



CHAPTER 3 :
PROCEDURAL SETTINGS

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Summary

1. Majority of PCI performed in Malaysia from 2007-2012 were performed as Elective cases (87.0 %).
2. Femoral access remains the most common percutaneous entry; however, radial approach was becoming more popular (37.7% in 2007-2009 to 46.6% in 2010-2012).
3. About 46.5% of PCI were performed in multiple vessel disease and 46.1 % in single vessel disease.
4. From 2001-2012, the overall usage of GP IIb/IIIa blocker has declined from 5.9% to 3.9% (n=584) of patients
5. In both group of patient, Clopidogrel and Aspirin were the two most common antiplatelet therapies for patients undergoing angioplasty. In 2010-2012, there was an increase trend in using the 600 mg loading dose for Clopidogrel (9.8%) and longer duration for dual antiplatelet (67.9%).

This chapter discussed the procedural details and treatment received by patients who underwent Percutaneous Coronary Intervention (PCI) from 2007 to 2012. A total of 26,483 PCI procedures were performed during this six year period from 16 centers across Malaysia, mainly from Institut Jantung Negara (58.1%), Hospital Umum Sarawak (11.3%) and Hospital Pulau Pinang (8.7%).

Most of the PCI were performed as elective cases (87.0%). About 7.5% of the total procedures were performed for Acute Myocardial Infarction (AMI) and 5.3% were for NSTEMI/UA. [Table 4.1.1]

There has been a slight decrease in the percentage of elective cases from 90.1% in 2007-2009 to 84.6% in 2010-2012. Generally, there was a steady increase in the number of PCI done during index admission for ACS (STEMI, NSTEMI and UA) over the last 3 years at 11.0% in 2010, 14.5% in 2011 and 19.3% in 2012. [Table 4.1.1]

Elective PCI does not only encompass those with chronic stable angina. These elective procedures also include patients who have been treated for ACS in other peripheral hospitals, then referred for percutaneous coronary intervention. [Table 4.1.1]

For patients presented with STEMI, 7.6% had PCI done during the index admission. Of these, 38.3% were primary PCI. [Table 4.1.1] This is probably underreported as patients who presented with STEMI and had Primary PCI not during the office hours or the weekend, thus the data may not have been captured.

Procedural access, sheath size and closure

The femoral approach was most popular for percutaneous entry for PCI which accounts for 52.3%, followed by radial which is 42.7% and 0.7% procedures were done via the brachial artery approach. There has been an increasing trend of radial approach from 37.7% during 2007-2009 compared to 46.6% from 2010 -2012, suggesting increasing operator preference for trans-radial approach over the recent years. [Table 4.1.2]

The most common size of sheath was 6 French at 81.8%, followed by 7 French at 13.0% and 8 French at 0.6%. [Table 4.1.2]

In terms of management of post procedure access closure, majority of the procedures (89.5%) were manually compressed. About 3.8% of access sites were closed with closure devices. [Table 4.1.2]

PCI procedure

In total, 46.5% of PCI were performed in multiple vessel disease, 46.1% in single vessel disease. [Table 4.1.2]

The mean fluoroscopy time was 20.4 minutes (SD 18.3) and median was 15.3 minutes. The mean and median fluoroscopy time have remained rather constant from 2007-2009 to 2010-2012. [Table 4.1.2]

In both periods, most of the contrasts used for these procedures were non-ionic at 91.5%. Only 0.9% was ionic. The mean contrast volume was 177.2 mls (SD 68.9). The mean volume of contrast used during 2007-2009 and 2010-2012 were almost similar at 176.9 mls and 177.5 mls. [Table 4.1.2]

Treatment of patients undergoing PCI

GP IIb/IIIa blocker.

