

**Cardiac Procedures Report**  
**January 1, 2022 through December 31, 2023 Data**

# Medicare Payments

The following table includes information about payments made by Medicare for the procedures included in this *Cardiac Procedures Report* – 1) coronary artery bypass graft, 2) percutaneous coronary intervention for a heart attack, 3) percutaneous coronary intervention without a heart attack, 4) surgical aortic valve replacement, 5) surgical aortic valve replacement with coronary artery bypass graft, and 6) transcatheter aortic valve replacement. This analysis is based on data from calendar years (CY) 2022 – 2023. Displayed are the average amounts paid by Medicare fee-for-service for inpatient hospitalizations of Pennsylvania residents only. Payments from Medicare Advantage plans (e.g., Medicare HMOs) are not included, nor are patient liabilities (e.g., coinsurance and deductible dollar amounts).

The average Medicare fee-for-service payment is calculated using the claim payment amount based on data provided by the Centers for Medicare and Medicaid Services. The average payment is calculated by summing the payment amounts for the cases in a particular procedure group and dividing the sum by the number of cases in that procedure group.

The procedure groups included in this report are defined using ICD-10-CM/PCS (International Classification of Diseases, Tenth Revision, Clinical Modification/Procedure Coding System) diagnosis and procedure codes, with a secondary requirement that they be limited to particular MS-DRGs (Medicare Severity Diagnosis-Related Groups) and MDC (Major Diagnostic Category) where appropriate – information available from the discharge data that PHC4 receives from Pennsylvania hospitals. Technical Notes relevant to this report provide additional detail. They are posted to PHC4’s website at [www.phc4.org](http://www.phc4.org).

In this section, average payments by MS-DRGs are displayed for the procedures included in this report. While these procedures have been defined using ICD-10-CM/PCS codes that represent a clinically cohesive population, the payment data is displayed by the individual MS-DRGs included within each procedure to account for variations in case mix.

## Cardiac Procedures Report

### January 1, 2022 through December 31, 2023 Data

Medicare Fee-for-Service Payments - CY 2022-2023 Statewide Data			
For the procedures included in this Cardiac Procedures Report			
MS-DRG	MS-DRG Title	Number of Cases	Average Payment
<b>Coronary Artery Bypass Graft</b>		<b>3,148</b>	<b>\$41,480</b>
001	Heart Transplant or Implant of Heart Assist System with MCC	NR	NR
002	Heart Transplant or Implant of Heart Assist System without MCC	NR	NR
003	ECMO or Tracheostomy with Mechanical Ventilation >96 Hours or Principal Diagnosis Except Face, Mouth and Neck with Major O.R. Procedures	NR	NR
212	Concomitant Aortic and Mitral Valve Procedures	NR	NR
215	Other Heart Assist System Implant	18	\$120,658
216	Cardiac Valve and Other Major Cardiothoracic Procedures with Cardiac Catheterization with MCC	NR	NR
217	Cardiac Valve and Other Major Cardiothoracic Procedures with Cardiac Catheterization with CC	NR	NR
218	Cardiac Valve and Other Major Cardiothoracic Procedures with Cardiac Catheterization without CC/MCC	NR	NR
219	Cardiac Valve and Other Major Cardiothoracic Procedures without Cardiac Catheterization with MCC	NR	NR
220	Cardiac Valve and Other Major Cardiothoracic Procedures without Cardiac Catheterization with CC	NR	NR
221	Cardiac Valve and Other Major Cardiothoracic Procedures without Cardiac Catheterization without CC/MCC	NR	NR
222	Cardiac Defibrillator Implant with Cardiac Catheterization with Acute Myocardial Infarction, Heart Failure or Shock with MCC	NR	NR
223	Cardiac Defibrillator Implant with Cardiac Catheterization with Acute Myocardial Infarction, Heart Failure or Shock without MCC	NR	NR
224	Cardiac Defibrillator Implant with Cardiac Catheterization without Acute Myocardial Infarction, Heart Failure or Shock with MCC	NR	NR
225	Cardiac Defibrillator Implant with Cardiac Catheterization without Acute Myocardial Infarction, Heart Failure or Shock without MCC	NR	NR
226	Cardiac Defibrillator Implant without Cardiac Catheterization with MCC	NR	NR

