



CHAPTER 4: TREATMENT

Azmee Mohd Ghazi, Azhari Rosman

Department of Cardiology, Institut Jantung Negara

Summary

1. The median for days spent in hospital by patients admitted with ACS was four to five days which includes two to three days in CCU. The length of stay in hospital increases with age.
2. In STEMI patients only 6-8% of patients received primary angioplasty and 70-75% received thrombolytic therapy.
3. About 17-21% of patients with STEMI were treated with PCI during the same admission.
4. About 13-16% of patients with NSTEMI and 3-9% of patients with UA were treated with PCI on the same admission.
5. More than 90% of patients received aspirin and statin for the treatment of ACS. However, only 60-70% of patients received dual antiplatelet therapy.
6. Malay patients appeared to receive less LMWH and Indian patients received more anti-diabetic medications.

Chapter 4 summarises the treatment of patients admitted with acute coronary syndrome registered in the NCVD ACS registry from January 2006 to December 2008. This chapter is divided into admission days, treatment of STEMI, treatment of NSTEMI/UA and pharmacological treatment of ACS.

Admission days

For each year from January 2006 to December 2008, the total number of admission days is similar in all ACS spectrums. The median for days of admission was 5 days for STEMI and NSTEMI; and 4 days for UA which were consistent between years 2006 and 2008. [Table 4.1] The total number of admission days increases with age and this was observed in all ACS spectrums. [Table 4.2] For STEMI, females tend to stay longer in hospitals (mean of 7 days) compared to 6 days for males (this trend is similar for all 3 years). [Table 4.3] However, in the NSTEMI/UA group, females and males spent equal length of time in hospital. [Table 4.7] There is no-difference in the median number of days spent in hospital in all three ethnic groups after admission with STEMI/NSTEMI/UA. [Table 4.4 & Table 4.8]

There is a similar trend across all ACS spectrums for number of days spent in CCU or ICU/CICU. The median numbers of days spent in CCU or ICU/CICU for STEMI, NSTEMI or UA were two to four days. [Table 4.1] This was observed in each year from 2006 to 2008. There is a trend in each year that the number of days in intensive care wards (CCU, ICU and CICU) increases with age. [Table 4.2]

Treatment of STEMI

For patients admitted with STEMI, 70-75% of patients received thrombolytic therapy and 6-8% of patients received primary angioplasty. Sixteen percent of all patients with STEMI did not receive any form of revascularization due to delayed presentation or initially wrong diagnosis. Thrombolytic therapy was not given due to contraindication in 4-5% of STEMI patients. [Table 4.1] The younger age group were given thrombolytic therapy more than the elderly group. On the other hand, the elderly group had higher percentage to with primary angioplasty compared to the young and the middle age groups. [Table 4.2]

There is a difference of treatment in terms of gender. Most female patients received less thrombolysis than male. [Table 4.3] Only about 17-21% of patients with STEMI were treated with percutaneous coronary intervention during the same hospital admission. The others were initially treated medically post STEMI. [Table 4.1]

Treatment of NSTEMI/UA

Majority of the patients admitted with NSTEMI/UA were treated medically. Only 13-16% of patients with NSTEMI and 3-9% of patients with UA were treated with PCI on the same admission. [Table 4.1] The younger patients and male tend to be more treated with PCI compared to those who were middle aged or elderly. [Table 4.6 & Table 4.7] There were no differences in the proportions of patients undergoing PCI among different ethnic groups. [Table 4.8]

Pharmacological treatment of ACS

During ACS admission, nearly 90% of patients received aspirin and statin. [Table 4.1] In the STEMI group, there were no differences in the use of aspirin and statin in the different age groups, genders and ethnic groups. However in patients admitted with NSTEMI/UA, the use of aspirin was less in the elderly. [Table 4.6] ADP antagonist was given in 60-70% of patients with ACS. The STEMI group received more ADP antagonist (60-73%) compared to the NSTEMI (60-63%) and UA (55-59%) patients. LMWH was given more in the UA and NSTEMI patients than STEMI patients. Generally, the Malays received less LMWH compared to other races. ACE Inhibitor and Beta blockers were used in more than 50% of the patients. The usage of anti diabetic medication was higher among the Indian patients. Glycoprotein IIb/IIIa receptor inhibitor is used in only a small proportion of the patients (<5%) in the ACS spectrum. [Table 4.1]

Around 74-85% of STEMI patients received thrombolysis at centres without cathlab facility compared to 65-69% in centre with cathlab facility. About 11-13% of patients in centre with cathlab facility proceeded directly to primary angioplasty. A higher percentage of STEMI patients underwent PCI at admission (33-34%) compared to NSTEMI (19-26%) and UA (5-13%). [Table 4.9]

Table 4.1 Summary of treatments for patients with ACS by ACS stratum, NCVI-ACS Registry, 2006-2008

Year	2006				2007				2008				Overall			
	STEMI	NSTEMI	UA	STEMI	NSTEMI	UA	STEMI	NSTEMI	UA	STEMI	NSTEMI	UA	STEMI	NSTEMI	UA	
ACS Stratum	STEMI	NSTEMI	UA	STEMI	NSTEMI	UA	STEMI	NSTEMI	UA	STEMI	NSTEMI	UA	STEMI	NSTEMI	UA	
Total	1445	1132	845	1687	1001	958	1534	662	655	4666	2795	2458				
Total admission days**																
N	1420	1104	830	1570	944	934	1387	607	581	4377	2655	2345				
Mean (SD)	6 (3)	6 (4)	5 (4)	6 (4)	6 (5)	5 (3)	6 (3)	6 (4)	5 (3)	6 (3)	6 (4)	5 (3)	6 (4)	6 (4)	5 (3)	
Median (min, max)	5 (1, 28)	5 (1, 30)	4 (1, 29)	5 (1, 30)	5 (1, 29)	4 (1, 30)	5 (1, 28)	5 (1, 26)	4 (1, 27)	5 (1, 30)	5 (1, 30)	4 (1, 30)	5 (1, 30)	5 (1, 30)	4 (1, 30)	
IQR	3	3	3	3	3	2	2	3	2	3	3	2	3	3	2	
Number of days on CCU																
N	1093	450	140	1175	352	129	1109	294	96	3377	1096	365				
Mean (SD)	3 (3)	4 (3)	3 (3)	3 (3)	3 (3)	3 (2)	3 (3)	3 (3)	3 (4)	3 (3)	3 (3)	3 (3)	3 (3)	3 (3)	3 (3)	
Median (min, max)	3 (1, 26)	3 (1, 24)	2 (1, 20)	3 (1, 29)	3 (1, 30)	2 (1, 13)	3 (1, 28)	2 (1, 20)	2 (1, 24)	3 (1, 29)	3 (1, 30)	2 (1, 24)	3 (1, 30)	3 (1, 30)	2 (1, 24)	
IQR	2	2	3	2	3	2	2	3	3	2	2	3	2	2	3	
Number of days on ICU/CICU																
N	87	110	27	13	27	8	14	16	7	114	153	42				
Mean (SD)	3 (3)	4 (3)	4 (2)	4 (4)	3 (4)	2 (2)	4 (3)	3 (2)	4 (3)	3 (3)	3 (3)	3 (2)	3 (3)	3 (3)	3 (2)	
Median (min, max)	2 (1, 17)	3 (1, 23)	4 (1, 9)	2 (1, 13)	2 (1, 24)	2 (1, 7)	4 (1, 11)	3 (1, 6)	3 (1, 11)	2 (1, 17)	3 (1, 24)	3 (1, 11)	3 (1, 24)	3 (1, 11)	3 (1, 11)	
IQR	3	2	3	2	2	1	2	2	3	2	2	2	2	2	4	
Fibrinolytic therapy, No. (%)																
Given	1018 (70)			1231 (73)			1143 (75)			3392 (73)						
Not given-proceeded directly to primary angioplasty	117 (8)			113 (7)			90 (6)			320 (7)						
Not given-Contraindicated	70 (5)			63 (4)			56 (4)			189 (4)						
Not given-Missed thrombolysis	193 (13)			226 (13)			168 (11)			587 (13)						
Not given-Others***	47 (3)			54 (3)			77 (5)			178 (4)						

Table 4.1 Summary of treatments for patients with ACS by ACS stratum, NCVI-ACS Registry, 2006-2008

Year	2006				2007				2008				Overall			
	STEMI	NSTEMI	UA	JA	STEMI	NSTEMI	UA	JA	STEMI	NSTEMI	UA	JA	STEMI	NSTEMI	UA	JA
ACS Stratum																
Total	1445	1132	845		1687	1001	958		1534	662	655		4666	2795	2458	
Cardiac catheterisation, No. (%)																
Yes	298 (21)	251 (22)	106 (13)		351 (21)	272 (27)	110 (11)		299 (19)	149 (23)	36 (5)		948 (20)	672 (24)	252 (10)	
No	1108 (77)	858 (76)	727 (86)		1285 (76)	707 (71)	836 (87)		1182 (77)	495 (75)	610 (93)		3575 (77)	2060 (74)	2173 (88)	
Number transferred to another centre	39 (3)	23 (2)	12 (1)		51 (3)	22 (2)	12 (1)		53 (3)	18 (3)	9 (1)		143 (3)	63 (2)	33 (1)	
Percutaneous Coronary Intervention, No. (%)																
Yes	308 (21)	161 (14)	80 (9)		297 (18)	161 (16)	77 (8)		258 (17)	88 (13)	22 (3)		863 (18)	410 (15)	179 (7)	
No	1137 (79)	971 (86)	765 (91)		1390 (82)	840 (84)	881 (92)		1276 (83)	574 (87)	633 (97)		3803 (82)	2385 (85)	2279 (93)	
CABG, No. (%)																
Yes	10 (1)	42 (4)	15 (2)		10 (1)	28 (3)	9 (1)		8 (1)	13 (2)	5 (1)		28 (1)	83 (3)	29 (1)	
No	1435 (99)	1090 (96)	830 (98)		1677 (99)	973 (97)	949 (99)		1526 (99)	649 (98)	650 (99)		4638 (99)	2712 (97)	2429 (99)	
Pre-admission aspirin use, No. (%)																
Yes	227 (16)	465 (41)	372 (44)		370 (22)	452 (45)	520 (54)		277 (18)	272 (41)	332 (51)		874 (19)	1189 (43)	1224 (50)	
No	965 (67)	468 (41)	257 (30)		1221 (72)	474 (47)	378 (39)		1133 (74)	317 (48)	209 (32)		3319 (71)	1259 (45)	844 (34)	
Unknown	253 (18)	199 (18)	216 (26)		96 (6)	75 (7)	60 (6)		124 (8)	73 (11)	114 (17)		473 (10)	347 (12)	390 (16)	