In 2007-2009, GP IIb/IIIa blocker was used in 5.9% of patients. About 45.8% of GP IIb/IIIa blocker were used prior to PCI, 43.9% during procedure and 10.3% after the PCI. [Table 4.1.2]

In 2010-2012, the overall usage of GP IIb/IIIa blocker has decline to 3.9% of patients. During this time frame, GP IIb/IIIa blocker was mainly use during PCI, 64.1%. Only 28.8% of GP IIb/IIIa blocker was used prior to PCI and 7.1% after PCI. [Table 4.1.2]

Intravenous unfractionated Heparin infusion

In term of intravenous unfractionated Heparin infusion, 91.9% were given in 2007-2009 and 97.8% were given in 2010-2012. In both periods, it was commonly given during the procedure, 81.1% and 79.4% respectively. [Table 4.1.2]

Low Molecular Weight Heparin (LMWH)

The use of LMWH has also drop in 2010-2012. In 2007-2009, 4.4% received LMWH as compared to 2.6% in 2010-2012. The majority, of these patients received LMWH prior to procedure, 88.9% and 85.2% respectively. [Table 4.1.2]

Anti-platelets

Aspirin and Clopidogrel were the two most common antiplatelet agents used in PCI in both periods of patients.

From 2007-2012, Aspirin was used in 97.4% of cases and Clopidogrel in 97.9% of cases. In more than 97% of cases, Clopidogrel and Aspirin were given prior to the procedure. [Table 4.1.2]

From 2007-2012, the most common loading dose for Clopidogrel was 300mg. This accounts for 52.6% in 2007-2009 and 28.9% in 2010-2012. However, in 2010-2012 there was an increasing trend of using higher loading dose of Clopidogrel (600 mg). In 2007-2009, only 5.8% of cases received a loading dose of 600mg as compared to 9.8% in 2010-2012. [Table 4.1.2]

About 41.6% of cases in 2007-2009, and 58.1% of cases in 2010-2012 received only 75mg prior to the PCI. In these instances, patients have been receiving long term Clopidogrel therapy prior to PCI. [Table 4.1.2]

Following PCI, the duration of Clopidogrel or Ticlopidine will depend on the clinical setting and the type of stents implanted.

There was an increasing trend of using Clopidogrel or Ticlopidine for 12 months duration, 67.9% in 2010-2012 vs. and 38.9% in 2007-2009. The increase trends in the duration of antiplatelets were likely to reflect the higher usage of Drug Eluting Stent in 2010-2012. Only 24.1% of cases in 2007-2009 and 13.8% of cases in 2010-2012 were planned for one month of Clopidogrel or Ticlopidine. [Table 4.1.2]

Table 4.1.1 PCI status of patients who underwent procedures, NCV D-PCI Registry, 2007-2012

	2007-2009		2010		2011		2012		2010-2012		2007-2012	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
PCI status, No. (%)												
Elective	10472	90.1	3937	88.3	4179	85.5	4451	80.7	12567	84.6	23039	87.0
NSTEMI/UA	526	4.5	265	5.9	268	5.5	338	6.2	871	5.9	1397	5.3
AMI (STEMI)	583	5.1	260	5.8	440	9.0	722	13.1	1422	9.5	2005	7.5
Not available	25	0.2	0	0	0	0	0	0	0	0	25	0.1
Missing	15	0.1	0	0	0	0	2	0.0	2	0.0	17	0.1
Elective PCI, No. (%)	10472	90.1	3937	88.3	4179	85.5	4451	80.7	12567	84.6	23039	87.0
Staged PCI	2229	25.1	876	22.8	1023	25.1	983	22.6	2882	23.5	5111	24.2
Ad hoc PCI	6659	74.9	2960	77.2	3056	74.9	3371	77.4	9387	76.5	16046	75.8
NSTEMI/UA, No. (%)	526	4.5	265	5.9	268	5.5	338	6.2	871	5.9	1397	5.3
Urgent	526	100.0	97	37.3	76	29.2	125	38.3	298	35.2	824	60.1
Non-urgent	0	0	163	62.7	184	70.8	201	61.7	548	64.8	548	39.9
AMI (STEMI), No. (%)	583	5.1	260	5.8	440	9.0	722	13.1	1422	9.5	2005	7.5
Rescue	265	45.5	101	39.5	160	36.7	211	29.5	472	33.5	737	37.1
Facilitated	0	0	4	1.5	13	2.9	9	1.3	26	1.8	26	1.3
Primary	317	54.5	117	45.7	111	25.5	217	30.3	445	31.6	762	38.3
Delayed	0	0	34	13.3	152	34.9	278	38.9	464	33.1	464	23.3