CC - Complication or Comorbidity  
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MS-DRG	MS-DRG Title	Number of Cases	Average Payment
<b>Coronary Artery Bypass Graft Continued</b>			
227	Cardiac Defibrillator Implant without Cardiac Catheterization without MCC	NR	NR
228	Other Cardiothoracic Procedures with MCC	NR	NR
229	Other Cardiothoracic Procedures without MCC	NR	NR
231	Coronary Bypass with PTCA with MCC	39	\$72,473
232	Coronary Bypass with PTCA without MCC	53	\$46,396
233	Coronary Bypass with Cardiac Catheterization or Open Ablation with MCC	595	\$56,434
234	Coronary Bypass with Cardiac Catheterization or Open Ablation without MCC	597	\$36,351
235	Coronary Bypass without Cardiac Catheterization with MCC	685	\$43,117
236	Coronary Bypass without Cardiac Catheterization without MCC	1,135	\$29,836
275	Cardiac Defibrillator Implant with Cardiac Catheterization and MCC	NR	NR
276	Cardiac Defibrillator Implant with MCC	NR	NR
277	Cardiac Defibrillator Implant without MCC	NR	NR
<b>Percutaneous Coronary Intervention for a Heart Attack</b>		<b>4,595</b>	<b>\$16,479</b>
246	Percutaneous Cardiovascular Procedures with Drug-Eluting Stent with MCC or 4+ Arteries or Stents	1,321	\$22,803
247	Percutaneous Cardiovascular Procedures with Drug-Eluting Stent without MCC	2,555	\$13,344
248	Percutaneous Cardiovascular Procedures with Non Drug-Eluting Stent with MCC or 4+ Arteries or Stents	NR	NR
249	Percutaneous Cardiovascular Procedures with Non Drug-Eluting Stent without MCC	NR	NR
250	Percutaneous Cardiovascular Procedures without Intraluminal Device with MCC	53	\$18,708
251	Percutaneous Cardiovascular Procedures without Intraluminal Device without MCC	100	\$11,534
321	Percutaneous Cardiovascular Procedures with Intraluminal Device with MCC or 4+ Arteries/Intraluminal Devices	144	\$22,392

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MS-DRG	MS-DRG Title	Number of Cases	Average Payment
<b>Percutaneous Coronary Intervention for a Heart Attack Continued</b>			
322	Percutaneous Cardiovascular Procedures with Intraluminal Device without MCC	356	\$13,048
323	Coronary Intravascular Lithotripsy with Intraluminal Device with MCC	19	\$32,642
324	Coronary Intravascular Lithotripsy with Intraluminal Device without MCC	20	\$22,647
325	Coronary Intravascular Lithotripsy without Intraluminal Device	NR	NR
<b>Percutaneous Coronary Intervention without a Heart Attack</b>		<b>2,303</b>	<b>\$18,324</b>
246	Percutaneous Cardiovascular Procedures with Drug-Eluting Stent with MCC or 4+ Arteries or Stents	948	\$22,914
247	Percutaneous Cardiovascular Procedures with Drug-Eluting Stent without MCC	866	\$13,399
248	Percutaneous Cardiovascular Procedures with Non Drug-Eluting Stent with MCC or 4+ Arteries or Stents	NR	NR
249	Percutaneous Cardiovascular Procedures with Non Drug-Eluting Stent without MCC	NR	NR
250	Percutaneous Cardiovascular Procedures without Intraluminal Device with MCC	130	\$19,019
251	Percutaneous Cardiovascular Procedures without Intraluminal Device without MCC	77	\$11,653
321	Percutaneous Cardiovascular Procedures with Intraluminal Device with MCC or 4+ Arteries/Intraluminal Devices	120	\$22,383
322	Percutaneous Cardiovascular Procedures with Intraluminal Device without MCC	115	\$13,456
323	Coronary Intravascular Lithotripsy with Intraluminal Device with MCC	21	\$34,831
324	Coronary Intravascular Lithotripsy with Intraluminal Device without MCC	15	\$22,360
325	Coronary Intravascular Lithotripsy without Intraluminal Device	NR	NR
<b>Surgical Aortic Valve Replacement</b>		<b>665</b>	<b>\$55,978</b>
001	Heart Transplant or Implant of Heart Assist System with MCC	NR	NR
002	Heart Transplant or Implant of Heart Assist System without MCC	NR	NR

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<b>Surgical Aortic Valve Replacement Continued</b>			
003	ECMO or Tracheostomy with Mechanical Ventilation >96 Hours or Principal Diagnosis Except Face, Mouth and Neck with Major O.R. Procedures	NR	NR
212	Concomitant Aortic and Mitral Valve Procedures	NR	NR
215	Other Heart Assist System Implant	NR	NR
216	Cardiac Valve and Other Major Cardiothoracic Procedures with Cardiac Catheterization with MCC	40	\$88,484
217	Cardiac Valve and Other Major Cardiothoracic Procedures with Cardiac Catheterization with CC	11	\$50,323
218	Cardiac Valve and Other Major Cardiothoracic Procedures with Cardiac Catheterization without CC/MCC	NR	NR
219	Cardiac Valve and Other Major Cardiothoracic Procedures without Cardiac Catheterization with MCC	244	\$62,385
220	Cardiac Valve and Other Major Cardiothoracic Procedures without Cardiac Catheterization with CC	305	\$44,029
221	Cardiac Valve and Other Major Cardiothoracic Procedures without Cardiac Catheterization without CC/MCC	54	\$38,077
222	Cardiac Defibrillator Implant with Cardiac Catheterization with Acute Myocardial Infarction, Heart Failure or Shock with MCC	NR	NR
223	Cardiac Defibrillator Implant with Cardiac Catheterization with Acute Myocardial Infarction, Heart Failure or Shock without MCC	NR	NR
224	Cardiac Defibrillator Implant with Cardiac Catheterization without Acute Myocardial Infarction, Heart Failure or Shock with MCC	NR	NR
225	Cardiac Defibrillator Implant with Cardiac Catheterization without Acute Myocardial Infarction, Heart Failure or Shock without MCC	NR	NR
226	Cardiac Defibrillator Implant without Cardiac Catheterization with MCC	NR	NR
227	Cardiac Defibrillator Implant without Cardiac Catheterization without MCC	NR	NR
228	Other Cardiothoracic Procedures with MCC	NR	NR

