



AHRQ Quality Indicators™ (AHRQ QI™) ICD-10-CM/PCS Specification Version 6.0

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

**July 2016**

**Provider-Level Indicator**

**Type of Score: Rate**

**Prepared by:**

Agency for Healthcare Research and Quality

U.S. Department of Health and Human Services

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### **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-10-PCS procedure codes for right and left heart catheterization without any-listed ICD-10-CM diagnosis codes for indications for right-sided catheterization.

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

4A023N8 Measurement of Cardiac Sampling and  
Pressure, Bilateral, Percutaneous  
Approach

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

A1884	Tuberculosis of heart	I427	Cardiomyopathy due to drug and external agent
I010	Acute rheumatic pericarditis	I428	Other cardiomyopathies
I011	Acute rheumatic endocarditis	I429	Cardiomyopathy, unspecified
I012	Acute rheumatic myocarditis	I43	Cardiomyopathy in diseases classified elsewhere
I018	Other acute rheumatic heart disease	I501	Left ventricular failure
I019	Acute rheumatic heart disease, unspecified	I5020	Unspecified systolic (congestive) heart failure
I020	Rheumatic chorea with heart involvement	I5021	Acute systolic (congestive) heart failure
I050	Rheumatic mitral stenosis	I5022	Chronic systolic (congestive) heart failure
I051	Rheumatic mitral insufficiency	I5023	Acute on chronic systolic (congestive) heart failure
I052	Rheumatic mitral stenosis with insufficiency	I5030	Unspecified diastolic (congestive) heart failure

I058	Other rheumatic mitral valve diseases	I5031	Acute diastolic (congestive) heart failure
I059	Rheumatic mitral valve disease, unspecified	I5032	Chronic diastolic (congestive) heart failure
I070	Rheumatic tricuspid stenosis	I5033	Acute on chronic diastolic (congestive) heart failure
I071	Rheumatic tricuspid insufficiency	I5040	Unspecified combined systolic (congestive) and diastolic (congestive) heart failure
I072	Rheumatic tricuspid stenosis and insufficiency	I5041	Acute combined systolic (congestive) and diastolic (congestive) heart failure
I078	Other rheumatic tricuspid valve diseases	I5042	Chronic combined systolic (congestive) and diastolic (congestive) heart failure
I079	Rheumatic tricuspid valve disease, unspecified	I5043	Acute on chronic combined systolic (congestive) and diastolic (congestive) heart failure
I080	Rheumatic disorders of both mitral and aortic valves	I509	Heart failure, unspecified
I081	Rheumatic disorders of both mitral and tricuspid valves	M3211	Endocarditis in systemic lupus erythematosus
I082	Rheumatic disorders of both aortic and tricuspid valves	M3212	Pericarditis in systemic lupus erythematosus
I083	Combined rheumatic disorders of mitral, aortic and tricuspid valves	P293	Persistent fetal circulation
I088	Other rheumatic multiple valve diseases	Q200	Common arterial trunk
I089	Rheumatic multiple valve disease, unspecified	Q201	Double outlet right ventricle
I090	Rheumatic myocarditis	Q202	Double outlet left ventricle
I091	Rheumatic diseases of endocardium, valve unspecified	Q203	Discordant ventriculoarterial connection

I092	Chronic rheumatic pericarditis	Q204	Double inlet ventricle
I0981	Rheumatic heart failure	Q205	Discordant atrioventricular connection
I0989	Other specified rheumatic heart diseases	Q206	Isomerism of atrial appendages
I099	Rheumatic heart disease, unspecified	Q208	Other congenital malformations of cardiac chambers and connections
I110	Hypertensive heart disease with heart failure	Q209	Congenital malformation of cardiac chambers and connections, unspecified
I119	Hypertensive heart disease without heart failure	Q210	Ventricular septal defect
I130	Hypertensive heart and chronic kidney disease with heart failure and stage 1 through stage 4 chronic kidney disease, or unspecified chronic kidney disease	Q211	Atrial septal defect
I1310	Hypertensive heart and chronic kidney disease without heart failure, with stage 1 through stage 4 chronic kidney disease, or unspecified chronic kidney disease	Q212	Atrioventricular septal defect
I1311	Hypertensive heart and chronic kidney disease without heart failure, with stage 5 chronic kidney disease, or end stage renal disease	Q213	Tetralogy of Fallot
I132	Hypertensive heart and chronic kidney disease with heart failure and with stage 5 chronic kidney disease, or end stage renal disease	Q214	Aortopulmonary septal defect
I2601	Septic pulmonary embolism with acute cor pulmonale	Q218	Other congenital malformations of cardiac septa
I2602	Saddle embolus of pulmonary artery with acute cor pulmonale	Q219	Congenital malformation of cardiac septum, unspecified
I2609	Other pulmonary embolism with acute cor pulmonale	Q220	Pulmonary valve atresia

