

Data Analytics on Overseas Coronary Angiograms and Angioplasty

Subject

1. A suggestion was submitted for data analysis to be conducted on the expenditure and prevalence of overseas coronary angiograms and angioplasty.

Disclaimer

2. The data is provided by the Bermuda Health Council and must be authorized prior to publication or use and if authorized, must be cited when published or used.
3. Bermuda Health Council does not make any guarantees or provide third party validation for the data sources.
4. The data provided is from claims data submitted to the Health Council by insurers for local and overseas claims (Note: this excludes local hospital and subsidy claims but includes overseas hospitals.). The original data is provided to the insurers by the health business submitting claims for the specified criteria outlined (i.e., conditions identified through diagnosis (ICD-9 or ICD-10) or procedure codes (CPT codes)). Claims expenditure does not include rejected claims.
5. Fiscal year (FY) is 1st April to 31st March.
6. Data included from Argus, BF&M, CG, GEHI, HIP and FTC.
7. Subsidy includes claims from: Youth, Age, Indigent
8. Data submitted to the Health Council by insurers does not include out-of-pocket expenses.
9. Note: Covid-19 may have impacted utilization of services from the time frame of March 2020, to current.

Data

The following table displays overseas expenditure for coronary angiograms.

PROCEDURE CODE	DESCRIPTION	FY21	FY20	FY19	FY18
93454	Catheter placement in coronary artery(s) for coronary angiography, including intraprocedural injection(s) for coronary angiography, imaging supervision and interpretation;	\$ 206,769.95	\$ 298,653.06	\$ 228,415.98	\$ 227,218.11
93455	Catheter placement in coronary artery(s) for coronary angiography, including intraprocedural injection(s) for coronary angiography, imaging supervision and interpretation; with catheter placement(s) in bypass graft(s) (internal mammary, free arterial, venous grafts) including intraprocedural injection(s) for bypass graft angiography	\$ 21,449.32	\$ 71,299.08	\$ 41,895.35	\$ 11,805.97
93456	Catheter placement in coronary artery(s) for coronary angiography, including intraprocedural injection(s) for coronary angiography, imaging supervision and interpretation; with right heart catheterization	\$ 7,411.94	\$ 23,355.82	\$ 50,761.53	\$ 23,071.70
93457	Catheter placement in coronary artery(s) for coronary angiography, including intraprocedural injection(s) for coronary angiography, imaging supervision and interpretation; with catheter placement(s) in bypass graft(s) (internal mammary, free arterial, venous grafts) including intraprocedural injection(s) for bypass graft angiography and right heart catheterization	\$ 8,084.63	\$ 4,296.27	\$ -	\$ 1,039.50
93458	Catheter placement in coronary artery(s) for coronary angiography, including intraprocedural injection(s) for coronary angiography, imaging supervision and interpretation; with left heart catheterization	\$ 88,704.66	\$ 235,480.56	\$ 154,504.13	\$ 121,065.91

	including intraprocedural injection(s) for left ventriculography, when performed				
93459	Catheter placement in coronary artery(s) for coronary angiography, including intraprocedural injection(s) for coronary angiography, imaging supervision and interpretation; with left heart catheterization including intraprocedural injection(s) for left ventriculography, when performed, catheter placement(s) in bypass graft(s) (internal mammary, free arterial, venous grafts) with bypass graft angiography	\$ 10,335.48	\$ 7,768.72	\$ 14,458.49	\$ 6,130.02
93460	Catheter placement in coronary artery(s) for coronary angiography, including intraprocedural injection(s) for coronary angiography, imaging supervision and interpretation; with right and left heart catheterization including intraprocedural injection(s) for left ventriculography, when performed	\$ 66,978.36	\$ 90,406.84	\$ 23,753.53	\$ 69,669.70
93461	Catheter placement in coronary artery(s) for coronary angiography, including intraprocedural injection(s) for coronary angiography, imaging supervision and interpretation; with right and left heart catheterization including intraprocedural injection(s) for left ventriculography, when performed, catheter placement(s) in bypass graft(s) (internal mammary, free arterial, venous grafts) with bypass graft angiography	\$ 7,313.60	\$ 1,324.00	\$ 654.86	\$ 1,419.52
93545	Injection for selective coronary angiography	\$ -	\$ 680.78	\$ -	\$ -
93565	Injection procedure during cardiac catheterization including imaging supervision, interpretation, and report; for selective left ventricular or left atrial angiography (List separately in addition to code for primary procedure)	\$ -	\$ 605.50	\$ 250.80	\$ -

The following table displays overseas expenditure for angioplasty.