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<b>Surgical Aortic Valve Replacement Continued</b>			
229	Other Cardiothoracic Procedures without MCC	NR	NR
275	Cardiac Defibrillator Implant with Cardiac Catheterization and MCC	NR	NR
276	Cardiac Defibrillator Implant with MCC	NR	NR
277	Cardiac Defibrillator Implant without MCC	NR	NR
<b>Surgical Aortic Valve Replacement with Coronary Artery Bypass Graft</b>		<b>537</b>	<b>\$58,527</b>
001	Heart Transplant or Implant of Heart Assist System with MCC	NR	NR
002	Heart Transplant or Implant of Heart Assist System without MCC	NR	NR
003	ECMO or Tracheostomy with Mechanical Ventilation >96 Hours or Principal Diagnosis Except Face, Mouth and Neck with Major O.R. Procedures	NR	NR
212	Concomitant Aortic and Mitral Valve Procedures	NR	NR
215	Other Heart Assist System Implant	NR	NR
216	Cardiac Valve and Other Major Cardiothoracic Procedures with Cardiac Catheterization with MCC	58	\$76,872
217	Cardiac Valve and Other Major Cardiothoracic Procedures with Cardiac Catheterization with CC	31	\$51,943
218	Cardiac Valve and Other Major Cardiothoracic Procedures with Cardiac Catheterization without CC/MCC	NR	NR
219	Cardiac Valve and Other Major Cardiothoracic Procedures without Cardiac Catheterization with MCC	212	\$62,422
220	Cardiac Valve and Other Major Cardiothoracic Procedures without Cardiac Catheterization with CC	202	\$41,639
221	Cardiac Valve and Other Major Cardiothoracic Procedures without Cardiac Catheterization without CC/MCC	16	\$33,156
222	Cardiac Defibrillator Implant with Cardiac Catheterization with Acute Myocardial Infarction, Heart Failure or Shock with MCC	NR	NR

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<b>Surgical Aortic Valve Replacement with Coronary Artery Bypass Graft Continued</b>			
223	Cardiac Defibrillator Implant with Cardiac Catheterization with Acute Myocardial Infarction, Heart Failure or Shock without MCC	NR	NR
224	Cardiac Defibrillator Implant with Cardiac Catheterization without Acute Myocardial Infarction, Heart Failure or Shock with MCC	NR	NR
225	Cardiac Defibrillator Implant with Cardiac Catheterization without Acute Myocardial Infarction, Heart Failure or Shock without MCC	NR	NR
226	Cardiac Defibrillator Implant without Cardiac Catheterization with MCC	NR	NR
227	Cardiac Defibrillator Implant without Cardiac Catheterization without MCC	NR	NR
228	Other Cardiothoracic Procedures with MCC	NR	NR
229	Other Cardiothoracic Procedures without MCC	NR	NR
275	Cardiac Defibrillator Implant with Cardiac Catheterization and MCC	NR	NR
276	Cardiac Defibrillator Implant with MCC	NR	NR
277	Cardiac Defibrillator Implant without MCC	NR	NR
<b>Transcatheter Aortic Valve Replacement</b>		<b>4,013</b>	<b>\$45,237</b>
001	Heart Transplant or Implant of Heart Assist System with MCC	NR	NR
002	Heart Transplant or Implant of Heart Assist System without MCC	NR	NR
003	ECMO or Tracheostomy with Mechanical Ventilation >96 Hours or Principal Diagnosis Except Face, Mouth and Neck with Major O.R. Procedures	NR	NR
228	Other Cardiothoracic Procedures with MCC	NR	NR
229	Other Cardiothoracic Procedures without MCC	NR	NR
266	Endovascular Cardiac Valve Replacement and Supplement Procedures with MCC	NR	NR
267	Endovascular Cardiac Valve Replacement and Supplement Procedures without MCC	2,541	\$41,154

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