I2690	Septic pulmonary embolism without acute cor pulmonale	Q221	Congenital pulmonary valve stenosis
I2692	Saddle embolus of pulmonary artery without acute cor pulmonale	Q222	Congenital pulmonary valve insufficiency
I2699	Other pulmonary embolism without acute cor pulmonale	Q223	Other congenital malformations of pulmonary valve
I270	Primary pulmonary hypertension	Q224	Congenital tricuspid stenosis
I271	Kyphoscoliotic heart disease	Q225	Ebsteins anomaly
I272	Other secondary pulmonary hypertension	Q226	Hypoplastic right heart syndrome
I2781	Cor pulmonale (chronic)	Q228	Other congenital malformations of tricuspid valve
I2789	Other specified pulmonary heart diseases	Q229	Congenital malformation of tricuspid valve, unspecified
I279	Pulmonary heart disease, unspecified	Q230	Congenital stenosis of aortic valve
I280	Arteriovenous fistula of pulmonary vessels	Q231	Congenital insufficiency of aortic valve
I281	Aneurysm of pulmonary artery	Q232	Congenital mitral stenosis
I288	Other diseases of pulmonary vessels	Q233	Congenital mitral insufficiency
I289	Disease of pulmonary vessels, unspecified	Q234	Hypoplastic left heart syndrome
I300	Acute nonspecific idiopathic pericarditis	Q238	Other congenital malformations of aortic and mitral valves
I301	Infective pericarditis	Q239	Congenital malformation of aortic and mitral valves, unspecified

I308	Other forms of acute pericarditis	Q240	Dextrocardia
I309	Acute pericarditis, unspecified	Q241	Levocardia
I310	Chronic adhesive pericarditis	Q242	Cor triatriatum
I311	Chronic constrictive pericarditis	Q243	Pulmonary infundibular stenosis
I312	Hemopericardium, not elsewhere classified	Q244	Congenital subaortic stenosis
I313	Pericardial effusion (noninflammatory)	Q245	Malformation of coronary vessels
I314	Cardiac tamponade	Q246	Congenital heart block
I318	Other specified diseases of pericardium	Q248	Other specified congenital malformations of heart
I319	Disease of pericardium, unspecified	Q249	Congenital malformation of heart, unspecified
I32	Pericarditis in diseases classified elsewhere	Q250	Patent ductus arteriosus
I330	Acute and subacute infective endocarditis	Q251	Coarctation of aorta
I339	Acute and subacute endocarditis, unspecified	Q252	Atresia of aorta
I340	Nonrheumatic mitral (valve) insufficiency	Q253	Supravalvular aortic stenosis
I341	Nonrheumatic mitral (valve) prolapse	Q254	Other congenital malformations of aorta
I342	Nonrheumatic mitral (valve) stenosis	Q255	Atresia of pulmonary artery

