

Support for MACRA Physician-focused Payment Model Technical Advisory Committee

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Table1. Characteristics of Physicians Performing Cardiac Catheterization at Non-Hospital Freestanding Facilities, by Rural and Urban Classification (2015)

Rural/Urban Classification	Number of Performing Physicians	Number of Patients	Number of Procedures
Rural	34	555	671
Urban	673	10,150	11,185
Overall¹	707	10,695	11,856

Source. Medicare FFS RIFs (2015)

Note:

1. Some patients get cardiac catheterizations at more than one location, so the overall total is unduplicated patients and is less than 555+10,150.

Table2. Characteristics of Physicians Performing Cardiac Catheterization at Non-Hospital Freestanding Facilities, by Geographic Dispersion in US (2015)

State	Number of Performing Physicians	Number of Patients	Number of Procedures
Florida	179	4,244	4,329
Texas	199	3,914	4,786
Alabama	19	489	492
Louisiana	39	447	514
Virginia	26	297	298
Arkansas	*	207	222
California	29	191	196
Wisconsin	*	154	154
Alaska	19	148	150
Arizona	12	115	118
Maryland	*	98	148
Indiana	*	70	73
Pennsylvania	16	61	63
Kansas	11	58	85
Georgia	22	41	41
New York	17	29	30
Tennessee	*	26	26
DC	*	23	23
Wyoming	*	15	15
Michigan	10	13	15
New Jersey	*	12	12
Oklahoma	*	*	*
Illinois	*	*	*
Colorado	*	*	*
Washington	*	*	*
Connecticut	*	*	*
Massachusetts	*	*	*
Nebraska	*	*	*
South Carolina	*	*	*
Kentucky	*	*	*
Mississippi	*	*	*
Nevada	*	*	*
Delaware	*	*	*
Hawaii	*	*	*
Minnesota	*	*	*
New Mexico	*	*	*
Ohio	*	*	*
Iowa	*	*	*
New Hampshire	*	*	*
North Carolina	*	*	*
Oregon	*	*	*
West Virginia	*	*	*

Source. Medicare FFS RIFs (2015)

Note.

* Cell size with less than 10 was marked with an asterisk.

1. Among the records identified as claims with cardiac catheterization, PCI, or bypass that were eventually unmatched to inpatient or outpatient visits, we isolated those with place of service (office, mobile unit, ambulatory surgical center, independent clinic/lab, and other) and specialty code (cardiology, internal medicine, independent diagnostic testing facility, ambulatory surgery center, vascular surgery, cardiac surgery, and interventional cardiology) and viewed them as freestanding facility-based records.

Table 3. Professional Component for Medicare FFS Spending with Cardiac Catheterization, by Type of Facility (2015)

Type of Facilities	Total Medicare FFS Spending for Professional Component
Freestanding non-hospital facilities	\$10,691,079
Inpatient	\$142,388,843
Outpatient	\$118,551,000
Total	\$271,630,922

Source. Medicare FFS RIFs (2015)

Table 4. Number of Physicians (or Facilities) and Medicare FFS Beneficiaries, by Type of Facility and Type of Procedure(2015)

Type of Facilities	Number of Physicians (or Facilities) Performing Cardiac Catheterization	Number of Beneficiaries Having Cardiac Catheterization	Number of Physicians (or Facilities) Performing PCI after Initial Cardiac Catheterization	Number of Beneficiaries Having PCI after Initial Cardiac Catheterization	Number of Physicians (or Facilities) Performing Coronary Bypass after Initial Cardiac Catheterization	Number of Beneficiaries Having Coronary Bypass after Initial Cardiac Catheterization
Freestanding ¹	707	10,695	202	463	0	0
Inpatient	12,822 (4,475)	391,065	8,637 (3,388)	170,080	4,718 (1,504)	82,460
Outpatient	12,493 (2,889)	375,181	6,699 (1,734)	62,767	8 (2)	8

Source. Medicare FFS RIFs (2015)

Note

1. Among the records identified as claims with cardiac catheterization, PCI, or bypass that were eventually unmatched to inpatient or outpatient visits, we isolated those with place of service (office, mobile unit, ambulatory surgical center, independent clinic/lab, and other) and specialty code (cardiology, internal medicine, independent diagnostic testing facility, ambulatory surgery center, vascular surgery, cardiac surgery, and interventional cardiology) and viewed them as freestanding facility-based records.