Table 4.1 Summary of treatments for patients with ACS by ACS stratum, NCVd-ACS Registry, 2006-2008

Year	2006				2007				2008				Overall			
	STEMI	NSTEMI	UA	STEMI	NSTEMI	UA	STEMI	NSTEMI	UA	STEMI	NSTEMI	UA	STEMI	NSTEMI	UA	
ACS Stratum	STEMI	NSTEMI	UA	STEMI	NSTEMI	UA	STEMI	NSTEMI	UA	STEMI	NSTEMI	UA	STEMI	NSTEMI	UA	
Total	1445	1132	845	1687	1001	958	1534	662	655	4666	2795	2458				
Pharmacological therapy given during admission, No. (%)																
Aspirin	1368 (95)	1018 (90)	765 (91)	1583 (94)	889 (89)	868 (91)	1386 (90)	555 (84)	501 (76)	4337 (93)	2462 (88)	2134 (87)				
ADP antagonist	868 (60)	719 (64)	422 (50)	1230 (73)	633 (63)	563 (59)	1073 (70)	396 (60)	362 (55)	3171 (68)	1748 (63)	1347 (55)				
GP receptor inhibitor	77 (5)	47 (4)	19 (2)	46 (3)	31 (3)	4 (0)	43 (3)	22 (3)	8 (1)	166 (4)	100 (4)	31 (1)				
Unfractionated heparin	181 (13)	203 (18)	197 (23)	161 (10)	100 (10)	99 (10)	137 (9)	62 (9)	41 (6)	479 (10)	365 (13)	337 (14)				
LMWH	446 (31)	767 (68)	537 (64)	613 (36)	725 (72)	714 (75)	539 (35)	466 (70)	443 (68)	1598 (34)	1958 (70)	1694 (69)				
Beta blocker	951 (66)	737 (65)	587 (69)	1092 (65)	648 (65)	693 (72)	931 (61)	411 (62)	408 (62)	2974 (64)	1796 (64)	1688 (69)				
ACE inhibitor	865 (60)	597 (53)	510 (60)	1025 (61)	558 (56)	657 (69)	761 (50)	312 (47)	354 (54)	2651 (57)	1467 (52)	1521 (62)				
Angiotensin II receptor blocker	66 (5)	131 (12)	70 (8)	67 (4)	95 (9)	91 (9)	88 (6)	74 (11)	55 (8)	221 (5)	300 (11)	216 (9)				
Statin	1333 (92)	1022 (90)	769 (91)	1529 (91)	882 (88)	868 (91)	1322 (86)	524 (79)	517 (79)	4184 (90)	2428 (87)	2154 (88)				
Other lipid lowering agent	54 (4)	79 (7)	54 (6)	54 (3)	65 (6)	49 (5)	83 (5)	45 (7)	29 (4)	191 (4)	189 (7)	132 (5)				
Diuretics	393 (27)	464 (41)	241 (29)	467 (28)	399 (40)	296 (31)	329 (21)	241 (36)	149 (23)	1189 (25)	1104 (39)	686 (28)				
Calcium antagonist	94 (7)	253 (22)	195 (23)	115 (7)	209 (21)	211 (22)	110 (7)	141 (21)	113 (17)	319 (7)	603 (22)	519 (21)				
Oral hypoglycaemic agent	373 (26)	364 (32)	236 (28)	387 (23)	263 (26)	298 (31)	297 (19)	181 (27)	210 (32)	1057 (23)	808 (29)	744 (30)				
Insulin	379 (26)	320 (28)	183 (22)	447 (26)	268 (27)	229 (24)	333 (22)	154 (23)	100 (15)	1159 (25)	742 (27)	512 (21)				
Anti-arrhythmic agent	135 (9)	72 (6)	49 (6)	121 (7)	81 (8)	40 (4)	102 (7)	64 (10)	18 (3)	358 (8)	217 (8)	107 (4)				

*Total admission days is derived as Outcome date - Admission date + 1

**Not given-Others' includes missing and refusal

Table 4.2 Treatments for patients with STEMI by age group (years), NCVDA-ACS Registry, 2006-2008

Year	2006				2007				2008				Overall			
	Young	Middle-age	Elderly		Young	Middle-age	Elderly		Young	Middle-age	Elderly		Young	Middle-age	Elderly	
Total	113	803	529		112	954	621		119	812	603		344	2569	1753	
Total admission days**																
N	110	796	514		105	881	584		108	737	542		323	2414	1640	
Mean (SD)	5 (2)	6 (3)	7 (4)		5 (2)	6 (3)	6 (4)		6 (3)	6 (3)	6 (4)		5 (2)	6 (3)	6 (4)	
Median (min, max)	5 (1, 20)	5 (1, 28)	5 (1, 28)		5 (1, 18)	5 (1, 30)	5 (1, 30)		5 (1, 27)	5 (1, 27)	5 (1, 28)		5 (1, 27)	5 (1, 30)	5 (1, 30)	
IQR	2	2	2		1	2	3		2	2	3		2	2	3	
Number of days on CCU																
N	86	614	393		78	677	420		81	603	425		245	1894	1238	
Mean (SD)	3 (2)	3 (2)	4 (3)		3 (2)	3 (2)	3 (3)		3 (2)	3 (2)	4 (3)		3 (2)	3 (2)	4 (3)	
Median (min, max)	3 (1, 10)	3 (1, 21)	3 (1, 26)		3 (1, 17)	3 (1, 29)	3 (1, 26)		3 (1, 11)	3 (1, 28)	3 (1, 28)		3 (1, 17)	3 (1, 29)	3 (1, 28)	
IQR	2	2	2		2	2	2		2	2	2		2	2	2	
Number of days on ICU/CICU																
N	7	48	32		0	8	5		2	7	5		9	63	42	
Mean (SD)	2 (1)	3 (3)	4 (4)		.	3 (2)	6 (5)		4 (1)	4 (3)	5 (4)		2 (1)	3 (3)	4 (4)	
Median (min, max)	2 (1, 4)	2 (1, 17)	3 (1, 17)		.	2 (1, 8)	4 (1, 13)		4 (3, 4)	3 (1, 9)	4 (2, 11)		2 (1, 4)	2 (1, 17)	3 (1, 17)	
IQR	1	2	3		.	3	9		1	2	3		1	3	3	

*Young is defined as age from 20 to less than 40 years, middle-age is defined as age between 40 to less than 60 years and elderly is defined as 60 years and above

**Total admission days is derived as Outcome date - Admission date + 1

***Not given-Others' includes missing and refusal

Table 4.2 Treatments for patients with STEMI by age group (years), NCVI-ACS Registry, 2006-2008

Year	2006				2007				2008				Overall			
	Young	Middle-age	Elderly	Total	Young	Middle-age	Elderly	Total	Young	Middle-age	Elderly	Total	Young	Middle-age	Elderly	Total
Age group*																
Total	113	803	529	112	954	621	119	812	603	344	2569	1753				
Fibrinolytic therapy, No. (%)																
Given	88 (78)	601 (75)	329 (62)	80 (71)	723 (76)	428 (69)	90 (76)	634 (78)	419 (69)	258 (75)	1958 (76)	1176 (67)				
Not given-proceeded directly to primary angioplasty	7 (6)	59 (7)	51 (10)	7 (6)	68 (7)	38 (6)	7 (6)	39 (5)	44 (7)	21 (6)	166 (6)	133 (8)				
Not given-Contraindicated	3 (3)	31 (4)	36 (7)	3 (3)	27 (3)	33 (5)	4 (3)	26 (3)	26 (4)	10 (3)	84 (3)	95 (5)				
Not given-Missed thrombolysis	10 (9)	94 (12)	89 (17)	20 (18)	107 (11)	99 (16)	10 (8)	80 (10)	78 (13)	40 (12)	281 (11)	266 (15)				
Not given-Others***	5 (4)	18 (2)	24 (5)	2 (2)	29 (3)	23 (4)	8 (7)	33 (4)	36 (6)	15 (4)	80 (3)	83 (5)				
Cardiac catheterisation, No. (%)																
Yes	27 (24)	171 (21)	100 (19)	26 (23)	215 (23)	110 (18)	29 (24)	158 (19)	112 (19)	82 (24)	544 (21)	322 (18)				
No	81 (72)	613 (76)	414 (78)	80 (71)	709 (74)	496 (80)	85 (71)	628 (77)	469 (78)	246 (72)	1950 (76)	1379 (79)				
Number transferred to another centre	5 (4)	19 (2)	15 (3)	6 (5)	30 (3)	15 (2)	5 (4)	26 (3)	22 (4)	16 (5)	75 (3)	52 (3)				
Percutaneous Coronary Intervention, No. (%)																
Yes	25 (22)	180 (22)	103 (19)	17 (15)	189 (20)	91 (15)	24 (20)	137 (17)	97 (16)	66 (19)	506 (20)	291 (17)				
No	88 (78)	623 (78)	426 (81)	95 (85)	765 (80)	530 (85)	95 (80)	675 (83)	506 (84)	278 (81)	2063 (80)	1462 (83)				
CABG, No. (%)																
Yes	0 (0)	3 (0)	7 (1)	0 (0)	7 (1)	3 (0)	0 (0)	3 (0)	5 (1)	0 (0)	13 (1)	15 (1)				
No	113 (100)	800 (100)	522 (99)	112 (100)	947 (99)	618 (100)	119 (100)	809 (100)	598 (99)	344 (100)	2556 (99)	1738 (99)				

