eMeasure Title	Use of Imaging Studies for Low Back Pain		
eMeasure Identifier (Measure Authoring Tool)	166	eMeasure Version number	6.0.000
NQF Number	0052	GUID	b6016b47-b65d-4be0-866f-1d397886ca89
Measurement Period	January 1, 20XX through December 31, 20XX		
Measure Steward	National Committee for Quality Assurance		
Measure Developer	National Committee for Quality Assurance		
Endorsed By	National Quality Forum		
Description	Percentage of patients 18-50 years of age with a diagnosis of low back pain who did not have an imaging study (plain X-ray, MRI, CT scan) within 28 days of the diagnosis.		
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Measure Scoring	Proportion		
Measure Type	Process		
Stratification	None		
Risk Adjustment	None		
Rate Aggregation	None		
Rationale	Low back pain is a pervasive problem that affects three quarters of adults at some time in their lives (Chou et al., 2012). It ranks among the top ten reasons for patient visits to internists and is the most common and expensive reason for work disability in the U.S. Low back pain is second only to upper respiratory problems as a symptom-related reason for visits to a physician (Jarvik and Deyo, 2002). Each year in the United States low back pain is experienced by 25 to 50 percent of adults, making it one of the most common reasons for seeking health care services (Haldeman and Dagenais, 2008). Low back pain results in high indirect costs from disability, lost time from work, and decreased productivity while at work, and is the number one cause for activity limitations in younger adults (Chou, 2012). The costs associated with health care services for spine pain (primarily low back pain) in the U.S. increased from $45.9 billion in 1997 to $102.6 billion in 2004 (Martin et al., 2008).		
Clinical Recommendation Statement	American College of Physicians and the American Pain Society (Chou et al., 2007) Clinicians should not routinely obtain imaging or other diagnostic tests in patients with nonspecific low back pain (strong recommendation, moderate-quality evidence). Institute for Clinical Systems Improvement (2012) Clinicians should not recommend imaging (including computed tomography [CT], magnetic resonance imaging [MRI]		

	and x-ray) for patients with non-specific low back pain (Strong Recommendation, Moderate Quality Evidence). * Low back pain assessment should include a subjective pain rating, functional status, patient history including notation of presence or absence of "red flags," psychosocial indicators, assessment of prior treatment and response, employment status, and clinician's objective assessment. * Reduce or eliminate imaging for diagnosis of non-specific low back pain in patients 18 years and older. * First-line treatment should emphasize patient education and a core treatment plan, that includes encouraging activity, use of heat, no imaging, cautious and responsible use of opioids, anti-inflammatory and analgesic over-the-counter medications and return to work assessment. * Patients with acute or subacute low back pain should be advised to stay active and continue ordinary daily activity as tolerated. * Use opioids cautiously and responsibly in the presence of acute or subacute low back pain.
Improvement Notation	Higher score indicates better quality
Reference	Chou, R., A. Qaseem, V. Snow, D. Casey, J.T. Cross Jr., P. Shekelle, D.K. Owens, and the Clinical Efficacy Assessment Subcommittee of the American College of Physicians and the American College of Physicians/American Pain Society Low Back Pain Guidelines Panel. 2007. "Diagnosis and treatment of low back pain: A joint clinical practice guideline from the American College of Physicians and the American Pain Society." Ann Intern Med 147(7): 478-491.
Reference	Chou R, et al. Radiologic Clinics of North America. Appropriate Use of Lumbar Imaging for Evaluation of Low Back Pain. 2012 Jul, Vol. 50, No. 4: 569-85.
Reference	Haldeman S, Dagenais S. A supermarket approach to the evidence informed management of chronic low back pain. Spine J 2008; 8: 1-7.
Reference	Institute for Clinical Systems Improvement. 2012. "Health Care Guideline: Adult Low Back Pain" Bloomington: Institute for Clinical Systems Improvement.
Reference	Jarvik, J.G., and R.A. Deyo. 2002. "Diagnostic evaluation of low back pain with emphasis on imaging." Ann Intern Med 137: 586-597.
Reference	Martin BI, Deyo RA, Mirza SK, et al. Expenditures and health status among adults with back and neck problems. JAMA 2008; 299: 656-64.
Definition	This measure applies to the first episode of low back pain during the measurement period.
Guidance	The outpatient or emergency department visit in the Initial Population needs to occur during the first 337 days of the measurement period (337 days allows 28 days for the numerator event). This visit must be the first visit for low back pain during the measurement period.
Transmission Format	TBD
Initial Population	Patients 18-50 years of age with a diagnosis of low back pain during an outpatient or emergency department visit
Denominator	Equals Initial Population
Denominator Exclusions	Exclude patients with a diagnosis of cancer any time in their history or patients with a diagnosis of recent trauma, IV drug abuse, or neurologic impairment during the 12-month period prior to through the 28 days after the outpatient or emergency department visit. Exclude patients with a diagnosis of low back pain within the 180 days prior to the outpatient or emergency department visit.
Numerator	Patients without an imaging study conducted on the date of the outpatient or emergency department visit or in the 28 days following the outpatient or emergency department visit
Numerator Exclusions	Not Applicable
Denominator Exceptions	None
Supplemental Data Elements	For every patient evaluated by this measure also identify payer, race, ethnicity and sex

