifier (**8P**) to CPT Category II code **6045F** to allow the reporting of circumstances when an action described in a measure's numerator is not performed and the reason is not otherwise specified.

8P: Final fluoroscopy report does not include documentation of radiation exposure or exposure time, reason not otherwise specified

DENOMINATOR:

All final reports for procedures using fluoroscopy.

Denominator Coding:

A CPT procedure code(s) or G-code is required to identify patients for denominator inclusion.

CPT procedure codes or G-codes: 0062T, 0075T, 0080T, 24516, 25606, 25651, 26608, 26650, 26676, 26706, 26727, 27235, 27244, 27245, 27506, 27509, 27756, 27759, 28406, 28436, 28456, 28476, 36597, 36598, 37182, 37183, 37184, 37187, 37188, 37210, 43752, 44500, 49440, 49441, 49442, 49446, 49450, 49451, 49452, 49460, 49465, 50382, 50384, 50385, 50386, 50387, 50389, 50590, 61623, 62263, 62264, 62280, 62281, 62282, 62318, 62319, 63610, 64510, 64520, 64530, 64561, 64605, 64610, 64620, 64622, 64626, 64680, 64681, 70010, 70015, 70170, 70332, 70370, 70371, 70373, 70390, 71023, 71034, 71040, 71060, 71090, 72240, 72255, 72265, 72270, 72275, 72285, 72291, 72295, 73040, 73085, 73115, 73525, 73542, 73580, 73615, 74190, 74210, 74220, 74230, 74235, 74240, 74241, 74245, 74246, 74247, 74249, 74250, 74251, 74260, 74270, 74280, 74283, 74290, 74291, 74300, 74305, 74320, 74327, 74328, 74329, 74330, 74340, 74355, 74360, 74363, 74400, 74410, 74415, 74420, 74425, 74430, 74440, 74445, 74450, 74455, 74470, 74475, 74480, 74485, 74740, 74742, 75600, 75605, 75625, 75630, 75650, 75658, 75660, 75662, 75665, 75671, 75676, 75680, 75685, 75705, 75710, 75716, 75722, 75724, 75726, 75731, 75733, 75736, 75741, 75743, 75746, 75756, 75790, 75801, 75803, 75805, 75807, 75809, 75810, 75820, 75822, 75825, 75827, 75831, 75833, 75840, 75842, 75860, 75870, 75872, 75880, 75885, 75887, 75889, 75891, 75893, 75894, 75896, 75898, 75900, 75901, 75902, 75940, 75952, 75953, 75954, 75956, 75957, 75958, 75959, 75960, 75961, 75962, 75966, 75970, 75978, 75980, 75982, 75984, 75992, 75994, 75995, 76000, 76001, 76080, 76100, 76101, 76102, 76120, 76150, 76496, 77001, 77002, 77003, 77031, 77053, 77054, 77071, 92611, 93555, 93556, G0106, G0120, G0122, G0259, G0260, G0275, G0278, G0365

RATIONALE:

Data suggests that the lifetime risk for cancer can be increased, albeit by a small amount, with frequent or repeated exposure to ionizing radiation, including procedures using fluoroscopy. (NCI, 2002) The BEIR report concluded that “the linear no-threshold model (LNT) provided the most reasonable description of the relation between low-dose exposure to ionizing radiation and the incidence of solid cancers that are induced by ionizing radiation.” (NRC, 2006) In order to monitor these long-term effects, the exposure time or radiation dose that a patient receives as a result of the procedure should be measured and recorded in the patient’s record.

CLINICAL RECOMMENDATION STATEMENTS:

Radiation dose related information provided by automated dosimetry systems should be recorded in the patient’s permanent record for procedures involving more than 10 minutes of fluoroscopic exposure. If automated dosimetry data is not available, fluoroscopic exposure times should be recorded in the patient’s medical record for such procedures. (ACR, 2003)

[ACR] should now encourage practices to record actual fluoroscopy time for all fluoroscopic procedures. The fluoroscopy time for various procedures (e.g., upper gastrointestinal, pediatric voiding cystourethrography, diagnostic angiography) should then be compared with benchmark figures...More complete patient radiation dose data should be recorded for all high-dose interventional procedures, such as embolizations, transjugular intrahepatic portosystemic shunts, and arterial angioplasty or stent placement anywhere in the abdomen and pelvis. (Amis et al., ACR, 2007)