Table 4.2 Treatments for patients with STEMI by age group (years), NCVI-ACS Registry, 2006-2008

Year	2006			2007			2008			Overall		
	Young	Middle-age	Elderly	Young	Middle-age	Elderly	Young	Middle-age	Elderly	Young	Middle-age	Elderly
Total	113	803	529	112	954	621	119	812	603	344	2569	1753
Pre-admission aspirin use, No. (%)												
Yes	10 (9)	111 (14)	106 (20)	19 (17)	210 (22)	141 (23)	16 (13)	139 (17)	122 (20)	45 (13)	460 (18)	369 (21)
No	89 (79)	536 (67)	340 (64)	88 (79)	695 (73)	438 (71)	92 (77)	616 (76)	425 (70)	269 (78)	1847 (72)	1203 (69)
Unknown	14 (12)	156 (19)	83 (16)	5 (4)	49 (5)	42 (7)	11 (9)	57 (7)	56 (9)	30 (9)	262 (10)	181 (10)
Pharmacological therapy given during admission, No. (%)												
Aspirin	110 (97)	760 (95)	498 (94)	108 (96)	901 (94)	574 (92)	104 (87)	743 (92)	539 (89)	322 (94)	2404 (94)	1611 (92)
ADP antagonist	69 (61)	452 (56)	347 (66)	81 (72)	700 (73)	449 (72)	75 (63)	558 (69)	440 (73)	225 (65)	1710 (67)	1236 (71)
GP receptor inhibitor	7 (6)	42 (5)	28 (5)	2 (2)	24 (3)	20 (3)	6 (5)	22 (3)	15 (2)	15 (4)	88 (3)	63 (4)
Unfractionated heparin	10 (9)	105 (13)	66 (12)	15 (13)	86 (9)	60 (10)	12 (10)	72 (9)	53 (9)	37 (11)	263 (10)	179 (10)
LMWH	44 (39)	232 (29)	170 (32)	45 (40)	345 (36)	223 (36)	52 (44)	286 (35)	201 (33)	141 (41)	863 (34)	594 (34)
Beta blocker	86 (76)	555 (69)	310 (59)	79 (71)	656 (69)	357 (57)	71 (60)	523 (64)	337 (56)	236 (69)	1734 (67)	1004 (57)
ACE inhibitor	68 (60)	506 (63)	291 (55)	70 (63)	600 (63)	355 (57)	59 (50)	427 (53)	275 (46)	197 (57)	1533 (60)	921 (53)
Angiotensin II receptor blocker	6 (5)	39 (5)	21 (4)	4 (4)	30 (3)	33 (5)	7 (6)	40 (5)	41 (7)	17 (5)	109 (4)	95 (5)
Statin	105 (93)	750 (93)	478 (90)	101 (90)	874 (92)	554 (89)	99 (83)	706 (87)	517 (86)	305 (89)	2330 (91)	1549 (88)
Other lipid lowering agent	10 (9)	29 (4)	15 (3)	4 (4)	37 (4)	13 (2)	7 (6)	50 (6)	26 (4)	21 (6)	116 (5)	54 (3)
Diuretics	13 (12)	184 (23)	196 (37)	20 (18)	242 (25)	205 (33)	18 (15)	151 (19)	160 (27)	51 (15)	577 (22)	561 (32)
Calcium antagonist	3 (3)	46 (6)	45 (9)	5 (4)	40 (4)	70 (11)	6 (5)	46 (6)	58 (10)	14 (4)	132 (5)	173 (10)
Oral hypoglycaemic agent	22 (19)	229 (29)	122 (23)	16 (14)	249 (26)	122 (20)	21 (18)	164 (20)	112 (19)	59 (17)	642 (25)	356 (20)
Insulin	22 (19)	221 (28)	136 (26)	21 (19)	255 (27)	171 (28)	12 (10)	177 (22)	144 (24)	55 (16)	653 (25)	451 (26)
Anti-arrhythmic agent	7 (6)	71 (9)	57 (11)	5 (4)	61 (6)	55 (9)	5 (4)	48 (6)	49 (8)	17 (5)	180 (7)	161 (9)

Table 4.3 Treatments for patients with STEMI by gender, NCVd-ACS Registry, 2006-2008

Year	2006		2007		2008		Overall	
	Male	Female	Male	Female	Male	Female	Male	Female
Gender								
Total	1230	215	1447	240	1281	253	3958	708
Total admission days*								
N	1211	209	1344	226	1162	225	3717	660
Mean (SD)	6 (3)	7 (4)	6 (3)	7 (5)	6 (3)	7 (4)	6 (3)	7 (4)
Median (min, max)	5 (1, 28)	5 (1, 28)	5 (1, 30)	6 (1, 29)	5 (1, 28)	6 (1, 28)	5 (1, 30)	6 (1, 29)
IQR	2	4	2	3	2	2	2	4
Number of days on CCU								
N	936	157	1022	153	944	165	2902	475
Mean (SD)	3 (3)	4 (3)	3 (3)	3 (3)	3 (2)	4 (3)	3 (3)	4 (3)
Median (min, max)	3 (1, 26)	3 (1, 21)	3 (1, 29)	3 (1, 22)	3 (1, 28)	3 (1, 28)	3 (1, 29)	3 (1, 28)
IQR	2	2	2	2	2	2	2	2
Number of days on ICU/CICU								
N	68	19	10	3	12	2	90	24
Mean (SD)	3 (3)	3 (2)	5 (4)	2 (2)	4 (2)	7 (6)	3 (3)	3 (2)
Median (min, max)	2 (1, 17)	2 (1, 7)	3 (1, 13)	2 (1, 4)	4 (1, 9)	7 (2, 11)	2 (1, 17)	2 (1, 11)
IQR	3	2	6	3	2	9	3	2
Fibrinolytic therapy, No. (%)								
Given	875 (71)	143 (67)	1071 (74)	160 (67)	982 (77)	161 (64)	2928 (74)	464 (66)
Not given-proceeded directly to primary angioplasty	99 (8)	18 (8)	99 (7)	14 (6)	77 (6)	13 (5)	275 (7)	45 (6)
Not given-Contraindicated	59 (5)	11 (5)	48 (3)	15 (6)	44 (3)	12 (5)	151 (4)	38 (5)
Not given-Missed thrombolysis	156 (13)	37 (17)	181 (13)	45 (19)	120 (9)	48 (19)	457 (12)	130 (18)
Not given-Others**	41 (3)	6 (3)	48 (3)	6 (3)	58 (5)	19 (8)	147 (4)	31 (4)

Table 4.3 Treatments for patients with STEMI by gender, NCD-ACS Registry, 2006-2008

Year	2006		2007		2008		Overall	
	Male	Female	Male	Female	Male	Female	Male	Female
Gender								
Total	1230	215	1447	240	1281	253	3958	708
Cardiac catheterisation, No. (%)								
Yes	266 (22)	32 (15)	301 (21)	50 (21)	261 (20)	38 (15)	828 (21)	120 (17)
No	931 (76)	177 (82)	1099 (76)	186 (78)	973 (76)	209 (83)	3003 (76)	572 (81)
Number transferred to another centre	33 (3)	6 (3)	47 (3)	4 (2)	47 (4)	6 (2)	127 (3)	16 (2)
Percutaneous Coronary Intervention, No. (%)								
Yes	273 (22)	35 (16)	256 (18)	41 (17)	226 (18)	32 (13)	755 (19)	108 (15)
No	957 (78)	180 (84)	1191 (82)	199 (83)	1055 (82)	221 (87)	3203 (81)	600 (85)
CABG, No. (%)								
Yes	9 (1)	1 (0)	10 (1)	0 (0)	6 (0)	2 (1)	25 (1)	3 (0)
No	1221 (99)	214 (100)	1437 (99)	240 (100)	1275 (100)	251 (99)	3933 (99)	705 (100)
Pre-admission aspirin use, No. (%)								
Yes	189 (15)	38 (18)	306 (21)	64 (27)	226 (18)	51 (20)	721 (18)	153 (22)
No	824 (67)	141 (66)	1066 (74)	155 (65)	959 (75)	174 (69)	2849 (72)	470 (66)
Unknown	217 (18)	36 (17)	75 (5)	21 (9)	96 (7)	28 (11)	388 (10)	85 (12)

Table 4.3 Treatments for patients with STEMI by gender, NCD-ACS Registry, 2006-2008

