



**AHRQ Quality Indicators™ (AHRQ QI™)
ICD-9-CM and ICD-10-CM/PCS
Specification Enhanced Version 5.0**

**Inpatient Quality Indicators #4 (IQI #4)
Abdominal Aortic Aneurysm (AAA)
Repair Volume**

**October 2015
Provider-Level Indicator
Type of Score: Volume**

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IQI #4 Abdominal Aortic Aneurysm (AAA) Repair Volume

DESCRIPTION
The number of hospital discharges with a procedure for abdominal aortic aneurysm (AAA) repair for patients 18 years and older or obstetric patients. Includes optional metrics for the number of discharges grouped by rupture status and procedure type.
Stratification of Indicator
<p>The indicator is stratified into four groups by 1) type of AAA repair (open vs. endovascular) and 2) AAA rupture status.</p> <p>Cases are assigned to strata according to a hierarchy based on mortality, with cases being assigned to the stratum with the highest mortality rate for which the case qualifies. In the case of AAA Repair Volume the current hierarchy is as follows:</p> <p>Strata hierarchy (listed from highest mortality to lowest mortality):</p> <ol style="list-style-type: none">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)

IQI #4 Abdominal Aortic Aneurysm (AAA) Repair Volume

NUMERATOR OVERALL

Overall:

Discharges, for patients ages 18 years and older or MDC 14 (pregnancy, childbirth, and puerperium), with either

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

Un-ruptured AAA diagnosis code: (PRAAA2D)

ICD-9-CM	Description	ICD-10-CM	Description
4414	ABDOM AORTIC ANEURYSM	I714	Abdominal aortic aneurysm, without rupture

Ruptured AAA diagnosis code: (PRAAARD)

ICD-9-CM	Description	ICD-10-CM	Description
4413	RUPT ABD AORTIC ANEURYSM	I713	Abdominal aortic aneurysm, ruptured

Open AAA repair procedure codes: (PRAAARP)

ICD-9-CM	Description	ICD-10-PCS	Description
3834	AORTA RESECTION & ANAST	04500ZZ	Destruction of Abdominal Aorta, Open Approach
3844	RESECT ABDM AORTA W REPL	04503ZZ	Destruction of Abdominal Aorta, Percutaneous Approach

3864	EXCISION OF AORTA	04504ZZ	Destruction of Abdominal Aorta, Percutaneous Endoscopic Approach
		04B00ZZ	Excision of Abdominal Aorta, Open Approach
		04B03ZZ	Excision of Abdominal Aorta, Percutaneous Approach
		04B04ZZ	Excision of Abdominal Aorta, Percutaneous Endoscopic Approach
		04R007Z	Replacement of Abdominal Aorta with Autologous Tissue Substitute, Open Approach
		04R00JZ	Replacement of Abdominal Aorta with Synthetic Substitute, Open Approach
		04R00KZ	Replacement of Abdominal Aorta with Nonautologous Tissue Substitute, Open Approach
		04R047Z	Replacement of Abdominal Aorta with Autologous Tissue Substitute, Percutaneous Endoscopic Approach
		04R04JZ	Replacement of Abdominal Aorta with Synthetic Substitute, Percutaneous Endoscopic Approach
		04R04KZ	Replacement of Abdominal Aorta with Nonautologous Tissue Substitute, Percutaneous Endoscopic Approach

Endovascular AAA repair procedure codes: (PRAAA2P)

ICD-9-CM	Description	ICD-10-PCS	Description
3971	ENDO IMPL GRFT ABD AORTA	04U03JZ	Supplement Abdominal Aorta with Synthetic Substitute, Percutaneous Approach
3977	TEMPORARY (PARTIAL) THERAPEUTIC ENDOVASCULAR OCCLUSION OF VESSEL	04U04JZ	Supplement Abdominal Aorta with Synthetic Substitute, Percutaneous Endoscopic Approach
3978	ENDOVASCULAR IMPLANTATION OF BRANCHING OF FENESTRATED GRAFT(S) IN AORTA	04V03DZ	Restriction of Abdominal Aorta with Intraluminal Device, Percutaneous Approach
		04V04DZ	Restriction of Abdominal Aorta with Intraluminal Device, Percutaneous Endoscopic Approach

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

NUMERATOR STRATUM A (Open repair of ruptured AAA)
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Discharges, for patients ages 18 years and older or MDC 14 (pregnancy, childbirth, and puerperium), with any-listed ICD-9-CM or ICD-10-CM diagnosis codes for ruptured AAA (see above) and any-listed ICD-9-CM or ICD-10-PCS procedure code for open AAA repair (see above).
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Note: The indicator is stratified into four groups by 1) type of AAA repair (open vs. endovascular) and 2) AAA rupture status.

NUMERATOR STRATUM B (Open repair of unruptured AAA)
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Discharges, for patients ages 18 years and older or MDC 14 (pregnancy, childbirth, and puerperium), with any-listed ICD-9-CM or ICD-10-CM diagnosis codes for un-ruptured AAA (see above) and any-listed ICD-9-CM or ICD-10-PCS procedure codes for open AAA repair (see above).
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Note: The indicator is stratified into four groups by 1) type of AAA repair (open vs. endovascular) and 2) AAA rupture status.

NUMERATOR STRATUM C (Endovascular repair of ruptured AAA)
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Discharges, for patients ages 18 years and older or MDC 14 (pregnancy, childbirth, and puerperium), with any-listed ICD-9-CM or ICD-10-CM diagnosis codes for ruptured AAA (see above) and any-listed ICD-9-CM or ICD-10-PCS procedure codes for endovascular AAA repair (see above).

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

NUMERATOR STRATUM D (Endovascular repair of unruptured AAA)

Discharges, for patients ages 18 years and older or MDC 14 (pregnancy, childbirth, and puerperium), with any-listed ICD-9-CM or ICD-10-CM diagnosis codes for un-ruptured AAA (see above) and any-listed ICD-9-CM or ICD-10-PCS procedure codes for endovascular AAA repair (see above).

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NUMERATOR EXCLUSIONS

Note: Numerator Exclusions are identical for Overall, Stratum A, Stratum B, Stratum C and Stratum D

Exclude cases:

- with missing gender (SEX=missing), age (AGE=missing), quarter (DQTR=missing), year (YEAR=missing) or principal diagnosis (DX1=missing)

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DENOMINATOR
Note: The Denominators are identical for Overall and Strata A, B, C and D
<i>Not Applicable</i>

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DENOMINATOR EXCLUSIONS
Note: The Denominator Exclusions are identical for Overall and Strata A, B, C and D
<i>Not Applicable</i>