



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

**Inpatient Quality Indicators #12 (IQI #12)
Coronary Artery Bypass Graft (CABG)
Mortality Rate**

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

Prepared by:

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IQI #12 Coronary Artery Bypass Graft (CABG) Mortality Rate

DESCRIPTION

In-hospital deaths per 1,000 discharges with coronary artery bypass graft (CABG), ages 40 years and older. 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

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

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NUMERATOR EXCLUSIONS
<i>Not Applicable</i>

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DENOMINATOR			
Discharges, for patients ages 40 years and older, with any-listed ICD-9-CM or ICD-10-PCS procedure code for CABG.			
<i>CABG procedure codes: (PRCABGP)</i>			
ICD-9-CM	Description	ICD-10-PCS	Description
3610	AORTOCORONARY BYPASS NOS	0210093	Bypass Coronary Artery, One Site from Coronary Artery with Autologous Venous Tissue, Open Approach
3611	AORTOCOR BYPAS-1 COR ART	0210098	Bypass Coronary Artery, One Site from Right Internal Mammary with Autologous Venous Tissue, Open Approach
3612	AORTOCOR BYPAS-2 COR ART	0210099	Bypass Coronary Artery, One Site from Left Internal Mammary with Autologous Venous Tissue, Open Approach
3613	AORTOCOR BYPAS-3 COR ART	021009C	Bypass Coronary Artery, One Site from Thoracic Artery with Autologous Venous Tissue, Open Approach
3614	AORTCOR BYPAS-4+ COR ART	021009F	Bypass Coronary Artery, One Site from Abdominal Artery with Autologous Venous Tissue, Open Approach
3615	INT MAM-COR ART BYPASS	021009W	Bypass Coronary Artery, One Site from Aorta with Autologous Venous Tissue, Open Approach
3616	INT MAM-COR ART BYPASS	02100A3	Bypass Coronary Artery, One Site from Coronary Artery with Autologous Arterial Tissue, Open Approach

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3617	ABD-CORON ART BYPASS	02100A8	Bypass Coronary Artery, One Site from Right Internal Mammary with Autologous Arterial Tissue, Open Approach
3619	HRT REVAS BYPS ANAS NEC	02100A9	Bypass Coronary Artery, One Site from Left Internal Mammary with Autologous Arterial Tissue, Open Approach
		02100AC	Bypass Coronary Artery, One Site from Thoracic Artery with Autologous Arterial Tissue, Open Approach
		02100AF	Bypass Coronary Artery, One Site from Abdominal Artery with Autologous Arterial Tissue, Open Approach
		02100AW	Bypass Coronary Artery, One Site from Aorta with Autologous Arterial Tissue, Open Approach
		02100J3	Bypass Coronary Artery, One Site from Coronary Artery with Synthetic Substitute, Open Approach
		02100J8	Bypass Coronary Artery, One Site from Right Internal Mammary with Synthetic Substitute, Open Approach
		02100J9	Bypass Coronary Artery, One Site from Left Internal Mammary with Synthetic Substitute, Open Approach
		02100JC	Bypass Coronary Artery, One Site from Thoracic Artery with Synthetic Substitute, Open Approach
		02100JF	Bypass Coronary Artery, One Site from Abdominal Artery with Synthetic Substitute, Open Approach

02100JW	Bypass Coronary Artery, One Site from Aorta with Synthetic Substitute, Open Approach
02100K3	Bypass Coronary Artery, One Site from Coronary Artery with Nonautologous Tissue Substitute, Open Approach
02100K8	Bypass Coronary Artery, One Site from Right Internal Mammary with Nonautologous Tissue Substitute, Open Approach
02100K9	Bypass Coronary Artery, One Site from Left Internal Mammary with Nonautologous Tissue Substitute, Open Approach
02100KC	Bypass Coronary Artery, One Site from Thoracic Artery with Nonautologous Tissue Substitute, Open Approach
02100KF	Bypass Coronary Artery, One Site from Abdominal Artery with Nonautologous Tissue Substitute, Open Approach
02100KW	Bypass Coronary Artery, One Site from Aorta with Nonautologous Tissue Substitute, Open Approach
02100Z3	Bypass Coronary Artery, One Site from Coronary Artery, Open Approach
02100Z8	Bypass Coronary Artery, One Site from Right Internal Mammary, Open Approach
02100Z9	Bypass Coronary Artery, One Site from Left Internal Mammary, Open Approach
02100ZC	Bypass Coronary Artery, One Site from Thoracic Artery, Open Approach
02100ZF	Bypass Coronary Artery, One Site from Abdominal Artery, Open Approach