Year	2006		2007		2008		Overall	
	Male	Female	Male	Female	Male	Female	Male	Female
Total	1230	215	1447	240	1281	253	3958	708
Pharmacological therapy given during admission, No. (%)								
Aspirin	1164 (95)	204 (95)	1363 (94)	220 (92)	1163 (91)	223 (88)	3690 (93)	647 (91)
ADP antagonist	726 (59)	142 (66)	1051 (73)	179 (75)	901 (70)	172 (68)	2678 (68)	493 (70)
GP receptor inhibitor	65 (5)	12 (6)	37 (3)	9 (4)	41 (3)	2 (1)	143 (4)	23 (3)
Unfractionated heparin	156 (13)	25 (12)	137 (9)	24 (10)	115 (9)	22 (9)	408 (10)	71 (10)
LMWH	371 (30)	75 (35)	508 (35)	105 (44)	430 (34)	109 (43)	1309 (33)	289 (41)
Beta blocker	812 (66)	139 (65)	945 (65)	147 (61)	790 (62)	141 (56)	2547 (64)	427 (60)
ACE inhibitor	759 (62)	106 (49)	884 (61)	141 (59)	637 (50)	124 (49)	2280 (58)	371 (52)
Angiotensin II receptor blocker	56 (5)	10 (5)	52 (4)	15 (6)	71 (6)	17 (7)	179 (5)	42 (6)
Statin	1136 (92)	197 (92)	1320 (91)	209 (87)	1110 (87)	212 (84)	3566 (90)	618 (87)
Other lipid lowering agent	45 (4)	9 (4)	46 (3)	8 (3)	73 (6)	10 (4)	164 (4)	27 (4)
Diuretics	316 (26)	77 (36)	368 (25)	99 (41)	260 (20)	69 (27)	944 (24)	245 (35)
Calcium antagonist	79 (6)	15 (7)	92 (6)	23 (10)	87 (7)	23 (9)	258 (7)	61 (9)
Oral hypoglycaemic agent	307 (25)	66 (31)	307 (21)	80 (33)	233 (18)	64 (25)	847 (21)	210 (30)
Insulin	290 (24)	89 (41)	334 (23)	113 (47)	240 (19)	93 (37)	864 (22)	295 (42)
Anti-arrhythmic agent	112 (9)	23 (11)	104 (7)	17 (7)	78 (6)	24 (9)	294 (7)	64 (9)

*Total admission days is derived as Outcome date - Admission date + 1

**Not given-Others' includes missing and refusal

Note: Percentage is to the nearest decimal point

Table 4.4 Treatments for patients with STEMI by ethnic group, NACVD-ACS Registry, 2006-2008

Year	2006					2007					2008					
	Malay	Chinese	Indian	Others*	Malay	Chinese	Indian	Others*	Malay	Chinese	Indian	Others*	Malay	Chinese	Indian	Others*
Total	780	301	286	78	893	356	322	115	852	301	271	105				
Total admission days**																
N	764	294	284	78	845	336	310	78	787	273	239	84				
Mean (SD)	6 (3)	6 (3)	6 (4)	5 (3)	6 (4)	6 (4)	6 (4)	6 (4)	6 (3)	6 (3)	6 (3)	6 (4)				
Median (min, max)	5 (1, 28)	5 (1, 28)	5 (1, 27)	5 (1, 25)	5 (1, 30)	5 (1, 25)	5 (1, 29)	5 (1, 27)	5 (1, 28)	5 (1, 21)	5 (1, 23)	5 (1, 27)				
IQR	2	2	3	2	3	2	1	2	3	2	2	2				
Number of days on CCU																
N	614	225	187	67	671	237	201	65	644	219	171	72				
Mean (SD)	4 (2)	3 (2)	4 (3)	3 (2)	3 (3)	3 (2)	3 (3)	3 (3)	3 (3)	3 (2)	4 (3)	3 (3)				
Median (min, max)	3 (1, 21)	3 (1, 15)	3 (1, 26)	3 (1, 10)	3 (1, 26)	2 (1, 14)	3 (1, 29)	3 (1, 17)	3 (1, 28)	3 (1, 17)	3 (1, 20)	3 (1, 28)				
IQR	2	2	2	2	2	3	2	2	2	2	2	2				
Number of days on ICU/CICU																
N	43	23	3	18	9	2	2	0	7	4	2	1				
Mean (SD)	4 (4)	2 (2)	2 (1)	2 (1)	4 (4)	8 (8)	3 (1)	. (.)	4 (3)	5 (3)	4 (1)	1 (.)				
Median (min, max)	2 (1, 17)	2 (1, 8)	2 (1, 2)	2 (1, 4)	2 (1, 11)	8 (2, 13)	3 (2, 4)	. (., .)	3 (2, 11)	5 (2, 9)	4 (3, 5)	1 (1, 1)				
IQR	3	3	1	1	3	11	2	.	2	4	2	0				
Fibrinolytic therapy, No. (%)																
Given	567 (73)	206 (68)	188 (66)	57 (73)	668 (75)	233 (65)	249 (77)	80 (70)	677 (79)	197 (65)	191 (70)	74 (70)				
Not given-proceeded directly to primary angioplasty	52 (7)	24 (8)	36 (13)	5 (6)	52 (6)	29 (8)	21 (7)	11 (10)	32 (4)	35 (12)	15 (6)	8 (8)				
Not given-Contraindicated	39 (5)	14 (5)	11 (4)	6 (8)	31 (3)	15 (4)	6 (2)	11 (10)	28 (3)	17 (6)	8 (3)	3 (3)				
Not given-Missed thrombolysis	99 (13)	43 (14)	42 (15)	9 (12)	109 (12)	68 (19)	38 (12)	11 (10)	81 (10)	35 (12)	42 (15)	9 (9)				
Not given-Others***	23 (3)	14 (5)	9 (3)	1 (1)	33 (4)	11 (3)	8 (2)	2 (2)	34 (4)	17 (6)	15 (6)	11 (10)				

Table 4.4 Treatments for patients with STEMI by ethnic group, NCDV-ACS Registry, 2006-2008

Year	2006					2007					2008				
	Malay	Chinese	Indian	Others*	Total	Malay	Chinese	Indian	Others*	Total	Malay	Chinese	Indian	Others*	Total
Ethnic group															
Total	780	301	286	78		893	356	322	115		852	301	271	105	
Cardiac catheterisation, No. (%)															
Yes	141 (18)	64 (21)	75 (26)	18 (23)		168 (19)	90 (25)	68 (21)	24 (21)		130 (15)	85 (28)	55 (20)	28 (27)	
No	619 (79)	231 (77)	203 (71)	55 (71)		696 (78)	255 (72)	246 (76)	88 (77)		697 (82)	206 (68)	211 (78)	65 (62)	
Number transferred to another centre	20 (3)	6 (2)	8 (3)	5 (6)		29 (3)	11 (3)	8 (2)	3 (3)		25 (3)	10 (3)	5 (2)	12 (11)	
Percutaneous Coronary Intervention, No. (%)															
Yes	143 (18)	66 (22)	83 (29)	16 (21)		140 (16)	79 (22)	62 (19)	15 (13)		108 (13)	72 (24)	51 (19)	26 (25)	
No	637 (82)	235 (78)	203 (71)	62 (79)		753 (84)	277 (78)	260 (81)	100 (87)		744 (87)	229 (76)	220 (81)	79 (75)	
CABG, No. (%)															
Yes	8 (1)	2 (1)	0 (0)	0 (0)		6 (1)	2 (1)	2 (1)	0 (0)		4 (0)	4 (1)	0 (0)	0 (0)	
No	772 (99)	299 (99)	286 (100)	78 (100)		887 (99)	354 (99)	320 (99)	115 (100)		848 (100)	297 (99)	271 (100)	105 (100)	
Pre-admission aspirin use, No. (%)															
Yes	112 (14)	44 (15)	66 (23)	5 (6)		211 (24)	73 (21)	68 (21)	18 (16)		146 (17)	50 (17)	67 (25)	13 (12)	
No	554 (71)	197 (65)	164 (57)	50 (64)		632 (71)	264 (74)	233 (72)	91 (79)		640 (75)	233 (77)	175 (65)	81 (77)	
Unknown	114 (15)	60 (20)	56 (20)	23 (29)		50 (6)	19 (5)	21 (7)	6 (5)		66 (8)	18 (6)	29 (11)	11 (10)	

Table 4.4 Treatments for patients with STEMI by ethnic group, NCDV-ACS Registry, 2006-2008