Table 5. Number of Medicare FFS Beneficiaries Who Received Cardiac Catheterization in Freestanding Labs and Then Received PCI, by Type of Facility and Type of Procedure (2015)

Type of Facilities	Number of Beneficiaries Who Received Cardiac Catheterization Only (No PCI)	Number of Beneficiaries Who Received Cardiac Catheterization and PCI on the Same Day	Number of Beneficiaries Who Received PCI within 1-30 Days After Initial Cardiac Catheterization	Number of Beneficiaries Who Received PCI within 31-60 Days After Initial Cardiac Catheterization	Number of Beneficiaries Who Received PCI within 61-365 Days After Initial Cardiac Catheterization
Freestanding ¹	8,326	516	1,554	174	125
Both Procedures Performed at Freestanding ²	n/a	256	192	10	5
Moved to Inpatient for PCI	n/a	71	220	48	53
Moved to Outpatient for PCI	n/a	189	1142	116	67

Source. Medicare FFS RIFs (2015)

Note.

n/a: not applicable

1. Among the records identified as claims with cardiac catheterization, PCI, or bypass that were eventually unmatched to inpatient or outpatient visits, we isolated those with place of service (office, mobile unit, ambulatory surgical center, independent clinic/lab, and other) and specialty code (cardiology, internal medicine, independent diagnostic testing facility, ambulatory surgery center, vascular surgery, cardiac surgery, and interventional cardiology) and viewed them as freestanding facility-based records.

2. In theory Medicare does not cover PCIs performed in freestanding settings. This set of cases receiving PCIs in freestanding settings could reflect cases where Medicare is a secondary payer, a bill that may ultimately be denied by Medicare, an error in the service setting, or a data anomaly.

Appendix 1. Identifying Cardiac Catheterization Procedures and Facilities

Methods: By using the Medicare fee-for-service (FFS) research identifiable files (RIFs), we identified Medicare beneficiaries who had a cardiac catheterization^[1] in 2015 and then identified those who had a percutaneous coronary intervention (PCI) or coronary bypass at the same time or after this initial cardiac catheterization. First, we used carrier line-item files to capture the Medicare beneficiaries who received cardiac catheterization, PCI, or bypass procedures and their claims. We then used the carrier line-item files to identify among this group of beneficiaries those who had PCIs or bypass procedures and their claims. Then, we matched those claims with the records included in the inpatient and outpatient claims files. If the records were matched with inpatient claims, we regarded them as inpatient events. If the records were matched with outpatient claims, we considered them as outpatient events. Then, among those records that were matched neither by inpatient claims nor by outpatient claims, we isolated claims only with their stated place of service indicating a free-standing setting and the provider specialty indicating the "operating" physician and classified their place of service as freestanding. Next, we used allowed charge amounts included in the physician claims file to calculate annual Medicare FFS spending for the professional component. Lastly, we examined the number of facilities (or performing physicians) and Medicare FFS beneficiaries with cardiac catheterization and follow-up PCI or bypass procedures. Additionally, among Medicare beneficiaries with cardiac catheterization, we looked at next PCI events and reported whether they moved to inpatient or outpatient settings and how soon they got the service.

[1]. Cardiac Catheterization Procedure Codes

CPT Code	Description
93451	right heart catheterization
93452	left heart catheterization
93453	right and left heart catheterization
93454	coronary angiography
93455	coronary angiography with bypass grafts
93456	coronary angiography with right heart catheterization
93457	coronary angiography and bypass grafts, with right heart catheterization
93458	coronary angiography with left heart catheterization
93459	coronary angiography and bypass grafts, with left heart catheterization
93460	coronary angiography with right and left heart catheterization
93461	coronary angiography with bypass grafts, right and left heart catheterization

Percutaneous Coronary Interventions (PCI) Procedure Codes

CPT Code	Description
92920	Percutaneous transluminal coronary angioplasty; single major coronary artery or branch
92921	Percutaneous transluminal coronary angioplasty; each additional branch of a major coronary artery (List separately in addition to code for primary procedure) (bundled code and will not be separately reimbursed)
92924	Percutaneous transluminal coronary atherectomy, with coronary angioplasty when performed; single major coronary artery or branch
92925	Percutaneous transluminal coronary atherectomy, with coronary angioplasty when performed; each additional branch of a major coronary artery (List separately in addition to code for primary procedure) (bundled code and will not be separately reimbursed)
92928	Percutaneous transcatheter placement of intracoronary stent(s), with coronary angioplasty when performed; single major coronary artery or branch
92929	Percutaneous transcatheter placement of intracoronary stent(s), with coronary angioplasty when performed; each additional branch of a major coronary artery (List separately in addition to code for primary procedure) (bundled code and will not be separately reimbursed)
92933	Percutaneous transluminal coronary atherectomy, with intracoronary stent, with coronary angioplasty when performed; single major coronary artery or branch
92934	Percutaneous transluminal coronary atherectomy, with intracoronary stent, with coronary angioplasty when performed; each additional branch of a major coronary artery (List separately in addition to code for primary procedure) (bundled code and will not be separately reimbursed)
92937	Percutaneous transluminal revascularization of or through coronary artery bypass graft (internal mammary, free arterial, venous), any combination of intracoronary stent, atherectomy and angioplasty, including distal protection when performed; single vessel