I348	Other nonrheumatic mitral valve disorders	Q2571	Coarctation of pulmonary artery
I349	Nonrheumatic mitral valve disorder, unspecified	Q258	Other congenital malformations of other great arteries
I350	Nonrheumatic aortic (valve) stenosis	Q259	Congenital malformation of great arteries, unspecified
I351	Nonrheumatic aortic (valve) insufficiency	Q260	Congenital stenosis of vena cava
I352	Nonrheumatic aortic (valve) stenosis with insufficiency	Q261	Persistent left superior vena cava
I358	Other nonrheumatic aortic valve disorders	Q262	Total anomalous pulmonary venous connection
I359	Nonrheumatic aortic valve disorder, unspecified	Q263	Partial anomalous pulmonary venous connection
I360	Nonrheumatic tricuspid (valve) stenosis	Q264	Anomalous pulmonary venous connection, unspecified
I361	Nonrheumatic tricuspid (valve) insufficiency	Q265	Anomalous portal venous connection
I362	Nonrheumatic tricuspid (valve) stenosis with insufficiency	Q266	Portal vein-hepatic artery fistula
I368	Other nonrheumatic tricuspid valve disorders	Q268	Other congenital malformations of great veins
I369	Nonrheumatic tricuspid valve disorder, unspecified	Q269	Congenital malformation of great vein, unspecified
I370	Nonrheumatic pulmonary valve stenosis	Q270	Congenital absence and hypoplasia of umbilical artery
I371	Nonrheumatic pulmonary valve insufficiency	Q271	Congenital renal artery stenosis
I372	Nonrheumatic pulmonary valve stenosis with insufficiency	Q272	Other congenital malformations of renal artery

I378	Other nonrheumatic pulmonary valve disorders	Q2730	Arteriovenous malformation, site unspecified
I379	Nonrheumatic pulmonary valve disorder, unspecified	Q2731	Arteriovenous malformation of vessel of upper limb
I38	Endocarditis, valve unspecified	Q2732	Arteriovenous malformation of vessel of lower limb
I39	Endocarditis and heart valve disorders in diseases classified elsewhere	Q2733	Arteriovenous malformation of digestive system vessel
I400	Infective myocarditis	Q2734	Arteriovenous malformation of renal vessel
I401	Isolated myocarditis	Q2739	Arteriovenous malformation, other site
I408	Other acute myocarditis	Q274	Congenital phlebectasia
I409	Acute myocarditis, unspecified	Q278	Other specified congenital malformations of peripheral vascular system
I41	Myocarditis in diseases classified elsewhere	Q279	Congenital malformation of peripheral vascular system, unspecified
I420	Dilated cardiomyopathy	Q280	Arteriovenous malformation of precerebral vessels
I421	Obstructive hypertrophic cardiomyopathy	Q281	Other malformations of precerebral vessels
I422	Other hypertrophic cardiomyopathy	Q282	Arteriovenous malformation of cerebral vessels
I423	Endomyocardial (eosinophilic) disease	Q283	Other malformations of cerebral vessels
I424	Endocardial fibroelastosis	Q288	Other specified congenital malformations of circulatory system
I425	Other restrictive cardiomyopathy	Q289	Congenital malformation of circulatory system, unspecified



I426      Alcoholic cardiomyopathy

**DENOMINATOR**

Discharges, for patients ages 18 years and older, with any-listed ICD-10-PCS procedure codes for heart catheterization and any-listed ICD-10-CM diagnosis codes for coronary artery disease.

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

4A023N7	Measurement of Cardiac Sampling and Pressure, Left Heart, Percutaneous Approach	4A023N8	Measurement of Cardiac Sampling and Pressure, Bilateral, Percutaneous Approach
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***Coronary artery disease diagnosis codes: (PRCATHD)***

I200	Unstable angina	I25701	Atherosclerosis of coronary artery bypass graft(s), unspecified, with angina pectoris with documented spasm
I201	Angina pectoris with documented spasm	I25708	Atherosclerosis of coronary artery bypass graft(s), unspecified, with other forms of angina pectoris
I208	Other forms of angina pectoris	I25709	Atherosclerosis of coronary artery bypass graft(s), unspecified, with unspecified angina pectoris
I209	Angina pectoris, unspecified	I25710	Atherosclerosis of autologous vein coronary artery bypass graft(s) with unstable angina pectoris
I2101	ST elevation (STEMI) myocardial infarction involving left main coronary artery	I25711	Atherosclerosis of autologous vein coronary artery bypass graft(s) with angina pectoris with documented spasm
I2102	ST elevation (STEMI) myocardial infarction involving left anterior descending coronary artery	I25718	Atherosclerosis of autologous vein coronary artery bypass graft(s) with other forms of angina pectoris
I2109	ST elevation (STEMI) myocardial infarction involving other coronary artery of anterior wall	I25719	Atherosclerosis of autologous vein coronary artery bypass graft(s) with unspecified angina pectoris
I2111	ST elevation (STEMI) myocardial infarction involving right coronary artery	I25720	Atherosclerosis of autologous artery coronary artery bypass graft(s) with unstable angina pectoris
I2119	ST elevation (STEMI) myocardial infarction involving other coronary artery of inferior wall	I25721	Atherosclerosis of autologous artery coronary artery bypass graft(s) with angina pectoris with documented spasm