Table of Contents

Population Criteria

- **Initial Population =**
    - AND: "Occurrence A of Diagnosis: Low Back Pain" satisfies all:

First: starts during "Measurement Period"
- starts during Occurrence A of $LBPEncounter
  - AND: Age>= 18 year(s) at: "Measurement Period"
  - AND: Age< 50 year(s) at: "Measurement Period"
- **Denominator =**
  - AND: Initial Population
- **Denominator Exclusions =**
  - OR: Union of:
    - "Diagnosis: Low Back Pain" <= 180 day(s) starts before start of "Occurrence A of Diagnosis: Low Back Pain"
    - "Diagnosis: All Cancer" starts before end of "Measurement Period"
    - $DiagnosisTraumaIVDrugNeuroImpairment <= 365 day(s) starts before or concurrent with start of Occurrence A of $LBPEncounter
    - $DiagnosisTraumaIVDrugNeuroImpairment <= 28 day(s) starts after start of Occurrence A of $LBPEncounter
- **Numerator =**
  - AND NOT: Union of:
    - "Diagnostic Study, Performed: X-Ray of Lower Spine"
    - "Diagnostic Study, Performed: MRI of Lower Spine"
    - "Diagnostic Study, Performed: CT Scan of Lower Spine"
    - <= 28 day(s) starts after start of "Occurrence A of Diagnosis: Low Back Pain"
- **Numerator Exclusions =**
  - None
- **Denominator Exceptions =**
  - None
- **Stratification =**
  - None

Data Criteria (QDM Variables)

- **$DiagnosisTraumaIVDrugNeuroImpairment =**
  - Union of:
    - "Diagnosis: Trauma"
    - "Diagnosis: IV Drug Abuse"
    - "Diagnosis: Neurologic impairment"
- **$LBPEncounter =**
  - Union of:
    - "Encounter, Performed: Office Visit"
    - "Encounter, Performed: Emergency Department Visit"
    - "Encounter, Performed: Face-to-Face Interaction"
    - <= 337 day(s) starts after start of "Measurement Period"

Data Criteria (QDM Data Elements)

- "Diagnosis: All Cancer" using "All Cancer Grouping Value Set (2.16.840.1.113883.3.464.1003.108.12.1011)"
- "Diagnosis: IV Drug Abuse" using "IV Drug Abuse Grouping Value Set (2.16.840.1.113883.3.464.1003.106.12.1003)"
- "Diagnosis: Low Back Pain" using "Low Back Pain Grouping Value Set (2.16.840.1.113883.3.464.1003.113.12.1001)"
- "Diagnosis: Neurologic impairment" using "Neurologic impairment Grouping Value Set (2.16.840.1.113883.3.464.1003.114.12.1012)"
- "Diagnosis: Trauma" using "Trauma Grouping Value Set (2.16.840.1.113883.3.464.1003.113.12.1036)"
- "Diagnostic Study, Performed: CT Scan of Lower Spine" using "CT Scan of Lower Spine Grouping Value Set (2.16.840.1.113883.3.464.1003.113.12.1035)"
- "Diagnostic Study, Performed: MRI of Lower Spine" using "MRI of Lower Spine Grouping Value Set (2.16.840.1.113883.3.464.1003.113.12.1034)"
- "Diagnostic Study, Performed: X-Ray of Lower Spine" using "X-Ray of Lower Spine Grouping Value Set (2.16.840.1.113883.3.464.1003.113.12.1033)"
- "Encounter, Performed: Emergency Department Visit" using "Emergency Department Visit Grouping Value Set (2.16.840.1.113883.3.464.1003.101.12.1010)"
- "Encounter, Performed: Face-to-Face Interaction" using "Face-to-Face Interaction Grouping Value Set (2.16.840.1.113883.3.464.1003.101.12.1048)"
- "Encounter, Performed: Office Visit" using "Office Visit Grouping Value Set (2.16.840.1.113883.3.464.1003.101.12.1001)"

Supplemental Data Elements

- "Patient Characteristic Ethnicity: Ethnicity" using "Ethnicity CDCREC Value Set (2.16.840.1.114222.4.11.837)"
- "Patient Characteristic Payer: Payer" using "Payer SOP Value Set (2.16.840.1.114222.4.11.3591)"
- "Patient Characteristic Race: Race" using "Race CDCREC Value Set (2.16.840.1.114222.4.11.836)"
- "Patient Characteristic Sex: ONC Administrative Sex" using "ONC Administrative Sex AdministrativeGender Value Set (2.16.840.1.113762.1.4.1)"

Risk Adjustment Variables

Use of Imaging Studies for Low Back Pain

- None

Measure Set	None