92938	Percutaneous transluminal revascularization of or through coronary artery bypass graft (internal mammary, free arterial, venous), any combination of intracoronary stent, atherectomy and angioplasty, including distal protection when performed; each additional branch subtended by the bypass graft (List separately in addition to code for primary procedure) (bundled code and will not be separately reimbursed)
92941	Percutaneous transluminal revascularization of acute total/subtotal occlusion during acute myocardial infarction, coronary artery or coronary artery bypass graft, any combination of intracoronary stent, atherectomy and angioplasty, including aspiration thrombectomy when performed, single vessel
92943	Percutaneous transluminal revascularization of chronic total occlusion, coronary artery, coronary artery branch, or coronary artery bypass graft, any combination of intracoronary stent, atherectomy and angioplasty; single vessel
92944	Percutaneous transluminal revascularization of chronic total occlusion, coronary artery, coronary artery branch, or coronary artery bypass graft, any combination of intracoronary stent, atherectomy and angioplasty; each additional coronary artery, coronary artery branch, or bypass graft (List separately in addition to code for primary procedure) (bundled code and will not be separately reimbursed)
92973	Percutaneous transluminal coronary thrombectomy mechanical (List separately in addition to code for primary procedure)
92974	Transcatheter placement of radiation delivery device for subsequent coronary intravascular brachytherapy (List separately in addition to code for primary procedure)
92975	Thrombolysis, coronary; by intracoronary infusion, including selective coronary angiography
92978	Endoluminal imaging of coronary vessel or graft using intravascular ultrasound (IVUS) or optical coherence tomography (OCT) during diagnostic evaluation and/or therapeutic intervention including imaging supervision, interpretation and report; initial vessel (List separately in addition to code for primary procedure)
92979	Endoluminal imaging of coronary vessel or graft using intravascular ultrasound (IVUS) or optical coherence tomography (OCT) during diagnostic evaluation and/or therapeutic intervention including imaging supervision, interpretation and report; each additional vessel (List separately in addition to code for primary procedure)
93571	Intravascular Doppler velocity and/or pressure derived coronary flow reserve measurement (coronary vessel or graft) during coronary angiography including pharmacologically induced stress; initial vessel (List separately in addition to code for primary procedure)
93572	Intravascular Doppler velocity and/or pressure derived coronary flow reserve measurement (coronary vessel or graft) during coronary angiography including pharmacologically induced stress; additional vessel (List separately in addition to code for primary procedure)

Coronary Bypass Procedure Codes

CPT Code	Description
33510	Coronary artery bypass, vein only; single coronary venous graft
33511	Coronary artery bypass, vein only; two coronary venous grafts
33512	Coronary artery bypass, vein only; three coronary venous grafts
33513	Coronary artery bypass, vein only; four coronary venous grafts
33514	Coronary artery bypass, vein only; five coronary venous grafts
33516	Coronary artery bypass, vein only; six or more coronary venous grafts
33517	Coronary artery bypass, using venous graft(s) and arterial graft(s); single vein graft
33518	Coronary artery bypass, using venous graft(s) and arterial graft(s); two venous grafts
33519	Coronary artery bypass, using venous graft(s) and arterial graft(s); three venous grafts
33521	Coronary artery bypass, using venous graft(s) and arterial graft(s); four venous grafts
33522	Coronary artery bypass, using venous graft(s) and arterial graft(s); five venous grafts
33523	Coronary artery bypass, using venous graft(s) and arterial graft(s); six or more venous grafts
33533	Coronary artery bypass, using arterial graft(s); single arterial graft
33534	Coronary artery bypass, using arterial graft(s); two coronary arterial grafts
33535	Coronary artery bypass, using arterial graft(s); three coronary arterial grafts
33536	Coronary artery bypass, using arterial graft(s); four or more coronary arterial grafts