PROCEDURE CODE	DESCRIPTION	FY21	FY20	FY19	FY18
92920	Percutaneous transluminal coronary angioplasty; single major coronary artery or branch	\$ 8,148.00	\$ 1,344.36	\$ 7,547.05	\$ 11,580.46
92921	Percutaneous transluminal coronary angioplasty; each additional branch of a major coronary artery (List separately in addition to code for primary procedure)	\$ 270.66	\$ 7,167.56	\$ 6,241.20	\$ -
92924	Percutaneous transluminal coronary atherectomy, with coronary angioplasty when performed; single major coronary artery or branch	\$ -	\$ 3,908.98	\$ 1,422.00	\$ -
92928	Percutaneous transcatheter placement of intracoronary stent(s), with coronary angioplasty when performed; single major coronary artery or branch	\$ 89,118.39	\$ 89,099.31	\$ 81,761.96	\$ 73,446.58
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)	\$ 1,692.15	\$ 1,032.31	\$ 4,434.28	\$ 2,230.34
92933	Percutaneous transluminal coronary atherectomy, with intracoronary stent, with coronary angioplasty when performed; single major coronary artery or branch	\$ 5,984.37	\$ 8,595.78	\$ 12,009.10	\$ 2,970.10
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)	\$ -	\$ 1,050.00	\$ -	\$ -
92937	Percutaneous transluminal revascularization of or through coronary artery bypass graft (internal	\$ 10,468.41	\$ 2,981.44	\$ 1,281.65	\$ 8,999.03

	mammary, free arterial, venous), any combination of intracoronary stent, atherectomy and angioplasty, including distal protection when performed; single vessel					
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	\$	5,560.20	\$	2,308.60	\$ 2,431.56 \$ 7,796.72
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	\$	-	\$	20,320.08	\$ 5,643.61 \$ 1,670.90
92982	Percutaneous transluminal coronary angioplasty (PTCA), single vessel.	\$	-	\$	3,663.00	\$ - \$ -

The following table displays expenditure for air ambulance services with coronary related primary diagnosis.

PRIMARY DIAGNOSIS CODE	DESCRIPTION	FY21	FY20	FY19	FY18
410	Acute myocardial infarction	\$ 23,500.00	\$ 41,800.00	\$ 20,900.00	\$ 51,850.00
410.71	Subendocardial infarction, initial episode of care	\$ -	\$ 16,900.00	\$ 25,000.00	\$ -
I21.11	ST elevation (STEMI) myocardial infarction involving right coronary artery	\$ -	\$ 17,391.00	\$ -	\$ -
I21.4	Non-ST elevation (NSTEMI) myocardial infarction	\$ 18,900.00	\$ -	\$ -	\$ 15,499.00
I21.9	Acute myocardial infarction, unspecified	\$ 23,450.00	\$ -	\$ -	\$ -
I24.9	Acute ischaemic heart disease, unspecified	\$ 25,900.00	\$ 28,950.00	\$ -	\$ -
I77.9	Disorder of arteries and arterioles, unspecified.	\$ 20,650.00	\$ -	\$ -	\$ -
I46.9	Cardiac arrest, cause unspecified	\$ -	\$ 28,085.00	\$ -	\$ -
I49.9	Cardiac arrhythmia, unspecified.	\$ -	\$ 24,750.00	\$ -	\$ -
I74.3	Embolism and thrombosis of arteries of the lower extremities	\$ -	\$ -	\$ 17,960.00	\$ -
I10	Essential (primary) hypertension	\$ -	\$ -	\$ -	\$ 28,100.00

I2102 | ST elevation (STEMI) myocardial infarction involving left anterior descending coronary artery \$ - \$ - \$ - \$ 26,550.00

The following table displays overseas utilization (Number of claims) for coronary angiograms.

