## High and Moderate Intensity Statin Therapy Following Stroke

<table>
<thead>
<tr>
<th><strong>Measure Description</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Percentage of patients aged 18 years to 74 years with a diagnosis of acute ischemic stroke or TIA who were prescribed high intensity statin therapy* and patients aged 75 and older who were prescribed moderate^ or high intensity statin therapy at discharge.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Measure Components</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Numerator Statement</strong></td>
</tr>
<tr>
<td>Patients aged 18 years to 74 years with a diagnosis of acute ischemic stroke or TIA who were prescribed high intensity statin therapy* and patients aged 75 and older who were prescribed moderate^ or high intensity statin therapy at discharge.</td>
</tr>
</tbody>
</table>

**Definitions:**

*High Intensity Statin Therapy*—defined as dose expected to reduce LDL-C by greater than or equal to 50% and includes the following: (1,2)

- Atorvastatin 40-80mg everyday
- Rosuvastatin 20-40mg everyday

^Moderate Intensity Statin Therapy - defined as dose expected to reduce LDL-C by 30-50% and includes the following: (1,2)

- Atorvastatin 10-20mg everyday
- Fluvastatin 40mg twice daily
- Fluvastatin XL 80mg everyday
- Lovastatin 40mg everyday
- Pitavastatin 2-4mg everyday
- Pravastatin 40-80mg everyday
- Rosuvastatin 5-10mg everyday
- Simvastatin 20-40mg everyday

±Prescribed – May include prescription given to the patient for statin therapy at discharge OR statin therapy to be continued after discharge as documented in the discharge medication list

<table>
<thead>
<tr>
<th><strong>Denominator Statement</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>All patients aged 18 years and older with a diagnosis of acute ischemic stroke or TIA</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Denominator Exceptions</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>• Documentation of medical reason(s) for not prescribing high intensity statin therapy at discharge:</td>
</tr>
<tr>
<td>o Contraindication to statin therapy including but not limited to: liver disease, patient taking medication with significant interaction to statin, statin allergy/intolerance</td>
</tr>
<tr>
<td>o etiology of stroke presumed to be NON-atherosclerotic (e.g. cardioembolic, secondary to dissection/trauma, vasculitis, etc.) AND absence of clinical ASCVD**</td>
</tr>
<tr>
<td>• Documentation of patient reason(s) for not prescribing high intensity statin therapy at discharge:</td>
</tr>
<tr>
<td>o Patient expired during hospitalization</td>
</tr>
<tr>
<td>o patient discharged to hospice or made comfort care</td>
</tr>
</tbody>
</table>
| Exception Justification | A medical reason exception has been included so that clinicians can exclude patients for whom prescribing a statin may not be appropriate.  

A patient reason exception has been included for patients who may decline receiving a statin. This exception should remove all patients who do not have a stroke due to atherosclerotic etiology.  

**Clinical Atherosclerotic Cardiovascular Disease (ASCVD) - includes acute coronary syndromes, history of myocardial infarction, stable or unstable angina, coronary or other arterial revascularization, stroke or TIA, or peripheral atherosclerotic arterial disease.** 

| Supporting Guideline & Other References | The following clinical recommendation statements are quoted verbatim from the referenced clinical guidelines and represent the evidence base for the measure:  

- “For patients with ASCVD or diabetes mellitus, consideration should be given to use of moderate- or high-intensity statin therapy, irrespective of baseline atherogenic cholesterol levels (Strength-A, Quality-High).”(1)  
- “First-line cholesterol-lowering drug therapy, unless contraindicated, is moderate- to high-intensity statin. The statin dosage may be increased or the patient switched to a more efficacious agent, if goal levels of atherogenic cholesterol are not achieved (Strength-A, Quality-High).”(1)  
- “The appropriate intensity of statin therapy should be initiated or continued:  
  - A. Clinical ASCVD  
    - 1. Age ≤ 75 and no safety concerns: High-intensity statin (Class I; Level of Evidence A)  
    - 2. Age > 75 or safety concerns: Moderate-intensity statin (Class I; Level of Evidence A)”(2)  
- “Statin therapy with intensive lipid-lowering effects is recommended to reduce risk of stroke and cardiovascular events among patients with ischemic stroke or TIA presumed to be of atherosclerotic origin and an LDL-C level ≥100 mg/dL with or without evidence for other ASCVD (Class I; Level of Evidence B).”(3)  
- “Statin therapy with intensive lipid-lowering effects is recommended to reduce risk of stroke and cardiovascular events among patients with ischemic stroke or TIA presumed to be of atherosclerotic origin, an LDL-C level <100 mg/dL, and no evidence for other clinical ASCVD (Class I; Level of Evidence C).”(3)  

| Relationship to Desired Outcome | A large body of evidence exists supporting the use of appropriate intensity statin therapy for secondary prevention in patients with clinical atherosclerotic cardiovascular disease including patients with ischemic stroke due to large artery atherosclerosis, intrinsic small vessel disease as well as in patients with ischemic stroke not directly due to atherosclerosis but with evidence of atherosclerosis in an uninvolved cerebral or noncerebral
vascular bed.(2) The Stroke Prevention by Aggressive Reduction in Cholesterol Levels (SPARCL) study convincingly demonstrated that intensive lipid lowering therapy using statin medication was associated with significant reduction in the rate of recurrent ischemic stroke and other major coronary events.(4)

**Opportunity for Improvement**

Patients suffering from ischemic stroke frequently have atherosclerosis of cerebral or noncerebral vascular bed, or have clinical atherosclerotic cardiovascular disease and would benefit from high intensity statin therapy. However, rate of use of high intensity statin therapy is low, ranging from 15.9-20.8% among eligible patients.(5) In a review of Get with the Guideline data, only 1 in 5 patients with a prior TIA/stroke had LDL levels <70 mg/dL indicating further opportunity to improve.(6)

This measure represents current best evidence, and will be updated on a regular basis to ensure medication list is consistent with current evidence.

**National Quality Strategy Domains**

- Patient and Family Engagement
- Patient Safety
- Care Coordination
- Population/Public Health
- Efficient Use of Healthcare Resources
- Clinical Process/Effectiveness

**Harmonization with Existing Measures**

Similar measures exist, including, Lipid Management in Adult and NQF#0439 Discharged on Statin Medication (Joint Commission STK 06), but a separate measure was required to address this denominator population.(7-9) Treatment requirements and guidelines are sufficiently unique that harmonization of denominators was not possible.

**Measure Purpose** (Check all that apply)

- Quality improvement
- Accountability

**Type of Measure** (Check all that apply)

- Process
- Outcome
- Structure

**Level of Measurement** (Check all that apply)

- Individual Provider
- Practice
- System

**Care Setting** (Check all that apply)

- Emergency Departments
- Inpatient
- Outpatient
- Post-Acute Care

**Data Source** (Check all that apply)

- Electronic health record (EHR) data
- Administrative Data/Claims
- Chart Review
- Registry

**References**