Table 4.1.2 Characteristics of PCI procedures performed, NCVD-PCI Registry, 2007-2012

	2007-2009		2010		2011		2012		2010-2012		2007-2012	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
#Percutaneous entry, No. (%)												
Brachial	114	1.0	21	0.5	22	0.5	26	0.5	69	0.5	183	0.7
Radial	4380	37.7	1941	43.5	2086	42.7	2894	52.5	6921	46.6	11301	42.7
Femoral	6563	56.5	2438	54.6	2498	51.1	2358	42.8	7294	49.1	13857	52.3
French size, No. (%)												
5	136	1.2	60	1.3	13	0.3	40	0.7	113	0.8	249	0.9
6	9183	79.0	3663	82.1	4139	84.7	4682	84.9	12484	84.0	21667	81.8
7	1889	16.3	622	13.9	521	10.7	409	7.4	1552	10.4	3441	13.0
8	114	1.0	19	0.4	16	0.3	6	0.1	41	0.3	155	0.6
9	1	0.0	0	0	1	0.0	0	0	1	0.0	2	0.0
Others	3	0.0	3	0.1	2	0.0	1	0.0	6	0.0	9	0.0
Not available	202	1.7	60	1.4	17	0.3	51	1.0	128	0.9	330	1.3
Missing	93	0.8	35	0.8	178	3.7	324	5.9	537	3.6	630	2.4
Closure device, No. (%)												
No	10763	92.6	4179	93.7	4147	84.9	4613	83.7	12939	87.1	23702	89.5
Seal	287	2.5	57	1.3	54	1.1	114	2.1	225	1.5	512	1.9
Suture	235	2.0	65	1.5	104	2.1	90	1.6	259	1.7	494	1.9
Others	24	0.2	7	0.2	5	0.1	3	0.1	15	0.1	39	0.1
Not available	176	1.5	20	0.4	63	1.3	121	2.1	204	1.4	380	1.4
Missing	136	1.2	134	2.9	514	10.5	572	10.4	1220	8.2	1356	5.2

	2007-2009		2010		2011		2012		2010-2012		2007-2012	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
#Extent of coronary disease, No. (%)												
Single vessel disease	5329	45.9	2348	52.6	2351	48.1	2170	39.4	6869	46.2	12198	46.1
Multiple vessel disease	6187	53.2	2023	45.3	1603	32.8	2509	45.5	6135	41.3	12322	46.5
Graft	130	1.1	66	1.5	22	0.5	74	1.3	162	1.1	292	1.1
Left main	82	0.7	30	0.7	15	0.3	44	0.8	89	0.6	171	0.6
Fluoroscopy time, min												
N		10138		4076		4216		4343		12635		22773
Mean (SD)		20.7 (19.3)		20.5 (16.8)		20.9 (18.5)		19.3 (16.7)		20.2 (17.3)		20.4 (18.3)
Median (min,max)		15.4 (2.0, 180.0)		15.6 (2.0, 174.4)		15.7 (2.0, 180.0)		14.5 (2.0, 173.0)		15.3 (2.0, 180.0)		15.3 (2.0, 180.0)
Not available, No. (%)	1290	11.1	145	3.2	223	4.6	564	10.2	932	6.3	2222	8.4
Missing, No. (%)	193	1.7	241	5.4	448	9.2	606	11.0	1295	8.7	1488	5.6
Fluoroscopy total dose, mGy												
N		4554		2533		2577		1863		6973		11527
Mean (SD)		717.0 (2629.4)		1718.6 (23912.2)		2421.8 (20057.0)		13079.5 (54826.6)		5013.8 (34393.3)		3316.3 (26882.6)
Median (min,max)		125.0 (3.2, 78539.0)		271.3 (1.2, 1199417.0)		220.0 (0.5, 684994.0)		456.0 (1.5, 931652.0)		282.9 (0.5, 1199417.0)		187.0 (0.5, 1199417.0)
Not available, No. (%)	6404	55.1	1354	30.3	973	19.9	1742	31.6	4069	27.4	10473	39.5
Missing, No. (%)	663	5.7	575	12.9	1337	27.4	1908	34.6	3820	25.7	4483	16.9

