New GRID 2.0 Measure Details

In 2017 and 2018, the American College of Radiology convened two multidisciplinary Technical Expert Panels for the purpose of developing new measures for use in the General Radiology Improvement Database (GRID) and in the QCDR for participants in the Merit-based Incentive Payment System.

These two panels resulted in the creation of 11 new measures which are now available for submission in the GRID registry. The purpose of these new measures is largely to encourage appropriate follow-up imaging, final report documentation, and use of low dose CT.

This document provides an overview of each new measure, along with a summary of the new data elements which must be submitted to GRID in order to calculate each measure. For more information about data submission, please contact nrdrsupport@acr.org.

*Denotes a measure that is also available for MIPS reporting as a NRDR QCDR measure.

Recommended Follow-up for Imaging Findings	
Required Data Elements	**Measure Details**
Denominator Elements: • Final report follow-up imaging recommendations • Modality Procedure • Place of service **Numerator Elements:** • Recommended follow-up imagine modality • Follow-up imaging interval **Exclusion Elements:** • Medical history	**Description:** Percentage of final reports for all patients with follow-up imaging recommended that contain an impression or conclusion that includes modalities AND time interval or range for follow-up imaging **Denominator:** All final reports for all patients, regardless of age, with follow-up imaging recommended on ultrasound, CT, MRI, PET or other nuclear medicine studies received in the ambulatory setting **Numerator:** Final reports that contain an impression or conclusion that includes modalities AND time interval or range for follow-up imaging **Exclusions:** Active diagnosis or history of cancer; lung cancer screening patients **Rationale:** The written radiology report serves as the key communication vehicle between the radiologist and referring physician. This measure is meant to ensure effective communication and thus better quality patient care.

Appropriateness: Follow-up CT Imaging for Incidentally-Detected Pulmonary Nodules According to Recommended Guidelines	
Required Data Elements	**Measure Details**
Denominator Elements: • Modality procedure • Incidental finding • Incidental mass type • Patient age **Numerator Elements:**	**Description:** Percentage of final reports for CT imaging studies with a finding of an incidental pulmonary nodule that contain an impression or conclusion that includes a recommended interval and modality for follow-up (e.g., type of imaging or biopsy) or no follow-up and source of recommendations **Denominator:** All final reports for CT imaging studies with a finding of an incidental pulmonary nodule for patients aged 35 years and older

• Final report follow-up imaging recommendations • Recommended follow-up imaging modality • Recommended follow up imaging time interval • Follow-up imaging recommendation source documented • Final report follow-up procedure recommendations • Recommended follow-up procedure type • Recommended follow-up procedure time interval • Follow-up procedure recommendation source documented **Exclusion Elements:** • Medical history • Smoking status • Number of Pack Years	**Numerator:** Final reports that contain an impression or conclusion that includes a recommended interval and modality for follow-up (e.g., type of imaging or biopsy) or no follow-up and source of recommendations (e.g., guidelines such as Fleischner Society, American Lung Association, American College of Chest Physicians) **Exclusions:** Active diagnosis or history of cancer; lung cancer screening patients; patients who are heavy smokers (30 pack-years and current smoker or quit within past 15 years) **Rationale:** With the increasing use of chest CT imaging comes an increase in incidental pulmonary nodule findings. This measure aims to encourage the use of an evidence-based approach when determining whether to recommend follow-up imaging for incidental pulmonary nodules.

Follow-up Recommendations for Incidental Findings of Simple-Appearing Cystic Renal Masses	
Required Data Elements	**Measure Details**
Denominator Elements: • Patient Age • Modality Modifier • Body Region • Incidental Finding • Incidental Mass Type • Incidental Mass Impression **Numerator Elements:** • Final Report Follow Up Imaging Recommendations **Exclusion Elements:** • Medical History • Incidental Mass Type • Incidental Mass Size	**Description:** Percentage of final reports for abdominal CT or MR imaging studies that include an incidental, simple-appearing cystic renal mass and a specific recommendation for no follow-up imaging based on radiological findings **Denominator:** All final reports for abdominal CT or MR imaging studies in patients aged 18 years and older that include a description of an incidental, simple-appearing (i.e. Bosniak I or II or equivalent) cystic renal mass **Numerator:** Final reports that include a description of an incidental simple-appearing cystic renal mass and a specific recommendation for no follow-up imaging based on radiological findings **Exclusions:** Active history or diagnosis of cancer; lymphadenopathy or other signs of metastasis; patients with cystic renal lesions that are too small to characterize; patients with any lesion that is stable for 5 years or more **Rationale:** Renal cysts are common incidental findings on abdominal CT and MRI. Because of the increasing use of cross-sectional imaging techniques, this finding is on the rise. This measure aims to encourage the use of an evidence-based approach in recommending no follow-up imaging for incidental benign-appearing renal cystic masses that reduces unnecessary CT and MRI examinations in patients who are highly unlikely to have renal cancer.

