



# Inpatient Quality Indicator 25 (IQI 25) Bilateral Cardiac Catheterization Rate

**March 2017**

**Provider-Level Indicator**

**Type of Score: Rate**

**Prepared by:**

Agency for Healthcare Research and Quality

U.S. Department of Health and Human Services

[www.qualityindicators.ahrq.gov](http://www.qualityindicators.ahrq.gov)

**DESCRIPTION**

Bilateral cardiac catheterization discharges per 1,000 heart catheterizations discharges for coronary artery disease for patients ages 18 years and older. Excludes valid indications for right-side catheterization discharges and obstetric discharges.

*[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 specific procedure discharges per 1,000 hospital discharges.]*

**NUMERATOR**

Discharges, among cases meeting the inclusion and exclusion rules for the denominator, with any-listed ICD-9-CM procedure codes for right and left heart catheterization without any-listed ICD-9-CM diagnosis codes for indications for right-sided catheterization.

***Right and left heart catheterization procedure codes: (PRCATHP)***

3723 RT/LEFT HEART CARD CATH

***Indications for right-sided catheterization diagnosis codes: (PRCAT2D)***

3910	ACUTE RHEUMATIC PERICARD	42511	HYPERTROPHIC OBSTRUCTIVE CARDIOMYOPATHY
3911	ACUTE RHEUMATIC ENDOCARD	42518	OTHER HYPERTROPHIC CARDIOMYOPATHY
3912	AC RHEUMATIC MYOCARDITIS	4252	OBSC AFRIC CARDIOMYOPATH
3918	AC RHEUMAT HRT DIS NEC	4253	ENDOCARD FIBROELASTOSIS
3919	AC RHEUMAT HRT DIS NOS	4254	PRIM CARDIOMYOPATHY NEC
3920	RHEUM CHOREA W HRT INVOL	4255	ALCOHOLIC CARDIOMYOPATHY
393	CHR RHEUMATIC PERICARD	4257	METABOLIC CARDIOMYOPATHY
3940	MITRAL STENOSIS	4258	CARDIOMYOPATH IN OTH DIS
3941	RHEUMATIC MITRAL INSUFF	4259	SECOND CARDIOMYOPATH NOS
3942	MITRAL STENOSIS W INSUFF	4280	CHF NOS
3949	MITRAL VALVE DIS NEC/NOS	4281	LEFT HEART FAILURE
3960	MITRAL/AORTIC STENOSIS	42820	SYSTOLIC HRT FAILURE NOS
3961	MITRAL STENOS/AORT INSUF	42821	AC SYSTOLIC HRT FAILURE
3962	MITRAL INSUF/AORT STENOS	42822	CHR SYSTOLIC HRT FAILURE
3963	MITRAL/AORTIC VAL INSUFF	42823	AC ON CHR SYST HRT FAIL
3968	MITR/AORTIC MULT INVOLV	42830	DIASTOLC HRT FAILURE NOS
3969	MITRAL/AORTIC V DIS NOS	42831	AC DIASTOLIC HRT FAILURE
3970	TRICUSPID VALVE DISEASE	42832	CHR DIASTOLIC HRT FAIL
3971	RHEUM PULMON VALVE DIS	42833	AC ON CHR DIAST HRT FAIL
3979	RHEUM ENDOCARDITIS NOS	42840	SYST/DIAST HRT FAIL NOS
3980	RHEUMATIC MYOCARDITIS	42841	AC SYST/DIASTOL HRT FAIL
39890	RHEUMATIC HEART DIS NOS	42842	CHR SYST/DIASTL HRT FAIL
39891	RHEUMATIC HEART FAILURE	42843	AC/CHR SYST/DIA HRT FAIL
39899	RHEUMATIC HEART DIS NEC	4289	HEART FAILURE NOS
40200	MAL HYPERTEN HRT DIS NOS	7450	COMMON TRUNCUS
40201	MAL HYPERT HRT DIS W CHF	74510	COMPL TRANSPOS GREAT VES
40210	BEN HYPERTEN HRT DIS NOS	74511	DOUBLE OUTLET RT VENTRIC
40211	BENIGN HYP HRT DIS W CHF	74512	CORRECT TRANSPOS GRT VES
40290	HYPERTENSIVE HRT DIS NOS	74519	TRANSPOS GREAT VESS NEC
40291	HYPERTEN HEART DIS W CHF	7452	TETRALOGY OF FALLOT