Patients are allowed to have more than one type of category



	2007-2009		2010		2011		2012		2010-2012		2007-2012	
	Total no. of procedures = 11621		Total no. of procedures = 4462		Total no. of procedures = 4887		Total no. of procedures = 5513		Total no. of procedures = 14862		Total no. of procedures = 26483	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Contrast type, No. (%)												
Ionic	192	1.7	4	0.1	26	0.5	7	0.1	37	0.2	229	0.9
Non-ionic	9973	85.8	4358	97.6	4621	94.6	5273	95.6	14252	95.9	24225	91.5
Not available	1374	11.8	48	1.1	56	1.1	64	1.2	168	1.2	1542	5.8
Missing	82	0.7	52	1.2	184	3.8	169	3.1	405	2.7	487	1.8
Contrast volume, ml												
N		10263		4120		4340		4927		13387		23650
Mean (SD)		176.9 (66.4)		185.7 (71.5)		182.8 (70.9)		166.1 (68.6)		177.5 (70.8)		177.2 (68.9)
Median (min,max)		160.0 (15.0, 500.0)		170.0 (15.0, 500.0)		170.0 (30.0, 500.0)		150.0 (15.0, 500.0)		150.0 (15.0, 500.0)		150.0 (15.0, 500.0)
Not available, No. (%)	1240	10.7	171	3.8	210	4.3	270	4.9	651	4.4	1891	7.1
Missing, No. (%)	118	1.0	171	3.8	337	6.9	316	5.7	824	5.5	942	3.6
Thrombolytics prior to PCI procedure in STEMI, No. (%)												
Total no. of procedures among STEMI patients												
Yes	2632	100.0	965	100.0	1157	100.0	968	100.0	3090	100.0	5722	100.0
No	514	19.5	146	15.1	257	22.2	341	35.2	744	24.1	1258	22.0
Missing	2112	80.3	819	84.9	900	77.8	627	64.8	2346	75.9	4458	77.9
	6	0.2	0	0	0	0	0	0	0	0	6	0.1

	2007-2009		2010		2011		2012		2010-2012		2007-2012	
	Total no. of procedures = 11621		Total no. of procedures = 4462		Total no. of procedures = 4887		Total no. of procedures = 5513		Total no. of procedures = 14862		Total no. of procedures = 26483	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Duration of thrombolytics given prior to PCI procedure in STEMI, No. (%)												
<3 hrs	35	7.3	6	4.6	15	6.9	21	6.7	42	6.4	77	6.8
3-6 hrs	36	7.5	15	11.5	34	15.6	47	15.0	96	14.5	132	11.6
6-12 hrs	42	8.8	12	9.2	28	12.8	27	8.7	67	10.2	109	9.6
12-24 hrs	62	12.9	12	9.2	24	11.0	48	15.4	84	12.7	146	12.8
1-7 days	178	37.2	50	38.5	83	38.1	139	44.6	272	41.2	450	39.5
>7 days	126	26.3	35	27.0	34	15.6	30	9.6	99	15.0	225	19.7
Not available	13		4		3		6		13		26	
Missing	22		12		36		23		71		93	
IIb/IIIa Blockade, No. (%)												
Yes	691	5.9	151	3.4	208	4.3	225	4.1	584	3.9	1275	4.8
No	10885	93.7	4311	96.6	4679	95.7	5288	95.9	14278	96.1	25163	95
Missing	45	0.4	0	0	0	0	0	0	0	0	45	0.2
IIb/IIIa Blockade given status, No. (%)												
Prior	289	45.8	48	34.1	60	30.5	50	23.7	158	28.8	447	37.9
After	65	10.3	14	9.9	10	5.1	15	7.1	39	7.1	104	8.8
During	277	43.9	79	56.0	127	64.4	146	69.2	352	64.1	629	53.3
Not available	21		2		0		0		2		23	
Missing	39		8		11		14		33		72	



