**Hip Arthroplasty**

**Measure #4: Venous Thromboembolic and Cardiovascular Risk Evaluation**

**Measure Description**

Percentage of patients undergoing a hip arthroplasty who are evaluated for the presence or absence of cardiovascular risk factors within 30 days prior to the procedure (e.g. history of deep venous thrombosis (DVT), pulmonary embolism (PE), myocardial infarction (MI), arrhythmia, and stroke).

**Measure Components**

<table>
<thead>
<tr>
<th>Numerator Statement</th>
<th>Patients who were evaluated for the presence or absence of cardiovascular risk factors within 30 days prior to the procedure (e.g. history of DVT, PE, MI, arrhythmia, and stroke)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Denominator Statement</td>
<td>All patients undergoing an elective primary total hip arthroplasty</td>
</tr>
<tr>
<td>Denominator Exceptions</td>
<td>None</td>
</tr>
<tr>
<td>Supporting Guideline &amp; Other References</td>
<td>The following evidence statements are quoted verbatim from the referenced clinical guidelines.</td>
</tr>
</tbody>
</table>

In patients with known coronary artery disease (CAD) or the new onset of signs or symptoms suggestive of CAD, baseline cardiac assessment should be performed. In the asymptomatic patient, a more extensive assessment of history and physical is warranted in those individuals 50 years of age or older, because the evidence related to the determination of cardiac risk factors and derivation of a Revised Cardiac Risk Index occurred in this population. Preoperative cardiac evaluation must therefore be carefully tailored to the circumstances that have prompted the evaluation and to the nature of the surgical illness. (ACC/AHA 2007)

**Measure Importance**

**Rationale**

Prior to a hip arthroplasty the patient’s venous thromboembolic and cardiovascular risk should be evaluated. A population-based study of all Olmstead County, Minnesota, patients undergoing a total hip or knee arthroplasty from 1994 - 2008, reported that patients undergoing a total hip arthroplasty with a previous history of a cardiac event or a thromboembolic event were associated with an increased risk of a 90-day cardiac event following surgery.

A study using the Danish national resident registries compared all patients undergoing a primary total hip replacement and total knee replacement from 1998 – 2007 to control groups not undergoing one of the procedures and found that the AMI rate 2 weeks after total hip replacement was increased 25-fold compared to the control group.

Any preoperative disease state should be identified and managed prior to surgery to minimize the risk of the surgical procedure.
American Association of Hip and Knee Surgeons
Primary Total Hip Arthroplasty

<table>
<thead>
<tr>
<th>National Quality Strategy Domain</th>
<th>Patient Safety</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exception Justification</td>
<td>This measure has no exceptions.</td>
</tr>
<tr>
<td>Harmonization with Existing Measures</td>
<td>Harmonization with existing measures was not applicable to this measure.</td>
</tr>
</tbody>
</table>

**Measure Designation**

| Measure purpose | • Quality improvement  
| Type of measure | • Process  
| Level of Measurement | • Individual practitioner  
| Care setting | • Ambulatory care  
| Data source | • Electronic health record (EHR) data  
| | • Paper medical record  
| | • Registry data  

**Technical Specifications**

The specifications listed below are those needed for the performance calculation.

| Denominator (Eligible Population) | All patients undergoing an elective primary total hip arthroplasty  
| CPT Service Code: 27130 (Excludes hip fractures – see addendum for exclusion codes)  
| Numerator | Patients who were evaluated for the presence or absence of cardiovascular risk factors within 30 days prior to the procedure (e.g. history of DVT, PE, MI, arrhythmia, and stroke) |