0211093	Bypass Coronary Artery, Two Sites from Coronary Artery with Autologous Venous Tissue, Open Approach
0211098	Bypass Coronary Artery, Two Sites from Right
0211099	Bypass Coronary Artery, Two Sites from Left Internal Mammary with Autologous Venous Tissue, Open Approach
021109C	Bypass Coronary Artery, Two Sites from Thoracic Artery with Autologous Venous Tissue, Open Approach
021109F	Bypass Coronary Artery, Two Sites from Abdominal Artery with Autologous Venous Tissue, Open Approach
021109W	Bypass Coronary Artery, Two Sites from Aorta with Autologous Venous Tissue, Open Approach
02110A3	Bypass Coronary Artery, Two Sites from Coronary Artery with Autologous Arterial Tissue, Open Approach
02110A8	Bypass Coronary Artery, Two Sites from Right Internal Mammary with Autologous Arterial Tissue, Open Approach
02110A9	Bypass Coronary Artery, Two Sites from Left Internal Mammary with Autologous Arterial Tissue, Open Approach
02110AC	Bypass Coronary Artery, Two Sites from Thoracic Artery with Autologous Arterial Tissue, Open Approach

02110AF	Bypass Coronary Artery, Two Sites from Abdominal Artery with Autologous Arterial Tissue, Open Approach
02110AW	Bypass Coronary Artery, Two Sites from Aorta with Autologous Arterial Tissue, Open Approach
02110J3	Bypass Coronary Artery, Two Sites from Coronary Artery with Synthetic Substitute, Open Approach
02110J8	Bypass Coronary Artery, Two Sites from Right Internal Mammary with Synthetic Substitute, Open Approach
02110J9	Bypass Coronary Artery, Two Sites from Left Internal Mammary with Synthetic Substitute, Open Approach
02110JC	Bypass Coronary Artery, Two Sites from Thoracic Artery with Synthetic Substitute, Open Approach
02110JF	Bypass Coronary Artery, Two Sites from Abdominal Artery with Synthetic Substitute, Open Approach
02110JW	Bypass Coronary Artery, Two Sites from Aorta with Synthetic Substitute, Open Approach
02110K3	Bypass Coronary Artery, Two Sites from Coronary Artery with Nonautologous Tissue Substitute, Open Approach
02110K8	Bypass Coronary Artery, Two Sites from Right Internal Mammary with Nonautologous Tissue Substitute, Open Approach

02110K9	Bypass Coronary Artery, Two Sites from Left Internal Mammary with Nonautologous Tissue Substitute, Open Approach
02110KC	Bypass Coronary Artery, Two Sites from Thoracic Artery with Nonautologous Tissue Substitute, Open Approach
02110KF	Bypass Coronary Artery, Two Sites from Abdominal Artery with Nonautologous Tissue Substitute, Open Approach
02110KW	Bypass Coronary Artery, Two Sites from Aorta with Nonautologous Tissue Substitute, Open Approach
02110Z3	Bypass Coronary Artery, Two Sites from Coronary Artery, Open Approach
02110Z8	Bypass Coronary Artery, Two Sites from Right Internal Mammary, Open Approach
02110Z9	Bypass Coronary Artery, Two Sites from Left Internal Mammary, Open Approach
02110ZC	Bypass Coronary Artery, Two Sites from Thoracic Artery, Open Approach
02110ZF	Bypass Coronary Artery, Two Sites from Abdominal Artery, Open Approach
0212093	Bypass Coronary Artery, Three Sites from Coronary Artery with Autologous Venous Tissue, Open Approach
0212098	Bypass Coronary Artery, Three Sites from Right Internal Mammary with Autologous Venous Tissue, Open Approach

0212099	Bypass Coronary Artery, Three Sites from Left Internal Mammary with Autologous Venous Tissue, Open Approach
021209C	Bypass Coronary Artery, Three Sites from Thoracic Artery with Autologous Venous Tissue, Open Approach
021209F	Bypass Coronary Artery, Three Sites from Abdominal Artery with Autologous Venous Tissue, Open Approach
021209W	Bypass Coronary Artery, Three Sites from Aorta with Autologous Venous Tissue, Open Approach
02120A3	Bypass Coronary Artery, Three Sites from Coronary Artery with Autologous Arterial Tissue, Open Approach
02120A8	Bypass Coronary Artery, Three Sites from Right Internal Mammary with Autologous Arterial Tissue, Open Approach
02120A9	Bypass Coronary Artery, Three Sites from Left Internal Mammary with Autologous Arterial Tissue, Open Approach
02120AC	Bypass Coronary Artery, Three Sites from Thoracic Artery with Autologous Arterial Tissue, Open Approach
02120AF	Bypass Coronary Artery, Three Sites from Abdominal Artery with Autologous Arterial Tissue, Open Approach
02120AW	Bypass Coronary Artery, Three Sites from Aorta with Autologous Arterial Tissue, Open Approach