PROCEDURE CODE	DESCRIPTION	FY21	FY20	FY19	FY18
93454	Catheter placement in coronary artery(s) for coronary angiography, including intraprocedural injection(s) for coronary angiography, imaging supervision and interpretation;	108	143	118	97
93455	Catheter placement in coronary artery(s) for coronary angiography, including intraprocedural injection(s) for coronary angiography, imaging supervision and interpretation; with catheter placement(s) in bypass graft(s) (internal mammary, free arterial, venous grafts) including intraprocedural injection(s) for bypass graft angiography	9	30	13	4
93456	Catheter placement in coronary artery(s) for coronary angiography, including intraprocedural injection(s) for coronary angiography, imaging supervision and interpretation; with right heart catheterization	3	12	11	8
93457	Catheter placement in coronary artery(s) for coronary angiography, including intraprocedural injection(s) for coronary angiography, imaging supervision and interpretation; with catheter placement(s) in bypass graft(s) (internal mammary, free arterial, venous grafts) including intraprocedural injection(s) for bypass graft angiography and right heart catheterization	2	4	0	1
93458	Catheter placement in coronary artery(s) for coronary angiography, including intraprocedural injection(s) for coronary angiography, imaging supervision and interpretation; with left heart catheterization including intraprocedural injection(s) for left ventriculography, when performed	40	93	62	51
93459	Catheter placement in coronary artery(s) for coronary angiography, including intraprocedural injection(s) for coronary angiography, imaging supervision and interpretation; with left heart catheterization including intraprocedural injection(s) for left ventriculography, when performed, catheter placement(s) in bypass graft(s) (internal mammary, free arterial, venous grafts) with bypass graft angiography	3	3	5	1
93460	Catheter placement in coronary artery(s) for coronary angiography, including intraprocedural injection(s) for coronary angiography, imaging supervision and	14	17	9	11

	interpretation; with right and left heart catheterization including intraprocedural injection(s) for left ventriculography, when performed				
93461	Catheter placement in coronary artery(s) for coronary angiography, including intraprocedural injection(s) for coronary angiography, imaging supervision and interpretation; with right and left heart catheterization including intraprocedural injection(s) for left ventriculography, when performed, catheter placement(s) in bypass graft(s) (internal mammary, free arterial, venous grafts) with bypass graft angiography	1	1	1	2
93545	Injection for selective coronary angiography	0	2	0	0
93565	Injection procedure during cardiac catheterization including imaging supervision, interpretation, and report; for selective left ventricular or left atrial angiography (List separately in addition to code for primary procedure)	0	1	1	0

The following table displays overseas utilization (Number of claims) for angioplasty.

PROCEDURE CODE	DESCRIPTION	FY21	FY20	FY19	FY18
92920	Percutaneous transluminal coronary angioplasty; single major coronary artery or branch	6	1	2	4
92921	Percutaneous transluminal coronary angioplasty; each additional branch of a major coronary artery (List separately in addition to code for primary procedure)	1	5	2	0
92924	Percutaneous transluminal coronary atherectomy, with coronary angioplasty when performed; single major coronary artery or branch	0	3	1	0
92928	Percutaneous transcatheter placement of intracoronary stent(s), with coronary angioplasty when performed; single major coronary artery or branch	48	63	55	47
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)	4	3	5	5
92933	Percutaneous transluminal coronary atherectomy, with intracoronary stent, with coronary angioplasty when performed; single major coronary artery or branch	4	6	4	2
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)	0	1	0	0

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	5	2	2	1
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	4	1	2	5
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	0	4	1	1
92982	Percutaneous transluminal coronary angioplasty (PTCA), single vessel.	0	1	0	0

The following table displays utilization (number of claims) for air ambulance services with coronary related primary diagnosis.

PRIMARY DIAGNOSIS CODE	DESCRIPTION	FY21	FY20	FY19	FY18
410	Acute myocardial infarction	1	2	1	2
410.71	Subendocardial infarction, initial episode of care	0	1	1	0
I21.11	ST elevation (STEMI) myocardial infarction involving right coronary artery	0	1	0	0
I21.4	Non-ST elevation (NSTEMI) myocardial infarction	1	0	0	2
I21.9	Acute myocardial infarction, unspecified	1	0	0	0
I24.9	Acute ischaemic heart disease, unspecified	1	1	0	0
I77.9	Disorder of arteries and arterioles, unspecified.	1	0	0	0
I46.9	Cardiac arrest, cause unspecified	0	1	0	0
I49.9	Cardiac arrhythmia, unspecified.	0	1	0	0
I74.3	Embolism and thrombosis of arteries of the lower extremities	0	0	2	0
I10	Essential (primary) hypertension	0	0	0	1
I2102	ST elevation (STEMI) myocardial infarction involving left anterior descending coronary artery	0	0	0	1