NQF IMAGING EFFICIENCY MEASURES

(1/25/2010)

TITLE/DESCRIPTION	NUMERATOR	DENOMINATOR	STEWARD
NQF #IEP-001-10 **Cancer Detection Rate** The percentage of screening mammograms interpreted as positive (BIRADS 0, 4 or 5) that had a tissue diagnosis of cancer with 12 months.	Number of screening mammograms with a BIRADS assessment category of 4 or 5, plus the number of screening mammograms with 0 that result in a tissue.	Number of screening mammograms.	American College of Radiology
NQF #IEP-002-10 **Screening Mammography Positive Predictive Value 2 (PPV2 - Biopsy Recommended)** Percentage of screening mammograms with abnormal interpretation (BIRADS 0, 4 or 5) that result in a tissue diagnosis of cancer within 12 months. The measure is to be reported annually based on aggregated patient data for mammograms performed 12 to 24 months prior to the reporting date to allow a 12 month follow up.	True positive screening cases are being measured: Of the number of screening mammograms with a BIRADS 4 or 5, or BIRADS 0 associated with a 4 or 5 on a diagnostic mammogram, the number that result in tissue diagnosis of cancer within 12 months.	Number of screening mammograms with a BIRADS 4 or 5, or BIRADS 0 associated with a 4 or 5 on a diagnostic mammogram.	American College of Radiology
NQF #IEP-003-10 **Diagnostic Mammography Positive Predictive Value 2 (PPV2 - Biopsy Recommended)** Percentage of diagnostic mammograms recommended for biopsy or surgical consult (BIRADS 4 or 5) that result in a tissue diagnosis of cancer within 12 months. The measure is to be reported annually based on aggregated patient data for mammograms performed 12 to 24 months prior to the reporting date to allow a 12 month follow up.	True positive diagnostic cases are being measured: number of diagnostic mammograms with a tissue diagnosis of breast cancer within 12 months.	Number of diagnostic mammograms with an assessment category of BIRADS 4 or 5 (recommended for biopsy or surgical consult).	American College of Radiology

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NQF #IEP-004-10 **Abnormal Interpretation Rate of Screening Mammography Exams (Recall Rate)** The percentage of screening mammograms interpreted as positive (BIRADS 0,4 or 5).	Number of screening mammograms with a final assessment category of BIRADS 0, 4 or 5.	Number of screening mammograms.	American College of Radiology
NQF #IEP-005-10 **Appropriate Pulmonary CT Imaging for Pulmonary Embolism** Percent of patients undergoing CT pulmonary angiogram for the evaluation of possible PE who have a documented indication consistent with guidelines (1) prior to CT imaging. (1) Torbicki A, Perrier A, Konstantinides S, et al. Guidelines on the diagnosis and management of acute pulmonary embolism: the Task Force for the Diagnosis and Management of Acute Pulmonary Embolism of the European Society of Cardiology (ESC). Eur Heart J. 2008 Sep;29(18):2276-315	Number of denominator patients with a documented indication consistent with guidelines prior to CT imaging.	Number of patients who have a CT pulmonary angiogram (CTPA) for the evaluation of possible pulmonary embolism.	Brigham and Women's Hospital
NQF #IEP-006-10 **Appropriate Head CT Imaging in Adults with Acute Atraumatic Headache** Percent of adults undergoing head CT for acute, atraumatic headache who have a documented indication consistent with clinical guidelines.(1) (1) Edlow JA, Panagos PD, Godwin SA, Thomas TL, Decker WW; American College of Emergency Physicians. Clinical policy: critical issues in the evaluation and management of adult patients presenting to the emergency department with acute headache. Ann Emerg Med. 2008 Oct;52(4):407-36. PubMed PMID: 18809105.	Number of denominator patients who have a documented indication consistent with the ACEP clinical policy prior to imaging.	This measure does not measure across time intervals as all numerator and denominator elements are available at the index visit.	Brigham and Women's Hospital