	2007-2009		2010		2011		2012		2010-2012		2007-2012	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Heparin, No. (%)												
Yes	10674	91.9	4399	98.6	4760	97.4	5372	97.4	14531	97.8	25205	95.2
No	919	7.9	63	1.4	127	2.6	141	2.6	331	2.2	1250	4.7
Missing	28	0.2	0	0	0	0	0	0	0	0	28	0.1
Heparin given status, No. (%)												
Prior	1932	18.6	600	13.8	1062	22.7	1269	24.1	2931	20.5	4863	19.7
After	27	0.3	2	0.0	3	0.1	3	0.1	8	0.1	35	0.1
During	8433	81.1	3743	86.2	3614	77.2	3999	75.8	11356	79.4	19789	80.2
Not available	35		1		2		2		5		40	
Missing	247		53		79		99		231		478	
LMWH, No. (%)												
Yes	512	4.4	102	2.3	120	2.5	161	2.9	383	2.6	895	3.4
No	11041	95.0	4360	97.7	4767	97.5	5352	97.1	14479	97.4	25520	96.4
Missing	68	0.6	0	0	0	0	0	0	0	0	68	0.2
LMWH given status, No. (%)												
Prior	423	87.4	79	80.6	99	87.6	127	86.4	305	85.2	728	86.5
After	31	6.4	6	6.1	3	2.7	13	8.8	22	6.1	53	6.3
During	30	6.2	13	13.3	11	9.7	7	4.8	31	8.7	61	7.2
Not available	2		0		0		1		1		3	
Missing	26		4		7		13		24		50	

	2007-2009		2010		2011		2012		2010-2012		2007-2012	
	Total no. of procedures = 11621		Total no. of procedures = 4462		Total no. of procedures = 4887		Total no. of procedures = 5513		Total no. of procedures = 14862		Total no. of procedures = 26483	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Ticlopidine, No. (%)												
Yes	351	3.1	88	2.0	47	1.0	56	1.0	191	1.3	542	2.0
No	11220	96.5	4374	98.0	4840	99.0	5457	99.0	14671	98.7	25891	97.8
Missing	50	0.4	0	0	0	0	0	0	0	0	50	0.2
Ticlopidine given status, No. (%)												
Prior	316	97.0	86	98.9	43	95.6	47	94.0	176	96.7	492	96.9
After	5	1.5	1	1.1	0	0	0	0	1	0.5	6	1.2
During	5	1.5	0	0	2	4.4	3	6.0	5	2.8	10	1.9
Not available	6		0		0		1		1		7	
Missing	19		1		2		5		8		27	
Aspirin, No. (%)												
Yes	11256	96.9	4300	96.4	4815	98.5	5417	98.3	14532	97.8	25788	97.4
No	338	2.9	162	3.6	72	1.5	96	1.7	330	2.2	668	2.5
Missing	27	0.2	0	0	0	0	0	0	0	0	27	0.1
Aspirin given status, No. (%)												
Prior	10629	98.4	4160	98.6	4625	98.4	5265	99.1	14050	98.7	24679	98.6
After	75	0.7	13	0.3	20	0.4	11	0.2	44	0.3	119	0.5
During	96	0.9	46	1.1	56	1.2	39	0.7	141	1.0	237	0.9
Not available	180		1		5		5		11		191	
Missing	276		80		109		97		286		562	