Year	2006					2007					2008					
	Malay	Chinese	Indian	Others*	Malay	Chinese	Indian	Others*	Malay	Chinese	Indian	Others*	Malay	Chinese	Indian	Others*
Total	780	301	286	78	893	356	322	115	852	301	271	105	852	301	271	105
Pharmacological therapy given during admission, No. (%)																
Aspirin	731 (94)	293 (97)	271 (95)	73 (94)	838 (94)	331 (93)	308 (96)	105 (91)	778 (91)	272 (90)	243 (90)	91 (87)	778 (91)	272 (90)	243 (90)	91 (87)
ADP antagonist	441 (57)	194 (64)	183 (64)	50 (64)	638 (71)	295 (83)	235 (73)	61 (53)	606 (71)	235 (78)	178 (66)	52 (50)	606 (71)	235 (78)	178 (66)	52 (50)
GP receptor inhibitor	44 (6)	10 (3)	19 (7)	4 (5)	25 (3)	12 (3)	7 (2)	2 (2)	23 (3)	11 (4)	3 (1)	6 (6)	23 (3)	11 (4)	3 (1)	6 (6)
Unfractionated heparin	120 (15)	21 (7)	38 (13)	2 (3)	97 (11)	23 (6)	34 (11)	7 (6)	69 (8)	27 (9)	30 (11)	11 (10)	69 (8)	27 (9)	30 (11)	11 (10)
LMWH	218 (28)	96 (32)	104 (36)	28 (36)	303 (34)	129 (36)	135 (42)	46 (40)	271 (32)	103 (34)	113 (42)	52 (50)	271 (32)	103 (34)	113 (42)	52 (50)
Beta blocker	504 (65)	209 (69)	193 (67)	45 (58)	564 (63)	246 (69)	226 (70)	55 (48)	514 (60)	198 (66)	164 (61)	52 (50)	514 (60)	198 (66)	164 (61)	52 (50)
ACE inhibitor	478 (61)	165 (55)	184 (64)	38 (49)	549 (61)	209 (59)	211 (66)	56 (49)	453 (53)	137 (46)	131 (48)	38 (36)	453 (53)	137 (46)	131 (48)	38 (36)
Angiotensin II receptor blocker	30 (4)	14 (5)	18 (6)	4 (5)	33 (4)	18 (5)	11 (3)	5 (4)	44 (5)	18 (6)	17 (6)	9 (9)	44 (5)	18 (6)	17 (6)	9 (9)
Statin	714 (92)	281 (93)	265 (93)	73 (94)	814 (91)	324 (91)	286 (89)	104 (90)	740 (87)	264 (88)	229 (85)	86 (82)	740 (87)	264 (88)	229 (85)	86 (82)
Other lipid lowering agent	31 (4)	10 (3)	11 (4)	2 (3)	22 (2)	13 (4)	18 (6)	1 (1)	52 (6)	11 (4)	14 (5)	6 (6)	52 (6)	11 (4)	14 (5)	6 (6)
Diuretics	234 (30)	64 (21)	80 (28)	15 (19)	262 (29)	80 (22)	93 (29)	32 (28)	178 (21)	64 (21)	64 (24)	23 (22)	178 (21)	64 (21)	64 (24)	23 (22)
Calcium antagonist	55 (7)	10 (3)	21 (7)	8 (10)	63 (7)	24 (7)	19 (6)	9 (8)	54 (6)	26 (9)	25 (9)	5 (5)	54 (6)	26 (9)	25 (9)	5 (5)
Oral hypoglycaemic agent	178 (23)	69 (23)	116 (41)	10 (13)	193 (22)	76 (21)	104 (32)	14 (12)	162 (19)	53 (18)	72 (27)	10 (10)	162 (19)	53 (18)	72 (27)	10 (10)
Insulin	184 (24)	73 (24)	107 (37)	15 (19)	229 (26)	83 (23)	117 (36)	18 (16)	194 (23)	48 (16)	79 (29)	12 (11)	194 (23)	48 (16)	79 (29)	12 (11)
Anti-arrhythmic agent	65 (8)	37 (12)	25 (9)	8 (10)	65 (7)	30 (8)	15 (5)	11 (10)	50 (6)	17 (6)	23 (8)	11 (10)	50 (6)	17 (6)	23 (8)	11 (10)

*Others' includes Orang asli, Kadazan, Melanau, Murut, Bajau, Bidayuh, Iban, other Malaysian and foreigner

**Total admission days is derived as Outcome date - Admission date + 1

***Not given-Others' includes missing and refusal

Table 4.4 Treatments for patients with STEMI by ethnic group, NCVS-ACS Registry, 2006-2008

Year	Overall			
Ethnic group	Malay	Chinese	Indian	Others*
Total	2525	958	879	298
Total admission days**				
N	2396	903	833	240
Mean (SD)	6 (3)	6 (3)	6 (3)	6 (4)
Median (min, max)	5 (1, 30)	5 (1, 28)	5 (1, 29)	5 (1, 27)
IQR	2	2	2	2
Number of days on CCU				
N	1929	681	559	204
Mean (SD)	3 (3)	3 (2)	4 (3)	3 (3)
Median (min, max)	3 (1, 28)	3 (1, 17)	3 (1, 29)	3 (1, 28)
IQR	2	2	2	2
Number of days on ICU/CICU				
N	59	29	7	19
Mean (SD)	4 (4)	3 (3)	3 (1)	2 (1)
Median (min, max)	2 (1, 17)	2 (1, 13)	2 (1, 5)	2 (1, 4)
IQR	3	3	2	2
Fibrinolytic therapy, No. (%)				
Given	1912 (76)	636 (66)	628 (71)	211 (71)
Not given-proceeded directly to primary angioplasty	136 (5)	88 (9)	72 (8)	24 (8)
Not given-Contraindicated	98 (4)	46 (5)	25 (3)	20 (7)
Not given-Missed thrombolysis	289 (11)	146 (15)	122 (14)	29 (10)
Not given-Others***	90 (4)	42 (4)	32 (4)	14 (5)
Cardiac catheterisation, No. (%)				
Yes	439 (17)	239 (25)	198 (23)	70 (23)
No	2012 (80)	692 (72)	660 (75)	208 (70)
Number transferred to another centre	74 (3)	27 (3)	21 (2)	20 (7)
Percutaneous Coronary Intervention, No. (%)				
Yes	391 (15)	217 (23)	196 (22)	57 (19)
No	2134 (85)	741 (77)	683 (78)	241 (81)
CABG, No. (%)				
Yes	18 (1)	8 (1)	2 (0)	0 (0)
No	2507 (99)	950 (99)	877 (100)	298 (100)
Pre-admission aspirin use, No. (%)				
Yes	469 (19)	167 (17)	201 (23)	36 (12)
No	1826 (72)	694 (72)	572 (65)	222 (74)
Unknown	230 (9)	97 (10)	106 (12)	40 (13)

Table 4.4 Treatments for patients with STEMI by ethnic group, NCVD-ACS Registry, 2006-2008

Year	Overall			
	Malay	Chinese	Indian	Others*
Total	2525	958	879	298
Pharmacological therapy given during admission, No. (%)				
Aspirin	2347 (93)	896 (94)	822 (94)	269 (90)
ADP antagonist	1685 (67)	724 (76)	596 (68)	163 (55)
GP receptor inhibitor	92 (4)	33 (3)	29 (3)	12 (4)
Unfractionated heparin	286 (11)	71 (7)	102 (12)	20 (7)
LMWH	792 (31)	328 (34)	352 (40)	126 (42)
Beta blocker	1582 (63)	653 (68)	583 (66)	152 (51)
ACE inhibitor	1480 (59)	511 (53)	526 (60)	132 (44)
Angiotensin II receptor blocker	107 (4)	50 (5)	46 (5)	18 (6)
Statin	2268 (90)	869 (91)	780 (89)	263 (88)
Other lipid lowering agent	105 (4)	34 (4)	43 (5)	9 (3)
Diuretics	674 (27)	208 (22)	237 (27)	70 (23)
Calcium antagonist	172 (7)	60 (6)	65 (7)	22 (7)
Oral hypoglycaemic agent	533 (21)	198 (21)	292 (33)	34 (11)
Insulin	607 (24)	204 (21)	303 (34)	45 (15)
Anti-arrhythmic agent	180 (7)	84 (9)	63 (7)	30 (10)

*Others' includes Orang asli, Kadazan, Melanau, Murut, Bajau, Bidayuh, Iban, other Malaysian and foreigner

**Total admission days is derived as Outcome date – Admission date + 1

+ 'Not given-Others' includes missing and refusal

Note: Percentage is to the nearest decimal point

Table 4.5 Door to needle and balloon time distribution for patients with STEMI by year, NCVD-ACS Registry, 2006-2008

ACS stratum	STEMI only		
	2006	2007	2008
Door to needle time, min			
N	756	828	798
Mean (SD)	102 (142)	91 (131)	112 (194)
Median (min, max)	60 (2, 1349)	53 (1, 1435)	50 (1, 1440)
IQR	89	70	72
Door to balloon time, min			
N	153	126	99
Mean (SD)	241 (295)	215 (266)	214 (260)
Median (min, max)	133 (35, 1440)	112 (25, 1410)	114 (11, 1195)
IQR	135	154	139

Table 4.6 Treatments for patients with NSTEMI/UA by age group (years), NCVI-ACS Registry, 2006-2008

Year	2006			2007			2008			Overall		
	Young	Middle-age	Elderly	Young	Middle-age	Elderly	Young	Middle-age	Elderly	Young	Middle-age	Elderly
Age group*												
Total	53	872	1052	69	846	1044	50	532	735	172	2250	2831
Total admission days**												
N	53	856	1025	67	812	999	43	485	660	163	2153	2684
Mean (SD)	5 (2)	5 (3)	6 (4)	5 (2)	5 (4)	6 (4)	4 (3)	5 (3)	6 (4)	5 (2)	5 (4)	6 (4)
Median (min, max)	4 (2, 15)	4 (1, 27)	5 (1, 30)	4 (2, 17)	4 (1, 30)	5 (1, 29)	4 (2, 13)	4 (1, 27)	5 (1, 26)	4 (2, 17)	4 (1, 30)	5 (1, 30)
IQR	1	3	3	2	3	3	2	2	3	2	3	3
Number of days on CCU												
N	14	246	330	17	209	255	18	149	223	49	604	808
Mean (SD)	2 (1)	3 (3)	3 (3)	2 (1)	3 (2)	4 (4)	3 (3)	3 (3)	4 (3)	2 (2)	3 (3)	4 (3)
Median (min, max)	2 (1, 5)	3 (1, 20)	3 (1, 24)	2 (1, 4)	2 (1, 12)	3 (1, 30)	3 (1, 10)	2 (1, 24)	3 (1, 20)	2 (1, 10)	3 (1, 24)	3 (1, 30)
IQR	1	2	2	2	3	2	4	3	3	2	3	2
Number of days on ICU/CICU												
N	1	62	74	0	13	22	2	6	15	3	81	111
Mean (SD)	1 (.)	4 (3)	4 (3)	(.)	2 (1)	4 (5)	3 (2)	3 (1)	3 (3)	2 (2)	3 (2)	4 (3)
Median (min, max)	1 (1, 1)	3 (1, 12)	3 (1, 23)	(., .)	2 (1, 5)	2 (1, 24)	3 (1, 4)	3 (1, 5)	3 (1, 11)	1 (1, 4)	3 (1, 12)	3 (1, 24)
IQR	0	4	2	(., .)	1	2	3	2	2	3	3	2