I2121	ST elevation (STEMI) myocardial infarction involving left circumflex coronary artery	I25728	Atherosclerosis of autologous artery coronary artery bypass graft(s) with other forms of angina pectoris
I2129	ST elevation (STEMI) myocardial infarction involving other sites	I25729	Atherosclerosis of autologous artery coronary artery bypass graft(s) with unspecified angina pectoris
I213	ST elevation (STEMI) myocardial infarction of unspecified site	I25730	Atherosclerosis of nonautologous biological coronary artery bypass graft(s) with unstable angina pectoris
I214	Non-ST elevation (NSTEMI) myocardial infarction	I25731	Atherosclerosis of nonautologous biological coronary artery bypass graft(s) with angina pectoris with documented
I220	Subsequent ST elevation (STEMI) myocardial infarction of anterior wall	I25738	Atherosclerosis of nonautologous biological coronary artery bypass graft(s) with other forms of angina pectoris
I221	Subsequent ST elevation (STEMI) myocardial infarction of inferior wall	I25739	Atherosclerosis of nonautologous biological coronary artery bypass graft(s) with unspecified angina pectoris
I222	Subsequent non-ST elevation (NSTEMI) myocardial infarction	I25750	Atherosclerosis of native coronary artery of transplanted heart with unstable angina
I228	Subsequent ST elevation (STEMI) myocardial infarction of other sites	I25751	Atherosclerosis of native coronary artery of transplanted heart with angina pectoris with documented spasm
I229	Subsequent ST elevation (STEMI) myocardial infarction of unspecified site	I25758	Atherosclerosis of native coronary artery of transplanted heart with other forms of angina pectoris
I240	Acute coronary thrombosis not resulting in myocardial infarction	I25759	Atherosclerosis of native coronary artery of transplanted heart with unspecified angina pectoris
I241	Dresslers syndrome	I25760	Atherosclerosis of bypass graft of coronary artery of transplanted heart with unstable angina
I248	Other forms of acute ischemic heart disease	I25761	Atherosclerosis of bypass graft of coronary artery of transplanted heart with angina pectoris with documented spasm
I249	Acute ischemic heart disease, unspecified	I25768	Atherosclerosis of bypass graft of coronary artery of transplanted heart with other forms of angina pectoris

I2510	Atherosclerotic heart disease of native coronary artery without angina pectoris	I25769	Atherosclerosis of bypass graft of coronary artery of transplanted heart with unspecified angina pectoris
I25110	Atherosclerotic heart disease of native coronary artery with unstable angina pectoris	I25790	Atherosclerosis of other coronary artery bypass graft(s) with unstable angina pectoris
I25111	Atherosclerotic heart disease of native coronary artery with angina pectoris with documented spasm	I25791	Atherosclerosis of other coronary artery bypass graft(s) with angina pectoris with documented spasm
I25118	Atherosclerotic heart disease of native coronary artery with other forms of angina pectoris	I25798	Atherosclerosis of other coronary artery bypass graft(s) with other forms of angina pectoris
I25119	Atherosclerotic heart disease of native coronary artery with unspecified angina pectoris	I25799	Atherosclerosis of other coronary artery bypass graft(s) with unspecified angina pectoris
I252	Old myocardial infarction	I25810	Atherosclerosis of coronary artery bypass graft(s) without angina pectoris
I253	Aneurysm of heart	I25811	Atherosclerosis of native coronary artery of transplanted heart without angina pectoris
I2541	Coronary artery aneurysm	I25812	Atherosclerosis of bypass graft of coronary artery of transplanted heart without angina pectoris
I2542	Coronary artery dissection	I2583	Coronary atherosclerosis due to lipid rich plaque
I255	Ischemic cardiomyopathy	I2584	Coronary atherosclerosis due to calcified coronary lesion
I256	Silent myocardial ischemia	I2589	Other forms of chronic ischemic heart disease
I25700	Atherosclerosis of coronary artery bypass graft(s), unspecified, with unstable angina pectoris	I259	Chronic ischemic heart disease, 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)