	2007-2009		2010		2011		2012		2010-2012		2007-2012	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Clopidogrel, No. (%)												
Yes	11389	98.0	4341	97.3	4792	98.1	5411	98.1	14544	97.9	25933	97.9
No	213	1.8	121	2.7	95	1.9	102	1.9	318	2.1	531	2.0
Missing	19	0.2	0	0	0	0	0	0	0	0	19	0.1
Clopidogrel given status, No. (%)												
Prior	10660	95.4	4220	98.0	4640	97.7	5287	98.9	14147	98.3	24807	97.0
After	294	2.7	54	1.3	42	0.9	14	0.3	110	0.8	404	1.6
During	215	1.9	30	0.7	65	1.4	41	0.8	136	0.9	351	1.4
Not available	152		5		2		19		26		178	
Missing	68		32		43		50		125		193	
Duration of clopidogrel given prior to PCI procedure, hrs, No. (%)												
<6	1841	18.5	800	19.8	1316	30.9	1915	38.2	4031	30.3	5872	25.3
6-24	2867	28.9	1016	25.1	1698	39.9	1904	38.1	4618	34.6	7485	32.2
>24-72	1788	18.0	1176	29.0	606	14.2	557	11.1	2339	17.6	4127	17.7
>72	3441	34.6	1058	26.1	639	15.0	633	12.6	2330	17.5	5771	24.8
Not available	460		41		78		98		217		677	
Missing	263		129		303		180		612		875	

	2007-2009		2010		2011		2012		2010-2012		2007-2012				
	No.	%	Total no. of procedures = 11621	No.	%	Total no. of procedures = 4462	No.	%	Total no. of procedures = 4887	No.	%	Total no. of procedures = 14862	No.	%	Total no. of procedures = 26483
First starting dose, mg, No. (%)															
75	4180	41.6		2267	56.8	2409	60.4	2711	57.1	7387	58.1	11567	50.8		
300	5291	52.6		1364	34.2	954	23.9	1368	28.8	3686	28.9	8977	39.4		
600	582	5.8		363	9.0	625	15.7	667	14.0	1655	13.0	2237	9.8		
≥1200	1	0.0		0	0	0	0	5	0.1	5	0.0	6	0.0		
Not available	886			44		58		199		301		1187			
Missing	449			303		746		461		1510		1959			
*Clopidogrel dose of STEMI patient, mg, No. (%)															
Total no. of PCI procedures among STEMI patients who are taking Clopidogrel.	2598	100.0		948	100.0	1138	100.0	945	100.0	3031	100.0	5629	100.0		
75	956	40.3		544	60.2	637	63.2	304	37.1	1485	54.4	2441	47.8		
300	1297	54.7		296	32.7	222	22.0	350	42.7	868	31.8	2165	42.5		
600	119	5.0		64	7.1	149	14.8	165	20.1	378	13.8	497	9.7		
≥1200	1	0.0		0	0	0	0	1	0.1	1	0.0	2	0.0		
Not available	150			6		13		42		61		211			
Missing	75			38		117		83		238		313			
Fondaparinox, No. (%)															
Yes	1	0		96	2.2	162	3.3	323	5.9	581	3.9	582	2.2		
No	604	5.2		4178	93.6	4449	91.1	4904	88.9	13531	91.0	14135	53.4		
Missing	11016	94.8		188	4.2	276	5.6	286	5.2	750	5.1	11766	44.4		



	2007-2009		2010		2011		2012		2010-2012		2007-2012	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Fondaparinux given status, No. (%)												
Prior	0	0	90	95.8	149	97.4	243	90.7	482	93.6	482	93.6
After	0	0	2	2.1	4	2.6	22	8.2	28	5.4	28	5.4
During	0	0	2	2.1	0	0	3	1.1	5	1.0	5	1.0
Not available	1		0		1		4		5		6	
Missing	0		2		8		51		61		61	
Planned duration of clopidogrel/ticlopidine, month, No. (%)												
1	2798	24.1	670	15	743	15.2	635	11.5	2048	13.8	4846	18.3
3	670	5.8	240	5.4	180	3.7	327	5.9	747	5.0	1417	5.4
6	1435	12.3	87	1.9	126	2.6	234	4.2	447	3.0	1882	7.1
12	4525	38.9	2990	67	3427	70.1	3677	66.7	10094	67.9	14619	55.2
>12	1297	11.2	302	6.8	117	2.4	58	1.2	477	3.2	1774	6.7
Not available	796	6.8	138	3.1	127	2.6	256	4.6	521	3.5	1317	4.9
Missing	100	0.9	35	0.8	167	3.4	326	5.9	528	3.6	628	2.4

*Only applicable to STEMI patients who are taking Clopidogrel

Table 4.1.3 Comparison of STEMI and NSTEMI patients who received ad-hoc PCI, NCVD-PCI Registry, 2007-2012