Table 4.6 Treatments for patients with NSTEMI/UA by age group (years), NCVD-ACS Registry, 2006-2008

Year	2006			2007			2008			Overall		
	Young	Middle-age	Elderly	Young	Middle-age	Elderly	Young	Middle-age	Elderly	Young	Middle-age	Elderly
Total	53	872	1052	69	846	1044	50	532	735	172	2250	2831
Cardiac catheterisation, No. (%)												
Yes	11 (21)	164 (19)	182 (17)	17 (25)	196 (23)	169 (16)	6 (12)	77 (14)	102 (14)	34 (20)	437 (19)	453 (16)
No	42 (79)	695 (80)	848 (81)	52 (75)	635 (75)	856 (82)	43 (86)	445 (84)	617 (84)	137 (80)	1775 (79)	2321 (82)
Number transferred to another centre	0 (0)	13 (1)	22 (2)	0 (0)	15 (2)	19 (2)	1 (2)	10 (2)	16 (2)	1 (1)	38 (2)	57 (2)
Percutaneous Coronary Intervention, No. (%)												
Yes	10 (19)	119 (14)	112 (11)	11 (16)	115 (14)	112 (11)	4 (8)	51 (10)	55 (7)	25 (15)	285 (13)	279 (10)
No	43 (81)	753 (86)	940 (89)	58 (84)	731 (86)	932 (89)	46 (92)	481 (90)	680 (93)	147 (85)	1965 (87)	2552 (90)
CABG, No. (%)												
Yes	0 (0)	25 (3)	32 (3)	0 (0)	15 (2)	22 (2)	1 (2)	4 (1)	13 (2)	1 (1)	44 (2)	67 (2)
No	53 (100)	847 (97)	1020 (97)	69 (100)	831 (98)	1022 (98)	49 (98)	528 (99)	722 (98)	171 (99)	2206 (98)	2764 (98)
Pre-admission aspirin use, No. (%)												
Yes	13 (25)	341 (39)	483 (46)	26 (38)	398 (47)	548 (52)	17 (34)	223 (42)	364 (50)	56 (33)	962 (43)	1395 (49)
No	25 (47)	343 (39)	357 (34)	39 (57)	394 (47)	419 (40)	20 (40)	239 (45)	267 (36)	84 (49)	976 (43)	1043 (37)
Unknown	15 (28)	188 (22)	212 (20)	4 (6)	54 (6)	77 (7)	13 (26)	70 (13)	104 (14)	32 (19)	312 (14)	393 (14)

Table 4.6 Treatments for patients with NSTEMI/UA by age group (years), NCVS-ACS Registry, 2006-2008

Year	2006			2007			2008			Overall		
	Young	Middle-age	Elderly	Young	Middle-age	Elderly	Young	Middle-age	Elderly	Young	Middle-age	Elderly
Total	53	872	1052	69	846	1044	50	532	735	172	2250	2831
Pharmacological therapy given during admission, No. (%)												
Aspirin	50 (94)	801 (92)	932 (89)	64 (93)	777 (92)	916 (88)	38 (76)	422 (79)	596 (81)	152 (88)	2000 (89)	2444 (86)
ADP antagonist	28 (53)	493 (57)	620 (59)	44 (64)	489 (58)	663 (64)	21 (42)	287 (54)	450 (61)	93 (54)	1269 (56)	1733 (61)
GP receptor inhibitor	0 (0)	27 (3)	39 (4)	5 (7)	17 (2)	13 (1)	0 (0)	13 (2)	17 (2)	5 (3)	57 (3)	69 (2)
Unfractionated heparin	14 (26)	200 (23)	186 (18)	6 (9)	94 (11)	99 (9)	7 (14)	50 (9)	46 (6)	27 (16)	344 (15)	331 (12)
LMWH	28 (53)	566 (65)	710 (67)	57 (83)	619 (73)	763 (73)	33 (66)	359 (67)	517 (70)	118 (69)	1544 (69)	1990 (70)
Beta blocker	34 (64)	613 (70)	677 (64)	57 (83)	592 (70)	692 (66)	24 (48)	336 (63)	459 (62)	115 (67)	1541 (68)	1828 (65)
ACE inhibitor	26 (49)	503 (58)	578 (55)	51 (74)	549 (65)	615 (59)	23 (46)	278 (52)	365 (50)	100 (58)	1330 (59)	1558 (55)
Angiotensin II receptor blocker	4 (8)	75 (9)	122 (12)	2 (3)	60 (7)	124 (12)	3 (6)	46 (9)	80 (11)	9 (5)	181 (8)	326 (12)
Statin	48 (91)	804 (92)	939 (89)	62 (90)	765 (90)	923 (88)	38 (76)	422 (79)	581 (79)	148 (86)	1991 (88)	2443 (86)
Other lipid lowering agent	4 (8)	64 (7)	65 (6)	7 (10)	48 (6)	59 (6)	2 (4)	30 (6)	42 (6)	13 (8)	142 (6)	166 (6)
Diuretics	14 (26)	249 (29)	442 (42)	13 (19)	243 (29)	439 (42)	7 (14)	110 (21)	273 (37)	34 (20)	602 (27)	1154 (41)
Calcium antagonist	9 (17)	156 (18)	283 (27)	7 (10)	148 (17)	265 (25)	6 (12)	74 (14)	174 (24)	22 (13)	378 (17)	722 (26)
Oral hypoglycaemic agent	8 (15)	262 (30)	330 (31)	20 (29)	239 (28)	302 (29)	7 (14)	156 (29)	228 (31)	35 (20)	657 (29)	860 (30)
Insulin	12 (23)	218 (25)	273 (26)	8 (12)	216 (26)	273 (26)	3 (6)	94 (18)	157 (21)	23 (13)	528 (23)	703 (25)
Anti-arrhythmic agent	3 (6)	45 (5)	73 (7)	2 (3)	29 (3)	90 (9)	1 (2)	31 (6)	50 (7)	6 (3)	105 (5)	213 (8)

*Young is defined as age from 20 to less than 40 years, middle-age is defined as age between 40 to less than 60 years and elderly is defined as 60 years and above

**Total admission days is derived as Outcome date - Admission date + 1

Note: Percentage is to the nearest decimal point

Table 4.7 Treatments for patients with NSTEMI/UA by gender, NCDV-ACS Registry, 2006-2008

Year	2006		2007		2008		Overall	
	Male	Female	Male	Female	Male	Female	Male	Female
Total	1339	638	1350	609	866	451	3555	1698
Total admission days*								
N	1315	619	1296	582	786	402	3397	1603
Mean (SD)	6 (4)	6 (4)	6 (4)	6 (4)	6 (4)	6 (4)	6 (4)	6 (4)
Median (min, max)	4 (1, 29)	5 (1, 30)	4 (1, 30)	5 (1, 29)	4 (1, 27)	4 (1, 25)	4 (1, 30)	5 (1, 30)
IQR	2	3	2	2	2	2	2	2
Number of days on CCU								
N	425	165	355	126	291	99	1071	390
Mean (SD)	3 (3)	4 (3)	3 (2)	3 (4)	3 (3)	4 (4)	3 (3)	4 (4)
Median (min, max)	3 (1, 24)	3 (1, 19)	2 (1, 21)	3 (1, 30)	2 (1, 24)	2 (1, 20)	3 (1, 24)	3 (1, 30)
IQR	2	2	3	3	3	3	3	3
Number of days on ICU/CICU								
N	96	41	30	5	16	7	142	53
Mean (SD)	3 (2)	5 (4)	3 (4)	2 (1)	3 (3)	3 (1)	3 (3)	4 (4)
Median (min, max)	3 (1, 11)	4 (1, 23)	2 (1, 24)	2 (1, 3)	3 (1, 11)	3 (1, 4)	2 (1, 24)	3 (1, 23)
IQR	3	3	3	0	3	3	3	3
Cardiac catheterisation, No. (%)								
Yes	264 (20)	93 (15)	288 (21)	94 (15)	132 (15)	53 (12)	684 (19)	240 (14)
No	1056 (79)	529 (83)	1035 (77)	508 (83)	717 (83)	388 (86)	2808 (79)	1425 (84)
Number transferred to another centre	19 (1)	16 (3)	27 (2)	7 (1)	17 (2)	10 (2)	63 (2)	33 (2)
Percutaneous Coronary Intervention, No. (%)								
Yes	181 (14)	60 (9)	179 (13)	59 (10)	80 (9)	30 (7)	440 (12)	149 (9)
No	1158 (86)	578 (91)	1171 (87)	550 (90)	786 (91)	421 (93)	3115 (88)	1549 (91)

Table 4.7 Treatments for patients with NSTEMI/UA by gender, NCVI-ACS Registry, 2006-2008