Appropriate Follow-up Imaging for Benign Adrenal Masses

Required Data Elements	Measure Details
Denominator Elements: • Patient Age • Incidental Findings • Incidental Mass Type • Incidental Mass Size • Incidental Mass Impression • Modality Procedure • Place of Service **Numerator Elements:** • Final Report Follow up Imaging recommendation **Exclusion Elements:** • Medical history • Incidental Findings • Incidental Mass Type • Incidental Mass Size	**Description:** Percentage of final reports with a finding of an incidental adrenal mass that is either ≤1.0cm or classified as likely benign with a specific recommendation for no follow-up imaging based on radiological findings **Denominator:** All final reports for patients aged 18 years and older with a finding of an incidental adrenal mass on CT or MRI imaging studies received in the ambulatory and inpatient settings that are either ≤1.0cm OR classified as likely benign by unenhanced CT or washout protocol CT, or MRI with in- and opposed-phase sequences or other equivalent institutional imaging protocols **Numerator:** Final reports describing an incidentally detected benign-appearing adrenal mass with a specific recommendation for no follow-up imaging based on radiological findings **Exclusions:** Active diagnosis or history of cancer; patients with metabolic disorders; patients with adrenal lesions >4.0cm **Rationale:** Incidental adrenal nodules are commonly found during abdominal imaging studies, and the vast majority are benign. This measure is intended to encourage radiologists to communicate appropriate recommendations for no follow-up imaging in cases where the nodule is ≤1.0cm or classified as likely benign.

*Interpretation of CT Pulmonary Angiography (CTPA) for Pulmonary Embolism (PE)

Required Data Elements	Measure Details
Denominator Elements: • Patient age • Modality Procedure • Modality Modifier • Body Region • Anatomy • Final Report Findings **Numerator Elements:** • Final Report Findings • PE Documentation	**Description:** Percentage of final reports for patients undergoing CTPA with a finding of PE that specify the branching order level of the most proximal level of embolus **Denominator:** All final reports for patients aged 18 years and older undergoing CTPA with a finding of PE **Numerator:** Final reports that specify the branching order level of the most proximal level of embolus (i.e. main, lobar, interlobar, segmental, subsegmental) **Exclusions:** None **Rationale:** This measure aims to improve the documentation related to conclusively positive PE results via CTPA by driving improvement in final report documentation to facilitate decision-making and care management by the referring physician.

*Incidental Coronary Artery Calcification Reported on Chest CT

Required Data Elements	Measure Details
Denominator Elements: • Patient Age • Patient Gender • Modality Procedure • Body Region • Contrast Usage	**Description:** Percentage of final reports for patients undergoing non-cardiac chest CT exams that note presence or absence of coronary artery calcification, or not evaluable

Numerator Elements: • Final Report Findings **Exclusion Elements:** • Procedure History	**Denominator:** All final reports for male patients aged 18-50 and female patients aged 18-65 undergoing non-cardiac non-contrast chest CT exams, or with and without contrast chest CT exams **Numerator:** Final reports that note presence or absence of coronary artery calcification, or not evaluable **Exclusions:** Patients who have received prior coronary artery bypass grafts or prior percutaneous coronary intervention with stent **Rationale:** Coronary artery calcium scoring predicts cardiovascular risk. While patients undergoing non-cardiac chest CTs are not undergoing an evaluation for coronary artery calcium scoring, there are cases where calcifications are found. This measure aims to improve communication of CAC findings to referring physicians to improve patients' cardiovascular care management.

*Use of Structured Reporting in Prostate MRI	
Required Data Elements	**Measure Details**
Denominator Elements: • Patient Age • Patient Gender • Modality Procedure • Anatomy • Clinical Focus **Numerator Elements:** • Structured Scoring System Method	**Description:** Percentage of final reports for patients undergoing prostate MRI for prostate cancer screening or surveillance that include reference to a validated scoring system such as PI-RADS **Denominator:** All final reports for male patients aged 18 years and older undergoing prostate MRI for prostate cancer screening or surveillance **Numerator:** Final reports that include reference to a validated scoring system such as PI-RADS **Exclusions:** None **Rationale:** As prostate MRI use continues to grow, there is a need for standard and consistent reporting to improve detection, characterization, localization, and risk stratification of prostate lesions. This measure aims to improve the quality of communication and diagnostic clarity of prostate MRI reports by encouraging adoption of evidence-based structured reporting by radiologists.