40400	MAL HY HT/REN W/O HF/RF	7453	COMMON VENTRICLE
40401	MAL HYPER HRT/REN W HF	7454	VENTRICULAR SEPT DEFECT
40402	MAL HY HT/REN W REN FAIL	7455	SECUNDUM ATRIAL SEPT DEF
40403	MAL HYP HRT/REN W HF/RF	74560	ENDOCARD CUSHION DEF NOS
40410	BEN HY HT/REN W/O HF/RF	74561	OSTIUM PRIMUM DEFECT
40411	BEN HYPER HRT/REN W HF	74569	ENDOCARD CUSHION DEF NEC
40412	BEN HY HT/REN W REN FAIL	7457	COR BILOCULARE
40413	BEN HYP HRT/REN W HF/RF	7458	SEPTAL CLOSURE ANOM NEC
40490	HY HT/REN NOS W/O HF/RF	7459	SEPTAL CLOSURE ANOM NOS
40491	HYPER HRT/REN NOS W HF	74600	PULMONARY VALVE ANOM NOS
40492	HY HT/REN NOS W REN FAIL	74601	CONG PULMON VALV ATRESIA
40493	HYP HRT/REN NOS W HF/RF	74602	CONG PULMON VALVE STENOS
4150	ACUTE COR PULMONALE	74609	PULMONARY VALVE ANOM NEC
4151	PULMON EMBOLISM/INFARCT	7461	CONG TRICUSP ATRES/STEN
41511	IATROGEN PULM EMB/INFARCT	7462	EBSTEINS ANOMALY
41512	SEPTIC PULMONARY EMBOLISM	7463	CONG AORTA VALV STENOSIS
41513	SADDLE EMBOLUS OF PULMONARY ARTERY	7464	CONG AORTA VALV INSUFFIC
41519	PULM EMBOL/INFARCT NEC	7465	CONGEN MITRAL STENOSIS
4160	PRIM PULM HYPERTENSION	7466	CONG MITRAL INSUFFICIENC
4161	KYPHOSCOLIOTIC HEART DIS	7467	HYPOPLAS LEFT HEART SYND
4168	CHR PULMON HEART DIS NEC	74681	CONG SUBAORTIC STENOSIS
4169	CHR PULMON HEART DIS NOS	74682	COR TRIARIATUM
4170	ARTERIOVEN FISTU PUL VES	74683	INFUNDIB PULMON STENOSIS
4171	PULMON ARTERY ANEURYSM	74684	OBSTRUCT HEART ANOM NEC
4178	PULMON CIRCULAT DIS NEC	74685	CORONARY ARTERY ANOMALY
4179	PULMON CIRCULAT DIS NOS	74686	CONGENITAL HEART BLOCK
4200	AC PERICARDIT IN OTH DIS	74687	MALPOSITION OF HEART
42090	ACUTE PERICARDITIS NOS	74689	CONG HEART ANOMALY NEC
42091	AC IDIOPATH PERICARDITIS	7469	CONG HEART ANOMALY NOS
42099	ACUTE PERICARDITIS NEC	7470	PATENT DUCTUS ARTERIOSUS
4210	AC/SUBAC BACT ENDOCARD	74710	COARCTATION OF AORTA
4211	AC ENDOCARDIT IN OTH DIS	74711	INTERRUPT OF AORTIC ARCH
4219	AC/SUBAC ENDOCARDIT NOS	74720	CONG ANOM OF AORTA NOS
4220	AC MYOCARDIT IN OTH DIS	74721	ANOMALIES OF AORTIC ARCH
42290	ACUTE MYOCARDITIS NOS	74722	AORTIC ATRESIA/STENOSIS
42291	IDIOPATHIC MYOCARDITIS	74729	CONG ANOM OF AORTA NEC
42292	SEPTIC MYOCARDITIS	7473	PULMONARY ARTERY ANOM
42293	TOXIC MYOCARDITIS	74731	PULMONARY ARTERY COARCTATION AND ATRESIA
42299	ACUTE MYOCARDITIS NEC	74740	GREAT VEIN ANOMALY NOS
4230	HEMOPERICARDIUM	74741	TOT ANOM PULM VEN CONN
4231	ADHESIVE PERICARDITIS	74742	PART ANOM PULM VEN CONN
4232	CONSTRUCTIV PERICARDITIS	74749	GREAT VEIN ANOMALY NEC

