

# Inpatient Quality Indicator 11 (IQI 11) Abdominal Aortic Aneurysm (AAA) Repair Mortality Rate

**March 2017**

**Provider-Level Indicator**

**Type of Score: Rate**

**Prepared by:**

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## **DESCRIPTION**

In-hospital deaths per 1,000 discharges with abdominal aortic aneurysm (AAA) repair, ages 18 years and older. Includes metrics for discharges grouped by type of diagnosis and procedure. Excludes obstetric discharges and transfers to another hospital.

*[NOTE: The software provides the rate per hospital discharge. However, common practice reports the measure as per 1,000 discharges. The user must multiply the rate obtained from the software by 1,000 to report in-hospital deaths per 1,000 hospital discharges.]*

## **Stratification of Indicator**

The indicator is stratified into four groups by 1) type of AAA repair (open vs. endovascular) and 2) AAA rupture status.

## **Stratum assignment**

Cases are assigned to strata according to a hierarchy based on mortality, with cases being assigned to the stratum with the highest mortality for which the case qualifies. In the case of AAA Repair Mortality the current hierarchy is as follows:

Strata hierarchy (listed from highest mortality to lowest mortality):

1. Stratum A (Open repair of ruptured AAA)
2. Stratum C (Endovascular repair of ruptured AAA)
3. Stratum B (Open repair of unruptured AAA)
4. Stratum D (Endovascular repair of unruptured AAA)

**NUMERATOR OVERALL**

Number of deaths (DISP=20) among cases meeting the inclusion and exclusion rules for the denominator.

Note: The indicator is stratified into four groups by 1) type of AAA repair (open vs. endovascular) and 2) AAA rupture status

**NUMERATOR ABDOMINAL AORTIC ANEURYSM (AAA) REPAIR MORTALITY RATE  
STRATUM A: OPEN REPAIR OF RUPTURED AAA**

Number of deaths (DISP=20) among cases meeting the inclusion and exclusion rules for the denominator.

**NUMERATOR ABDOMINAL AORTIC ANEURYSM (AAA) REPAIR MORTALITY RATE  
STRATUM B: OPEN REPAIR OF UNRUPTURED AAA**

Number of deaths (DISP=20) among cases meeting the inclusion and exclusion rules for the denominator.

**NUMERATOR ABDOMINAL AORTIC ANEURYSM (AAA) REPAIR MORTALITY RATE  
STRATUM C: ENDOVASCULAR REPAIR OF RUPTURED AAA**

Number of deaths (DISP=20) among cases meeting the inclusion and exclusion rules for the denominator.

**NUMERATOR ABDOMINAL AORTIC ANEURYSM (AAA) REPAIR MORTALITY RATE  
STRATUM D: ENDOVASCULAR REPAIR OF UNRUPTURED AAA**

Number of deaths (DISP=20) among cases meeting the inclusion and exclusion rules for the denominator.

**DENOMINATOR OVERALL**

Discharges, for patients ages 18 years and older, with the following

- any-listed ICD-9-CM diagnosis codes for ruptured AAA and any-listed ICD-9-CM procedure code for open AAA repair; or
- any-listed ICD-9-CM diagnosis codes for unruptured AAA and any-listed ICD-9-CM procedure codes for open AAA repair; or
- any-listed ICD-9-CM diagnosis codes for ruptured AAA and any-listed ICD-10-CM procedure codes for endovascular AAA repair; or
- any-listed ICD-10-CM diagnosis codes for unruptured AAA and any-listed ICD-10-CM procedure codes for endovascular AAA repair

***Un-ruptured AAA diagnosis code: (PRAAA2D)***

4414 ABDOM AORTIC ANEURYSM

***Ruptured AAA diagnosis codes: (PRAAARD)***

4413 RUPT ABD AORTIC ANEURYSM

***Open AAA repair procedure codes: (PRAAARP)***

3834 AORTA RESECTION & ANAST  
3844 RESECT ABDM AORTA W REPL

3864 EXCISION OF AORTA

***Endovascular AAA repair procedure codes: (PRAAA2P)***

3971 ENDO IMPL GRFT ABD AORTA  
  
3977 TEMPORARY (PARTIAL)  
THERAPEUTIC ENDOVASCULAR  
OCCLUSUION OF VESSE

3978 ENDOVASCULAR IMPLANTATION  
OF BRANCHING OF FENESTRATED  
GRAFT(S) IN AORTA

## **DENOMINATOR STRATA**

Note: The indicator is stratified into four groups by 1) type of AAA repair (open vs. endovascular) and 2) AAA rupture status

### **DENOMINATOR ABDOMINAL AORTIC ANEURYSM (AAA) REPAIR MORTALITY RATE STRATUM A: OPEN REPAIR OF RUPTURED AAA**

Discharges otherwise qualifying for the denominator, with any-listed ICD-9-CM diagnosis code for ruptured AAA (see above) and any-listed ICD-9-CM procedure code for open AAA repair (see above).

### **DENOMINATOR ABDOMINAL AORTIC ANEURYSM (AAA) REPAIR MORTALITY RATE STRATUM B: OPEN REPAIR OF UNRUPTURED AAA**

Discharges otherwise qualifying for the denominator, with any-listed ICD-9-CM diagnosis code for unruptured AAA (see above) and any-listed ICD-9-CM procedure code for open AAA repair (see above).

### **DENOMINATOR ABDOMINAL AORTIC ANEURYSM (AAA) REPAIR MORTALITY RATE STRATUM C: ENDOVASCULAR REPAIR OF RUPTURED AAA**

Discharges otherwise qualifying for the denominator, with any-listed ICD-9-CM diagnosis code for unruptured AAA (see above) and any-listed ICD-9-CM procedure code for endovascular AAA repair (see above).

### **DENOMINATOR ABDOMINAL AORTIC ANEURYSM (AAA) REPAIR MORTALITY RATE STRATUM D: ENDOVASCULAR REPAIR OF UNRUPTURED AAA**

Discharges otherwise qualifying for the denominator, with any-listed ICD-9-CM diagnosis code for unruptured AAA (see above) and any-listed ICD-9-CM procedure code for endovascular AAA repair (see above).

## **DENOMINATOR EXCLUSIONS**

Exclude cases:

- transferring to another short-term hospital (DISP=2)
- MDC 14 (pregnancy, childbirth, and puerperium)
- with missing discharge disposition (DISP=missing), gender (SEX=missing), age (AGE=missing), quarter (DQTR=missing), year (YEAR=missing) or principal diagnosis (DX1=missing)