02120J3	Bypass Coronary Artery, Three Sites from Coronary Artery with Synthetic Substitute, Open Approach
02120J8	Bypass Coronary Artery, Three Sites from Right Internal Mammary with Synthetic Substitute, Open Approach
02120J9	Bypass Coronary Artery, Three Sites from Left Internal Mammary with Synthetic Substitute, Open Approach
02120JC	Bypass Coronary Artery, Three Sites from Thoracic Artery with Synthetic Substitute, Open Approach
02120JF	Bypass Coronary Artery, Three Sites from Abdominal Artery with Synthetic Substitute, Open Approach
02120JW	Bypass Coronary Artery, Three Sites from Aorta with Synthetic Substitute, Open Approach
02120K3	Bypass Coronary Artery, Three Sites from Coronary Artery with Nonautologous Tissue Substitute, Open Approach
02120K8	Bypass Coronary Artery, Three Sites from Right Internal Mammary with Nonautologous Tissue Substitute, Open Approach
02120K9	Bypass Coronary Artery, Three Sites from Left Internal Mammary with Nonautologous Tissue Substitute, Open Approach
02120KC	Bypass Coronary Artery, Three Sites from Thoracic Artery with Nonautologous Tissue Substitute, Open Approach

02120KF	Bypass Coronary Artery, Three Sites from Abdominal Artery with Nonautologous Tissue Substitute, Open Approach
02120KW	Bypass Coronary Artery, Three Sites from Aorta with Nonautologous Tissue Substitute, Open Approach
02120Z3	Bypass Coronary Artery, Three Sites from Coronary Artery, Open Approach
02120Z8	Bypass Coronary Artery, Three Sites from Right Internal Mammary, Open Approach
02120Z9	Bypass Coronary Artery, Three Sites from Left Internal Mammary, Open Approach
02120ZC	Bypass Coronary Artery, Three Sites from Thoracic Artery, Open Approach
02120ZF	Bypass Coronary Artery, Three Sites from Abdominal Artery, Open Approach
0213093	Bypass Coronary Artery, Four or More Sites from Coronary Artery with Autologous Venous Tissue, Open Approach
0213098	Bypass Coronary Artery, Four or More Sites from Right Internal Mammary with Autologous Venous Tissue, Open Approach
0213099	Bypass Coronary Artery, Four or More Sites from Left Internal Mammary with Autologous Venous Tissue, Open Approach
021309C	Bypass Coronary Artery, Four or More Sites from Thoracic Artery with Autologous Venous Tissue, Open Approach
021309F	Bypass Coronary Artery, Four or More Sites from Abdominal Artery with Autologous Venous Tissue, Open Approach

021309W	Bypass Coronary Artery, Four or More Sites from Aorta with Autologous Venous Tissue, Open Approach
02130A3	Bypass Coronary Artery, Four or More Sites from Coronary Artery with Autologous Arterial Tissue, Open Approach
02130A8	Bypass Coronary Artery, Four or More Sites from Right Internal Mammary with Autologous Arterial Tissue, Open Approach
02130A9	Bypass Coronary Artery, Four or More Sites from Left Internal Mammary with Autologous Arterial Tissue, Open Approach
02130AC	Bypass Coronary Artery, Four or More Sites from Thoracic Artery with Autologous Arterial Tissue, Open Approach
02130AF	Bypass Coronary Artery, Four or More Sites from Abdominal Artery with Autologous Arterial Tissue, Open Approach
02130AW	Bypass Coronary Artery, Four or More Sites from Aorta with Autologous Arterial Tissue, Open Approach
02130J3	Bypass Coronary Artery, Four or More Sites from Coronary Artery with Synthetic Substitute, Open Approach
02130J8	Bypass Coronary Artery, Four or More Sites from Right Internal Mammary with Synthetic Substitute, Open Approach

02130J9	Bypass Coronary Artery, Four or More Sites from Left Internal Mammary with Synthetic Substitute, Open Approach
02130JC	Bypass Coronary Artery, Four or More Sites from Thoracic Artery with Synthetic Substitute, Open Approach
02130JF	Bypass Coronary Artery, Four or More Sites from Abdominal Artery with Synthetic Substitute, Open Approach
02130JW	Bypass Coronary Artery, Four or More Sites from Aorta with Synthetic Substitute, Open Approach
02130K3	Bypass Coronary Artery, Four or More Sites from Coronary Artery with Nonautologous Tissue Substitute, Open Approach
02130K8	Bypass Coronary Artery, Four or More Sites from Right Internal Mammary with Nonautologous Tissue Substitute, Open Approach
02130K9	Bypass Coronary Artery, Four or More Sites from Left Internal Mammary with Nonautologous Tissue Substitute, Open Approach
02130KC	Bypass Coronary Artery, Four or More Sites from Thoracic Artery with Nonautologous Tissue Substitute, Open Approach
02130KF	Bypass Coronary Artery, Four or More Sites from Abdominal Artery with Nonautologous Tissue Substitute, Open Approach
02130KW	Bypass Coronary Artery, Four or More Sites from Aorta with Nonautologous Tissue Substitute, Open Approach

02130Z3	Bypass Coronary Artery, Four or More Sites from Coronary Artery, Open Approach
02130Z8	Bypass Coronary Artery, Four or More Sites from Right Internal Mammary, Open Approach
02130Z9	Bypass Coronary Artery, Four or More Sites from Left Internal Mammary, Open Approach
02130ZC	Bypass Coronary Artery, Four or More Sites from Thoracic Artery, Open Approach
02130ZF	Bypass Coronary Artery, Four or More Sites from Abdominal Artery, Open Approach

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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)