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NQF #IEP-007-10 **Appropriate Head CT Imaging in Adults with Mild Traumatic Brain Injury** Percent of adult patients who presented within 24 hours of a non-penetrating head injury with a Glasgow coma score (GCS) >13 and underwent head CT for trauma in the ED who have a documented indication consistent with guidelines(1) prior to imaging. (1) Jagoda AS, Bazarian JJ, Bruns JJ Jr, Cantrill SV, Gean AD, Howard PK, Ghajar J, Riggio S, Wright DW, Wears RL, Bakshy A, Burgess P, Wald MM, Whitson RR; American College of Emergency Physicians; Centers for Disease Control and Prevention. Clinical policy: neuroimaging and decision-making in adult mild traumatic brain injury in the acute setting. Ann Emerg Med. 2008 Dec;52(6):714-48. PubMed PMID: 19027497.	Number of denominator patients who have a documented indication consistent with the ACEP clinical policy for mild traumatic brain injury prior to imaging.	Number of adult patients undergoing head CT for trauma who presented within 24 hours of a non-penetrating head injury with a Glasgow Coma Scale (GCS).	Brigham and Women's Hospital
NQF #IEP-008-10 **Appropriate Cervical Spine CT Imaging in Trauma** Percent of adult patients undergoing cervical spine CT scans for trauma who have a documented evidence-based indication prior to imaging (Canadian C-Spine Rule or the NEXUS Low-Risk Criteria).	Number of denominator patients who have a documented evidence-based indication prior to imaging.	Number of adult patients undergoing cervical spine CT scans for trauma (as initial full imaging of C-spine).	Brigham and Women's Hospital
NQF #IEP-009-10 **Mammography Follow-up Rates** The Mammography Follow-up Rate measure calculates the percentage of Medicare patients with mammography screening studies done in the outpatient hospital setting that are followed within 45 days by a diagnostic mammography or	The number of Medicare beneficiaries who had a diagnostic mammography study or an ultrasound of the breast following a screening mammography study within 45 days.	Medicare beneficiaries who had a screening mammography.	Centers for Medicare and Medicaid Services

ultrasound of the breast study in an outpatient or office setting.			
TITLE/DESCRIPTION	**NUMERATOR**	**DENOMINATOR**	**STEWARD**
NQF #IEP-010-10 **Preoperative Evaluation for Low-Risk Non-Cardiac Surgery Risk Assessment** This measure calculates the percentage of low-risk, non-cardiac surgeries performed at a hospital outpatient facility with a Stress Echocardiography, SPECT MPI or Stress MRI study performed in the 30 days prior to the surgery at a hospital outpatient facility (e.g., endoscopic, superficial, cataract surgery, and breast biopsy procedures). Results are to be segmented and reported by hospital outpatient facility where the imaging procedure was performed.	Number of Stress Echocardiography, SPECT MPI and Stress MRI studies performed at the hospital outpatient facility in the 30 days preceding low-risk non-cardiac surgery.	Number of low-risk, non-cardiac surgeries performed at the hospital outpatient facility.	Centers for Medicare and Medicaid Services
NQF #IEP-011-10 **Use of Stress Echocardiography, SPECT MPI, and Cardiac Stress MRI Post CABG** This measure identifies the post-CABG patients being treated with an outpatient service in an outpatient hospital facility, who also had an imaging procedure done at a hospital outpatient facility (i.e., post-CABG patients receiving imaging procedures without exclusion /post-CABG patients seen at the hospital outpatient facility).	Out of patients in the denominator, patients who received a SPECT MPI, Stress Echocardiography or Stress MRI study not meeting exclusion criteria. The following exclusions will be applied to the numerator alone: 1. Patients with claims based indicators for silent ischemia or accelerated coronary artery disease in the 6 months preceding the imaging study; 2. Patients with catheterization, percutaneous coronary intervention (PCI) or CABG procedure in 6 months following imaging study; or 3. SPECT MPI, Stress Echocardiography or Stress MRI studies within the first 6 months following a CABG procedure.	Number of patients with a CABG procedure in the previous five (5) year period treated at a hospital outpatient department for any hospital outpatient service. CABG procedure may have been performed at a hospital unrelated to the current hospital outpatient service.	Centers for Medicare and Medicaid Services