*Surveillance Imaging for Liver Nodules <10 mm in Patients at Risk for Hepatocellular Carcinoma (HCC)	
Required Data Elements	**Measure Details**
Denominator Elements: • Patient Age • Medical History • Clinical Focus • Anatomy **Numerator Elements:** • Final Report Follow Up Imaging Recommendations • Recommended Follow-up Imaging Modality • Recommended Follow-up Imaging Time Interval	**Description:** Percentage of final ultrasound reports with findings of liver nodules <10 mm for patients with a diagnosis of hepatitis B or cirrhosis undergoing screening and/or surveillance imaging for hepatocellular carcinoma with a specific recommendation for follow-up ultrasound imaging in 3-6 months based on radiological findings **Denominator:** All final ultrasound reports with findings of liver nodules < 10 mm for patients aged 18 years and older with a diagnosis of hepatitis B or cirrhosis undergoing screening and/or surveillance imaging for hepatocellular carcinoma **Numerator:** Final ultrasound reports with a specific recommendation for follow-up ultrasound imaging in 3-6 months based on radiological findings

Exclusion Elements: • Medical History	**Exclusions:** Active history or diagnosis of cancer **Rationale:** Because of the associated increased risk of developing HCC in patients with cirrhosis or hepatitis B, current guidelines recommend surveillance imaging at regular intervals. Patients with cirrhosis receiving this kind of regular screening have been demonstrated to have increased access to transplant, improved survival, and lower mortality. This measure aims to encourage the use of an evidence-based approach in recommending follow-up imaging with ultrasound in 3-6 months for liver lesions measuring <10 mm in patients at risk for developing hepatocellular carcinoma to reduce inappropriate high-cost imaging such as CT or MRI.

*Use of Quantitative Criteria for Oncologic FDG PET Imaging	
Required Data Elements	**Measure Details**
Denominator Elements: • Modality Procedure • Nuclear Agent • Clinical Focus • Anatomy **Numerator Elements:** • FDG PET Measurements Documented	**Description:** Percentage of final reports for all patients undergoing non-CNS oncologic FDG PET studies that include at a minimum: a. Serum glucose (e.g. finger stick at time of injection) b. Uptake time (interval from injection to initiation of imaging) c. One reference background (e.g. volumetric normal liver or mediastinal blood pool) SUV measurement, along with description of the SUV measurement type (e.g. SUVmax) and normalization method (e.g. BMI) d. At least one lesional SUV measurement OR diagnosis of "no disease-specific abnormal uptake" **Denominator:** All final reports for all patients, regardless of age, undergoing non-CNS oncologic FDG PET studies **Numerator:** Final reports for FDG PET scans that include at a minimum the above listed elements **Exclusions:** None **Rationale:** The diagnostic imaging report is the primary vehicle to communicate imaging study results in patients with cancer. Results of imaging studies often play a major role in diagnostic clarification and the development of treatment plans. This measure aims to improve the quality and comparability of final reports for FDG PET scans for patients with non-central nervous system (CNS) cancer by ensuring important core elements are included.

*Use of Low Dose Cranial CT or MRI Examinations for Patients with Ventricular Shunts	
Required Data Elements	**Measure Details**
Denominator Elements: • Patient Age • Body Region • Clinical Focus **Numerator Elements:** • Procedure Modifier • Modality Procedure **Exclusion Elements:**	**Description:** Percentage of patients aged less than 18 years with a ventricular shunt undergoing cranial imaging exams to evaluate for ventricular shunt malfunction undergoing either low dose cranial CT exams or MRI **Denominator:** All patients aged less than 18 years with a ventricular shunt undergoing cranial imaging exams to evaluate for ventricular shunt malfunction **Numerator:** Patients undergoing either low dose cranial CT exams or MRI

• Medical History	**Exclusions:** Active diagnosis or history of cancer; patients with meningitis; trauma patients **Rationale:** Advances in computed tomography (CT) technology that allow for faster scanning have led to an increase in CT scans as a modality of choice for many indications in children. This measure aims to decrease both patient and population radiation exposure in VP shunt malfunction evaluations by substituting the use of low-dose CT or MRI examinations in place of standard head CT examinations.

***Use of Low Dose CT Studies for Adults with Suspicion of Urolithiasis or Nephrolithiasis**	
Required Data Elements	**Measure Details**
Denominator Elements: • Patient Age • Medical History • Body Region • Modality Procedure • Use of Contrast • Clinical Focus **Numerator Elements:** • Procedure Modifier • Modality Procedure • Body region **Exclusion Elements:** • BMI	**Description:** Percentage of patients with a diagnosis of urolithiasis or nephrolithiasis undergoing CT imaging exams of the abdomen or pelvis to evaluate for urologic stones undergoing only low-dose CT exams of the abdomen or pelvis without intravenous contrast **Denominator:** All patients aged 18 years and older with a diagnosis of urolithiasis or nephrolithiasis undergoing CT exams of the abdomen or pelvis without intravenous contrast to evaluate for urologic stones **Numerator:** Patients undergoing only low-dose CT exams of the abdomen or pelvis **Exclusions:** Patients with a BMI of >35 or equivalent (i.e. waist circumference >88cm in women and >102 cm in men) **Rationale:** Because of its diagnostic accuracy and quick turnaround time, CT has been the modality of choice in 70% of diagnosed kidney stones in the US. However, concerns exist about the administered radiation dose inherent in standard CT examinations, particularly when it is used to diagnose conditions that are often recurrent such as urologic stones. This measure is intended to promote the use of a low dose CT protocol when performing CT studies to identify the presence or absence of urologic stones.