Lower-Extremity Amputation among Patients with Diabetes Rate
Technical Specifications

Prevention Quality Indicators #16 (PQI #16)
AHRQ Quality Indicators™, Version 4.5, May 2013
Area-Level Indicator
Type of Score: Rate

Description

Admissions for any-listed diagnosis of diabetes and any-listed procedure of lower-extremity amputation per 100,000 population, ages 18 years and older. Excludes any-listed diagnosis of traumatic lower-extremity amputation admissions, toe amputation admission (likely to be traumatic), obstetric admissions, and transfers from other institutions.

[NOTE: The software provides the rate per population. However, common practice reports the measure as per 100,000 population. The user must multiply the rate obtained from the software by 100,000 to report admissions per 100,000 population.]

Numerator

Discharges, for patients ages 18 years and older, with any-listed ICD-9-CM procedure codes for lower-extremity amputation and any-listed ICD-9-CM diagnosis codes for diabetes.

ICD-9-CM Lower-extremity amputation procedure codes:
8410 LOWER LIMB AMPUTAT NOS
8411 TOE AMPUTATION
8412 AMPUTATION THROUGH FOOT
8413 DISARTICULATION OF ANKLE
8414 AMPUTAT THROUGH MALLEOLI

ICD-9-CM Diabetes diagnosis codes:
25000 DMII WO CMP NT ST UNCNTR
25001 DMII WO CMP NT ST UNCNTRL
25002 DMII WO CMP UNCNTRL
25003 DMII WO CMP UNCNTRL
25010 DMII KETO NT ST UNCNTRL
25011 DMII KETO NT ST UNCNTRL
25012 DMII KETOACD UNCONTROL
25013 DMII KETOACD UNCONTROL
25020 DMII HPRSM NT ST UNCNTRL
25021 DMII HPRSM NT ST UNCNTRL
25022 DMII HPROSMLR UNCONTROL
25023 DMII HPROSMLR UNCONTROL
25030 DMII O CM NT ST UNCNTRL
25031 DMII O CM NT ST UNCNTRL
25032 DMII O CM NT ST UNCNTRL
25033 DMII O CM NT ST UNCNTRL
25040 DMII RENL NT ST UNCNTRL
25041 DMII RENL NT ST UNCNTRL
25042 DMII RENAL UNCNTRL
25043 DMII RENAL UNCNTRL
25050 DMII OPHTH NT ST UNCNTRL
25051 DMII OPHTH NT ST UNCNTRL
25052 DMII OPHTH UNCNTRL
25053 DMII OPHTH UNCNTRL
25060 DMII NEURO NT ST UNCNTRL
25061 DMII NEURO NT ST UNCNTRL
25062 DMII NEURO UNCNTRL
25063 DMII NEURO UNCNTRL
Exclude cases:

- with any-listed ICD-9-CM diagnosis codes for traumatic amputation of the lower extremity
- with any-listed ICD-9-CM procedure codes for toe amputation
- transfer from a hospital (different facility)
- transfer from a Skilled Nursing Facility (SNF) or Intermediate Care Facility (ICF)
- transfer from another health care facility
- MDC 14 (pregnancy, childbirth, and puerperium)
- with missing gender (SEX=missing), age (AGE=missing), quarter (DQTR=missing), year (YEAR=missing), principal diagnosis (DX1=missing), or county (PSTCO=missing)

See *Prevention Quality Indicators Appendices*:

- Appendix A – Admission Codes for Transfers

**ICD-9-CM Traumatic amputation of the lower extremity diagnosis codes:**

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>8950</td>
<td>AMPUTATION TOE</td>
</tr>
<tr>
<td>8951</td>
<td>AMPUTATION TOE-COMPLICAT</td>
</tr>
<tr>
<td>8960</td>
<td>AMPUTATION FOOT, UNILAT</td>
</tr>
<tr>
<td>8961</td>
<td>AMPUT FOOT, UNILAT-COMPL</td>
</tr>
<tr>
<td>8962</td>
<td>AMPUTATION FOOT, BILAT</td>
</tr>
<tr>
<td>8963</td>
<td>AMPUTAT FOOT, BILAT-COMP</td>
</tr>
<tr>
<td>8970</td>
<td>AMPUT BELOW KNEE, UNILAT</td>
</tr>
</tbody>
</table>

**ICD-9-CM Toe amputation procedure code:**

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>8411</td>
<td>TOE AMPUTATION</td>
</tr>
</tbody>
</table>

**Denominator**

Population ages 18 years and older in metropolitan area† or county. Discharges in the numerator are assigned to the denominator based on the metropolitan area or county of the patient residence, not the metropolitan area or county of the hospital where the discharge occurred.‡

† The term “metropolitan area” (MA) was adopted by the U.S. Census in 1990 and referred collectively to metropolitan statistical areas (MSAs), consolidated metropolitan statistical areas (CMSAs), and primary metropolitan statistical areas (PMSAs). In addition, “area” could refer to either 1) FIPS county, 2) modified FIPS county, 3) 1999 OMB Metropolitan Statistical Area, or 4) 2003 OMB Metropolitan Statistical Area. Microtropolitan Statistical Areas are not used in the QI software.

‡ The denominator can be specified with the diabetic population only and calculated with the SAS QI Software Version 4.5 through the condition-specific denominator at the state-level feature.