4233	CARDIAC TAMPONADE	7475	UMBILICAL ARTERY ABSENCE
4238	PERICARDIAL DISEASE NEC	74760	UNSP PRPHERL VASC ANOMAL
4239	PERICARDIAL DISEASE NOS	74761	GSTRONTEST VESL ANOMALY
4240	MITRAL VALVE DISORDER	74762	RENAL VESSEL ANOMALY
4241	AORTIC VALVE DISORDER	74763	UPR LIMB VESSEL ANOMALY
4242	NONRHEUM TRICUSP VAL DIS	74764	LWR LIMB VESSEL ANOMALY
4243	PULMONARY VALVE DISORDER	74769	OTH SPCF PRPH VSCL ANOML
42490	ENDOCARDITIS NOS	74781	CEREBROVASCULAR ANOMALY
42491	ENDOCARDITIS IN OTH DIS	74782	SPINAL VESSEL ANOMALY
42499	ENDOCARDITIS NEC	74783	PERSISTENT FETAL CIRC
4250	ENDOMYOCARDIAL FIBROSIS	74789	CIRCULATORY ANOMALY NEC
4251	HYPERTR OBSTR CARDIOMYOP	7479	CIRCULATORY ANOMALY NOS

**DENOMINATOR**

Discharges, for patients ages 18 years and older, with any-listed ICD-9-CM procedure codes for heart catheterization and any-listed ICD-9-CM diagnosis codes for coronary artery disease.

***Heart catheterization procedure codes: (PRCAT2P)***

3722	LEFT HEART CARDIAC CATH	3723	RT/LEFT HEART CARD CATH
------	-------------------------	------	-------------------------

***Coronary artery disease diagnosis codes: (PRCATHD)***

41000	AMI ANTEROLATERAL,UNSPEC	41091	AMI NOS, INITIAL
41001	AMI ANTEROLATERAL, INIT	41092	AMI NOS, SUBSEQUENT
41002	AMI ANTEROLATERAL,SUBSEQ	4110	POST MI SYNDROME
41010	AMI ANTERIOR WALL,UNSPEC	4111	INTERMED CORONARY SYND
41011	AMI ANTERIOR WALL, INIT	41181	CORONARY OCCLSN W/O MI
41012	AMI ANTERIOR WALL,SUBSEQ	41189	AC ISCHEMIC HRT DIS NEC
41020	AMI INFEROLATERAL,UNSPEC	412	OLD MYOCARDIAL INFARCT
41021	AMI INFEROLATERAL, INIT	4130	ANGINA DECUBITUS
41022	AMI INFEROLATERAL,SUBSEQ	4131	PRINZMETAL ANGINA
41030	AMI INFEROPOST, UNSPEC	4139	ANGINA PECTORIS NEC/NOS
41031	AMI INFEROPOST, INITIAL	4140	CORONARY ATHEROSCLEROSIS
41032	AMI INFEROPOST, SUBSEQ	41400	COR ATH UNSP VSL NTV/GFT
41040	AMI INFERIOR WALL,UNSPEC	41401	CRNRY ATHRSCL NATVE VSSL
41041	AMI INFERIOR WALL, INIT	41402	CRN ATH ATLG VN BPS GRFT
41042	AMI INFERIOR WALL,SUBSEQ	41403	CRN ATH NONATLG BLG GRFT
41050	AMI LATERAL NEC, UNSPEC	41404	COR ATH ARTRY BYPAS GRFT
41051	AMI LATERAL NEC, INITIAL	41405	COR ATH BYPASS GRAFT NOS
41052	AMI LATERAL NEC, SUBSEQ	41406	COR ATH NATV ART TP HRT
41060	TRUE POST INFARCT,UNSPEC	41407	COR ATH BPS GRAFT TP HRT
41061	TRUE POST INFARCT, INIT	41410	ANEURYSM, HEART (WALL)
41062	TRUE POST INFARCT,SUBSEQ	41411	CORONARY VESSEL ANEURYSM
41070	SUBENDO INFARCT, UNSPEC	41412	DISSECTION COR ARTERY
41071	SUBENDO INFARCT, INITIAL	41419	ANEURYSM OF HEART NEC
41072	SUBENDO INFARCT, SUBSEQ	4143	COR ATH D/T LPD RCH PLAQ
41080	AMI NEC, UNSPECIFIED	4144	CORONARY ATHEROSCLEROSIS DUE TO CALCIFID LESION
41081	AMI NEC, INITIAL	4148	CHR ISCHEMIC HRT DIS NEC
41082	AMI NEC, SUBSEQUENT	4149	CHR ISCHEMIC HRT DIS NOS
41090	AMI NOS, UNSPECIFIED		

**DENOMINATOR EXCLUSIONS**

Exclude cases:

- MDC 14 (pregnancy, childbirth, and puerperium)
- with missing gender (SEX=missing), age (AGE=missing), quarter (DQTR=missing), year (YEAR=missing) or principal diagnosis (DX1=missing)