Year	2006		2007		2008		Overall	
	Male	Female	Male	Female	Male	Female	Male	Female
Total	1339	638	1350	609	866	451	3555	1698
CABG, No. (%)								
Yes	42 (3)	15 (2)	32 (2)	5 (1)	13 (2)	5 (1)	87 (2)	25 (1)
No	1297 (97)	623 (98)	1318 (98)	604 (99)	853 (98)	446 (99)	3468 (98)	1673 (99)
Pre-admission aspirin use, No. (%)								
Yes	570 (43)	267 (42)	686 (51)	286 (47)	407 (47)	197 (44)	1663 (47)	750 (44)
No	471 (35)	254 (40)	571 (42)	281 (46)	337 (39)	189 (42)	1379 (39)	724 (43)
Unknown	298 (22)	117 (18)	93 (7)	42 (7)	122 (14)	65 (14)	513 (14)	224 (13)
Pharmacological therapy given during admission, No. (%)								
Aspirin	1224 (91)	559 (88)	1222 (91)	535 (88)	704 (81)	352 (78)	3150 (89)	1446 (85)
ADP antagonist	813 (61)	328 (51)	839 (62)	357 (59)	501 (58)	257 (57)	2153 (61)	942 (55)
GP receptor inhibitor	50 (4)	16 (3)	24 (2)	11 (2)	23 (3)	7 (2)	97 (3)	34 (2)
Unfractionated heparin	283 (21)	117 (18)	136 (10)	63 (10)	68 (8)	35 (8)	487 (14)	215 (13)
LMWH	878 (66)	426 (67)	984 (73)	455 (75)	583 (67)	326 (72)	2445 (69)	1207 (71)
Beta blocker	902 (67)	422 (66)	941 (70)	400 (66)	551 (64)	268 (59)	2394 (67)	1090 (64)
ACE inhibitor	772 (58)	335 (53)	880 (65)	335 (55)	437 (50)	229 (51)	2089 (59)	899 (53)
Angiotensin II receptor blocker	119 (9)	82 (13)	114 (8)	72 (12)	78 (9)	51 (11)	311 (9)	205 (12)
Statin	82 (6)	51 (8)	1207 (89)	543 (89)	678 (78)	363 (80)	3110 (87)	1472 (87)
Other lipid lowering agent	453 (34)	252 (39)	78 (6)	36 (6)	55 (6)	19 (4)	215 (6)	106 (6)
Diuretics	263 (20)	185 (29)	439 (33)	256 (42)	237 (27)	153 (34)	1129 (32)	661 (39)
Calcium antagonist	381 (28)	219 (34)	258 (19)	162 (27)	142 (16)	112 (25)	663 (19)	459 (27)
Oral hypoglycaemic agent	319 (24)	184 (29)	345 (26)	216 (35)	226 (26)	165 (37)	952 (27)	600 (35)
Insulin	85 (6)	36 (6)	292 (22)	205 (34)	142 (16)	112 (25)	753 (21)	501 (30)
Anti-arrhythmic agent	1339	638	79 (6)	42 (7)	54 (6)	28 (6)	218 (6)	106 (6)

Table 4.8 Treatments for patients with NSTEMI/UA by ethnic group, NCVS-ACS Registry, 2006-2008

Year	2006					2007					2008					
	Malay	Chinese	Indian	Others*	Malay	Chinese	Indian	Others*	Malay	Chinese	Indian	Others*	Malay	Chinese	Indian	Others*
Total	904	485	513	75	847	497	525	87	574	359	330	51				
Total admission days*																
N	879	477	506	72	807	482	515	71	530	324	287	46				
Mean (SD)	6 (4)	6 (4)	6 (4)	5 (3)	6 (4)	6 (4)	5 (4)	6 (5)	6 (4)	5 (4)	5 (3)	6 (4)				
Median (min, max)	5 (1, 26)	4 (1, 30)	5 (1, 30)	4 (2, 18)	5 (1, 30)	4 (1, 27)	4 (1, 29)	4 (2, 22)	5 (1, 27)	4 (1, 25)	4 (1, 25)	5 (2, 21)				
IQR	3	3	2	3	2	3	3	2	3	3	3	4				
Number of days on CCU																
N	278	156	115	41	251	122	68	40	204	102	51	33				
Mean (SD)	4 (3)	3 (2)	4 (3)	3 (2)	3 (3)	3 (3)	3 (3)	2 (2)	3 (3)	3 (2)	4 (3)	4 (3)				
Median (min, max)	3 (1, 24)	2 (1, 17)	3 (1, 14)	3 (1, 9)	3 (1, 30)	2 (1, 24)	3 (1, 21)	2 (1, 9)	2 (1, 24)	2 (1, 17)	3 (1, 18)	2 (1, 14)				
IQR	2	3	3	3	2	3	3	2	3	2	3	3				
Number of days on ICU/CICU																
N	59	43	17	18	15	13	2	5	15	4	1	3				
Mean (SD)	4 (3)	3 (3)	4 (3)	3 (3)	4 (6)	3 (1)	2 (1)	2 (1)	3 (3)	3 (2)	3 (.)	3 (1)				
Median (min, max)	3 (1, 23)	3 (1, 11)	3 (1, 12)	2 (1, 10)	2 (1, 24)	2 (1, 5)	2 (1, 2)	2 (1, 3)	2 (1, 11)	3 (1, 6)	3 (3, 3)	3 (2, 4)				
IQR	3	3	4	2	3	2	1	1	3	3	0	2				

Table 4.8 Treatments for patients with NSTEMI/UA by ethnic group, NCD-ACS Registry, 2006-2008

Year	2006					2007					2008				
	Malay	Chinese	Indian	Others*	Total	Malay	Chinese	Indian	Others*	Total	Malay	Chinese	Indian	Others*	Total
Ethnic group															
Total	904	485	513	75	1555	847	497	525	87	1556	574	359	330	51	1314
Cardiac catheterisation, No. (%)															
Yes	156 (17)	83 (17)	103 (20)	15 (20)	357 (23)	153 (18)	94 (19)	106 (20)	28 (32)	381 (24)	79 (14)	47 (13)	43 (13)	16 (31)	185 (14)
No	731 (81)	392 (81)	402 (78)	60 (80)	1585 (77)	668 (79)	401 (81)	414 (79)	58 (67)	1181 (76)	484 (84)	301 (84)	283 (86)	34 (67)	1102 (86)
Number transferred to another centre	17 (2)	10 (2)	8 (2)	0 (0)	35 (2)	26 (3)	2 (0)	5 (1)	1 (1)	34 (2)	11 (2)	11 (3)	4 (1)	1 (2)	27 (2)
Percutaneous Coronary Intervention, No. (%)															
Yes	99 (11)	62 (13)	70 (14)	10 (13)	241 (16)	101 (12)	56 (11)	66 (13)	14 (16)	237 (15)	42 (7)	27 (8)	32 (10)	9 (18)	110 (8)
No	805 (89)	423 (87)	443 (86)	65 (87)	1736 (84)	746 (88)	441 (89)	459 (87)	73 (84)	1499 (85)	532 (93)	332 (92)	298 (90)	42 (82)	1204 (92)
CABG, No. (%)															
Yes	29 (3)	16 (3)	11 (2)	1 (1)	57 (4)	21 (2)	9 (2)	3 (1)	4 (5)	37 (2)	8 (1)	5 (1)	1 (0)	4 (8)	18 (1)
No	875 (97)	469 (97)	502 (98)	74 (99)	1920 (96)	826 (98)	488 (98)	522 (99)	83 (95)	1419 (98)	566 (99)	354 (99)	329 (100)	47 (92)	1396 (99)
Pre-admission aspirin use, No. (%)															
Yes	401 (44)	183 (38)	233 (45)	20 (27)	837 (55)	418 (49)	229 (46)	292 (56)	32 (37)	971 (63)	265 (46)	158 (44)	162 (49)	19 (37)	604 (47)
No	335 (37)	194 (40)	155 (30)	41 (55)	725 (47)	368 (43)	242 (49)	190 (36)	50 (57)	850 (55)	252 (44)	150 (42)	98 (30)	25 (49)	525 (40)
Unknown	168 (19)	108 (22)	125 (24)	14 (19)	415 (27)	61 (7)	26 (5)	43 (8)	5 (6)	135 (9)	57 (10)	51 (14)	70 (21)	7 (14)	185 (14)

Table 4.8 Treatments for patients with NSTEMI/UA by ethnic group, NCD-ACS Registry, 2006-2008

Year	2006					2007					2008				
	Malay	Chinese	Indian	Others*		Malay	Chinese	Indian	Others*		Malay	Chinese	Indian	Others*	
Total	904	485	513	75		847	497	525	87		574	359	330	51	
Pharmacological therapy given during admission, No. (%)															
Aspirin	814 (90)	440 (91)	462 (90)	67 (89)		752 (89)	447 (90)	473 (90)	82 (94)		477 (83)	295 (82)	239 (72)	45 (88)	
ADP antagonist	461 (51)	299 (62)	335 (65)	46 (61)		487 (57)	338 (68)	314 (60)	54 (62)		323 (56)	230 (64)	171 (52)	33 (65)	
GP receptor inhibitor	27 (3)	20 (4)	15 (3)	4 (5)		9 (1)	12 (2)	12 (2)	2 (2)		12 (2)	10 (3)	8 (2)	0 (0)	
Unfractionated heparin	284 (31)	47 (10)	64 (12)	5 (7)		128 (15)	25 (5)	42 (8)	4 (5)		64 (11)	11 (3)	24 (7)	4 (8)	
LMWH	495 (55)	369 (76)	390 (76)	50 (67)		571 (67)	385 (77)	418 (80)	63 (72)		382 (67)	271 (75)	214 (65)	41 (80)	
Beta blocker	575 (64)	353 (73)	350 (68)	46 (61)		563 (66)	357 (72)	356 (68)	63 (72)		361 (63)	228 (64)	196 (59)	33 (65)	
ACE inhibitor	510 (56)	259 (53)	303 (59)	35 (47)		535 (63)	297 (60)	339 (65)	41 (47)		323 (56)	177 (49)	138 (42)	27 (53)	
Angiotensin II receptor blocker	82 (9)	49 (10)	63 (12)	7 (9)		66 (8)	51 (10)	59 (11)	10 (11)		52 (9)	41 (11)	31 (9)	5 (10)	
Statin	798 (88)	443 (91)	480 (94)	70 (93)		748 (88)	450 (91)	470 (90)	80 (92)		467 (81)	292 (81)	240 (73)	41 (80)	
Other lipid lowering agent	55 (6)	40 (8)	34 (7)	4 (5)		57 (7)	26 (5)	27 (5)	3 (3)		38 (7)	18 (5)	16 (5)	2 (4)	
Diuretics	330 (37)	172 (35)	181 (35)	22 (29)		316 (37)	167 (34)	189 (36)	23 (26)		188 (33)	99 (28)	80 (24)	22 (43)	
Calcium antagonist	190 (21)	104 (21)	135 (26)	19 (25)		184 (22)	105 (21)	118 (22)	13 (15)		118 (21)	59 (16)	68 (21)	9 (18)	
Oral hypoglycaemic agent	227 (25)	140 (29)	218 (42)	15 (20)		209 (25)	120 (24)	210 (40)	22 (25)		166 (29)	93 (26)	122 (37)	10 (20)	
Insulin	195 (22)	107 (22)	188 (37)	13 (17)		200 (24)	103 (21)	174 (33)	20 (23)		111 (19)	63 (18)	76 (23)	4 (8)	
Anti-arrhythmic agent	60 (7)	34 (7)	22 (4)	5 (7)		49 (6)	32 (6)	29 (6)	11 (13)		35 (6)	23 (6)	18 (5)	6 (12)	

