

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

Numerator Statement	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)
Denominator Statement	All patients undergoing an elective primary total hip arthroplasty
Denominator Exceptions	None
Supporting Guideline & Other References	<p>The following evidence statements are quoted <u>verbatim</u> from the referenced clinical guidelines.</p> <p>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)¹⁹</p>

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.²⁰

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.²¹

Any preoperative disease state should be identified and managed prior to surgery to minimize the risk of the surgical procedure.

National Quality Strategy Domain	Patient Safety
Exception Justification	This measure has no exceptions.
Harmonization with Existing Measures	Harmonization with existing measures was not applicable to this measure.

Measure Designation

Measure purpose	<ul style="list-style-type: none"> • Quality improvement • Accountability
Type of measure	<ul style="list-style-type: none"> • Process
Level of Measurement	<ul style="list-style-type: none"> • Individual practitioner
Care setting	<ul style="list-style-type: none"> • Ambulatory care • Hospital care
Data source	<ul style="list-style-type: none"> • 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)