Year	Cath/PCI same lab visit	STEMI		NSTEMI	
		No.	%	No.	%
2007-2009 Total no. of procedures = 1109	Yes	520	89.2	461	87.6
	No	58	9.9	60	11.4
	Missing	5	0.9	5	1.0
	Total	583	100.0	526	100.0
2010-2012 Total no. of procedures = 2293	Yes	1210	85.1	705	80.9
	No	167	11.7	151	17.3
	Missing	45	3.2	15	1.8
	Total	1422	100.0	871	100.0
2007-2012 Total no. of procedures = 3402	Yes	1730	86.3	1166	83.5
	No	225	11.2	211	15.1
	Missing	50	2.5	20	1.4
	Total	2005	100.0	1397	100.0



Table 4.1.4 Duration of Thienopyridine in patients who underwent PCI, NCVD-PCI Registry, 2007-2012

Year	Planned duration of clopidogrel/ ticlopidine (months)	#Intracoronary devices used					
		Balloon only		Drug eluting stent		Bare metal stent	
		No.	%	No.	%	No.	%
2007-2009 Total no. of lesions = 15848	1	353	27.6	124	1.6	2766	46.8
	3	68	5.3	191	2.5	471	8.0
	6	169	13.2	1110	14.3	662	11.2
	12	393	30.7	4649	59.8	1171	19.8
	>12	123	9.6	1278	16.4	474	8.0
	Not available	161	12.5	373	4.8	317	5.3
	Missing	14	1.1	48	0.6	52	0.9
	Total	1281	100.0	7773	100.0	5913	100.0
2010-2012 Total no. of lesions = 19025	1	235	19.4	175	1.4	1643	43.2
	3	74	6.1	242	1.9	396	10.4
	6	41	3.4	207	1.7	181	4.8
	12	707	58.5	10836	86.0	1301	34.1
	>12	33	2.7	512	4.1	60	1.6
	Not available	92	7.6	180	1.4	98	2.6
	Missing	27	2.3	445	3.5	124	3.3
	Total	1209	100.0	12597	100.0	3803	100.0
2007-2012 Total no. of lesions = 34873	1	588	23.6	299	1.5	4409	45.4
	3	142	5.7	433	2.1	867	8.9
	6	210	8.4	1317	6.5	843	8.7
	12	1100	44.2	15485	76.0	2472	25.4
	>12	156	6.3	1790	8.8	534	5.5
	Not available	253	10.2	553	2.7	415	4.3
	Missing	41	1.6	493	2.4	176	1.8
	Total	2490	100.0	20370	100.0	9716	100.0

#Patients are allowed to have more than one type of category

Table 4.1.5 Access site of patients who underwent procedures, by PCI status, NCVI-PCI Registry, 2007-2012

Year	#Percutaneous entry	PCI status											
		Elective		NSTEMI/UA		AMI		Not available		Missing		Total	
		No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
2007-2009 Total no. of procedures = 11621	Brachial	108	94.7	2	1.8	3	2.6	1	0.9	0	0	114	100.0
	Radial	4191	95.7	112	2.6	66	1.5	10	0.2	1	0.0	4380	100.0
	Femoral	5655	86.2	394	6.0	499	7.6	13	0.2	2	0.0	6563	100.0
2010-2012 Total no. of procedures = 14862	Brachial	59	85.5	5	7.2	5	7.3	0	0	0	0	69	100.0
	Radial	6187	89.4	332	4.8	401	5.8	0	0	1	0.0	6921	100.0
	Femoral	5820	79.8	509	7.0	964	13.2	0	0	1	0.0	7294	100.0
2007-2012 Total no. of procedures = 26483	Brachial	167	91.3	7	3.8	8	4.4	1	0.5	0	0	183	100.0
	Radial	10378	91.8	444	3.9	467	4.2	10	0.1	2	0.0	11301	100.0
	Femoral	11475	82.8	903	6.5	1463	10.6	13	0.1	3	0.0	13857	100.0

#Patients are allowed to have more than one type of category