*Others includes Orang asli, Kadazan, Melanau, Murut, Bajau, Bidayuh, Iban, other Malaysian and foreigner

**Total admission days is derived as Outcome date - Admission date + 1

Note: Percentage is to the nearest decimal point

Table 4.8 Treatments for patients with NSTEMI/UA by ethnic group, NCVD-ACS Registry, 2006-2008

Year	Overall			
	Malay	Chinese	Indian	Others*
Total	2325	1341	1368	213
Total admission days**				
N	2216	1283	1308	189
Mean (SD)	6 (4)	6 (4)	5 (4)	6 (4)
Median (min, max)	5 (1, 30)	4 (1, 30)	4 (1, 30)	4 (2, 22)
IQR	2	3	2	2
Number of days on CCU				
N	733	380	234	114
Mean (SD)	3 (3)	3 (3)	4 (3)	3 (2)
Median (min, max)	3 (1, 30)	2 (1, 24)	3 (1, 21)	2 (1, 14)
IQR	2	3	3	3
Number of days on ICU/CICU				
N	89	60	20	26
Mean (SD)	4 (4)	3 (2)	4 (3)	3 (2)
Median (min, max)	3 (1, 24)	3 (1, 11)	3 (1, 12)	2 (1, 10)
IQR	2	3	4	1
Cardiac catheterisation, No. (%)				
Yes	388 (17)	224 (17)	252 (18)	59 (28)
No	1883 (81)	1094 (82)	1099 (80)	152 (71)
Number transferred to another centre	54 (2)	23 (2)	17 (1)	2 (1)
Percutaneous Coronary Intervention, No. (%)				
Yes	242 (10)	145 (11)	168 (12)	33 (15)
No	2083 (90)	1196 (89)	1200 (88)	180 (85)
CABG, No. (%)				
Yes	58 (2)	30 (2)	15 (1)	9 (4)
No	2267 (98)	1311 (98)	1353 (99)	204 (96)
Pre-admission aspirin use, No. (%)				
Yes	1084 (47)	570 (43)	687 (50)	71 (33)
No	955 (41)	586 (44)	443 (32)	116 (54)
Unknown	286 (12)	185 (14)	238 (17)	26 (12)

Table 4.8 Treatments for patients with NSTEMI/UA by ethnic group, NCVD-ACS Registry, 2006-2008

Ethnic group	Malay	Chinese	Indian	Others*
Total	2325	1341	1368	213
Pharmacological therapy given during admission, No. (%)				
Aspirin	2043 (88)	1182 (88)	1174 (86)	194 (91)
ADP antagonist	1271 (55)	867 (65)	820 (60)	133 (62)
GP receptor inhibitor	48 (2)	42 (3)	35 (3)	6 (3)
Unfractionated heparin	476 (20)	83 (6)	130 (10)	13 (6)
LMWH	1448 (62)	1025 (76)	1022 (75)	154 (72)
Beta blocker	1499 (64)	938 (70)	902 (66)	142 (67)
ACE inhibitor	1368 (59)	733 (55)	780 (57)	103 (48)
Angiotensin II receptor blocker	200 (9)	141 (11)	153 (11)	22 (10)
Statin	2013 (87)	1185 (88)	1190 (87)	191 (90)
Other lipid lowering agent	150 (6)	84 (6)	77 (6)	9 (4)
Diuretics	834 (36)	438 (33)	450 (33)	67 (31)
Calcium antagonist	492 (21)	268 (20)	321 (23)	41 (19)
Oral hypoglycaemic agent	602 (26)	353 (26)	550 (40)	47 (22)
Insulin	506 (22)	273 (20)	438 (32)	37 (17)
Anti-arrhythmic agent	144 (6)	89 (7)	69 (5)	22 (10)

*Others' includes Orang asli, Kadazan, Melanau, Murut, Bajau, Bidayuh, Iban, other Malaysian and foreigner

**Total admission days is derived as Outcome date – Admission date + 1

Note: Percentage is to the nearest decimal point

Table 4.9 Treatments for patients with ACS by type of participating centres, NCV-D-ACS Registry, 2006-2008

	2006						2007					
	STEMI = 1445		NSTEMI = 1132		UA = 845		STEMI = 1687		NSTEMI = 1001		UA = 958	
	Cardiologist centre	Physician centre	Cardiologist centre	Physician centre	Cardiologist centre	Physician centre	Cardiologist centre	Physician centre	Cardiologist centre	Physician centre	Cardiologist centre	Physician centre
N	915	530	814	318	628	217	869	818	623	378	652	306
Fibrinolytic therapy, No. (%)												
Given	628 (69)	390 (74)	NA	NA	NA	NA	573 (66)	658 (80)	NA	NA	NA	NA
Not given – proceeded directly to primary angioplasty	110 (12)	7 (1)	NA	NA	NA	NA	109 (13)	4 (0)	NA	NA	NA	NA
Not given – Contraindicated	36 (4)	34 (6)	NA	NA	NA	NA	31 (4)	32 (4)	NA	NA	NA	NA
Not given – Missed thrombolysis	111 (12)	82 (15)	NA	NA	NA	NA	133 (15)	93 (11)	NA	NA	NA	NA
Not given – Others*	30 (3)	17 (3)	NA	NA	NA	NA	23 (3)	31 (4)	NA	NA	NA	NA
Percutaneous Coronary Intervention, No. (%)												
Yes	308 (34)	0 (0)	161 (20)	0 (0)	80 (13)	0 (0)	297 (34)	0 (0)	161 (26)	0 (0)	77 (12)	0 (0)
No	607 (66)	530 (100)	653 (80)	318 (100)	548 (87)	217 (100)	572 (66)	818 (100)	462 (74)	378 (100)	575 (88)	306 (100)
CABG, No. (%)												
Yes	10 (1)	0 (0)	42 (5)	0 (0)	15 (2)	0 (0)	10 (1)	0 (0)	28 (4)	0 (0)	9 (1)	0 (0)
No	905 (99)	530 (100)	772 (95)	318 (100)	613 (98)	217 (100)	859 (99)	818 (100)	595 (96)	378 (100)	643 (99)	306 (100)

*Not given-Others' includes missing and refusal

NA – Not Available

Note: Percentage is to the nearest decimal point

Table 4.9 Treatments for patients with ACS by type of participating centres, NCVD-ACS Registry, 2006-2008

	Overall											
	2008						Overall					
	STEMI = 1534		NSTEMI = 662		UA = 655		STEMI = 4666		NSTEMI = 2795		UA = 2458	
	Cardiologist centre	Physician centre	Cardiologist centre	Physician centre	Cardiologist centre	Physician centre	Cardiologist centre	Physician centre	Cardiologist centre	Physician centre	Cardiologist centre	Physician centre
N	792	742	458	204	453	202	2576	2090	1895	900	1733	725
Fibrinolytic therapy, No. (%)												
Given	512 (65)	631 (85)	NA	NA	NA	NA	1713 (66)	1679 (80)	NA	NA	NA	NA
Not given – proceeded directly to primary angioplasty	87 (11)	3 (0)	NA	NA	NA	NA	306 (12)	14 (1)	NA	NA	NA	NA
Not given – Contraindicated	26 (3)	30 (4)	NA	NA	NA	NA	93 (4)	96 (5)	NA	NA	NA	NA
Not given – Missed thrombolysis	108 (14)	60 (8)	NA	NA	NA	NA	352 (14)	235 (11)	NA	NA	NA	NA
Not given – Others*	59 (7)	18 (2)	NA	NA	NA	NA	112 (4)	66 (3)	NA	NA	NA	NA
Percutaneous Coronary Intervention, No. (%)												
Yes	258 (33)	0 (0)	88 (19)	0 (0)	22 (5)	0 (0)	863 (34)	0 (0)	410 (22)	0 (0)	179 (10)	0 (0)
No	534 (67)	742 (100)	370 (81)	204 (100)	431 (95)	202 (100)	1713 (66)	2090 (100)	1485 (78)	900 (100)	1554 (90)	725 (100)
CABG, No. (%)												
Yes	8 (1)	0 (0)	13 (3)	0 (0)	5 (1)	0 (0)	28 (1)	0 (0)	83 (4)	0 (0)	29 (2)	0 (0)
No	784 (99)	742 (100)	445 (97)	204 (100)	448 (99)	202 (100)	2548 (99)	2090 (100)	1812 (96)	900 (100)	1704 (98)	725 (100)

*Not given-Others' includes missing and refusal

NA – Not Available

Note: Percentage is to the nearest decimal point