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NQF #IEP-012-10 **Simultaneous Use of Brain Computed Tomography (CT) and Sinus Computed Tomography (CT)** This measure calculates the percentage of Brain CT studies with a simultaneous Sinus CT (i.e., Brain and Sinus CT studies performed on the same day at the same facility). Results of this measure are to be segmented and reported at the facility level.	Of studies identified in the denominator, studies with a simultaneous Sinus CT study (i.e., on the same date at the same facility as the Brain CT).	Brain CT studies.	Centers for Medicare and Medicaid Services
NQF #IEP-013-10 **Use of Brain Computed Tomography (CT) in the Emergency Department (ED) for Atraumatic Headache** This measure calculates the percentage of Emergency Department (ED) visits for headache with a coincident brain computed tomography (CT) study for Medicare beneficiaries. The results are segmented and reported at the facility level.	Of ED visits identified in the denominator, visits with a coincident Brain CT study (i.e. Brain CT studies on the same day for the same patient).	ED patient visits with a primary diagnosis code of headache.	Centers for Medicare and Medicaid Services
NQF #IEP-014-10 **Cardiac stress imaging not meeting appropriate use criteria: Preoperative evaluation in low risk surgery patients** Percentage of stress SPECT MPI and stress echo performed in low risk surgery patients for preoperative evaluation.	Number of stress SPECT MPI and stress echo performed in low risk surgery patients as a part of the preoperative evaluation.	Number of stress SPECT MPI and stress echo performed.	American College of Cardiology
NQF #IEP-015-10 **Cardiac stress imaging not meeting appropriate use criteria: Routine testing after percutaneous coronary intervention (PCI)** Percentage of all stress SPECT MPI and stress echo performed routinely after PCI, with	Number of stress SPECT MPI and stress echo performed in asymptomatic patients within 2 years of the most recent PCI	Number of stress SPECT MPI and stress echo performed.	American College of Cardiology

reference to timing of test after PCI and symptom status.			
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NQF #IEP-016-10 **Cardiac stress imaging not meeting appropriate use criteria: Testing in asymptomatic, low risk patients** Percentage of all stress SPECT MPI and stress echo performed in asymptomatic, low CHD risk patients for initial detection and risk assessment.	Number of stress SPECT MPI and stress echo performed for asymptomatic, low CHD risk patients for initial detection and risk assessment.	Number of stress SPECT MPI and stress echo performed.	American College of Cardiology
NQF #IEP-017-10 **Adequacy of data to assess appropriate use of cardiac stress imaging** Proportion of test requisitions and/or patient charts documenting use of stress SPECT MPI and stress echo with adequate data to demonstrate avoidance of common inappropriate uses.	Number of patients for which the following are recorded within the test requisition and/or patient chart 1) Symptom Status Ischemic equivalent symptom status (asymptomatic, ischemic equivalent [typical or atypical] AND 2) Presence of Prior Known CHD Yes No AND 3) Risk Category OR Procedure Documentation at time of test requisition a) If PCI, time since prior most recent PCI OR b) If preoperative evaluation, scheduled surgery OR c) If initial risk assessment in asymptomatic patient, clinician estimate of coronary heart disease risk category (ATP III criteria) * *Submission of individual clinical data variables required for Framingham risk (ATP III criteria) calculation for asymptomatic patients is recognized to place a significant data collection burden upon institutions and may not be possible based on data elements that are readily available at the imaging laboratory. As such, a clinician estimate of CHD risk will	Number of stress SPECT MPI or stress echo performed in post PCI patients, preoperative patients, or asymptomatic patients for initial risk assessment.	American College of Cardiology

NQF #IEP-017-10 **Adequacy of data to assess appropriate use of cardiac stress imaging (cont'd)**	be collected for all asymptomatic patients who are being seen for initial detection and risk assessment without known coronary heart disease. However, in making their estimate, clinicians should consider the maximum number of available patient factors used to estimate risk based on Framingham (ATP III criteria), typically age, gender, diabetes, smoking status, and use of blood pressure medication, and integrate age appropriate estimates for missing elements, such as LDL or standard blood pressure. While calculation of the estimate does not require submission of the actual clinical data elements other than the clinician estimate of CHD risk, clinicians are attesting to the accuracy of the estimate by submitting it. An audit of clinician estimates should be completed on a subset of clinicians to verify their estimates as being accurate based on the data that was available.		