

CHAPTER 4: TREATMENT

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Summary

1. Similar length of admission in CCU/ICU was observed in all ACS spectrums and age groups.
2. Following STEMI, 75% received fibrinolytic therapy and 9.4% were treated with primary PCI.
3. The median door to needle time (DTN) was 45 minutes, slightly better than previous cohort (2006-2010). 39.2 % achieved the recommended DTN of 30 minutes.
4. The median door to balloon time (DTB) was 111 minutes, slight better than the previous cohort (2006-2010) which was 117 minutes. 38.0% achieved the recommended DTB time of 90 minutes.
5. In NSTEMI/UA, male and younger patients underwent more PCI compared to female and elderly patients.
6. There was improvement in prescription of aspirin (more than 95%) and statins (about 92%) compared to the previous cohort (2006-2010). However, the usage of beta blockers and ACE inhibitors remain the same.

Pattern of admission

The total number of days of admission was almost similar in all ACS spectrums. The median of total number of days of admission was five days in STEMI and NSTEMI and four days in UA. [Table 4.1] The total number of days of admission were similar in all age group (young, middle and elderly). [Table 4.2 & 4.6] There was also no difference in the number of days spent in hospital in all three ethnic groups (Malay, Chinese and Indian) admitted with ACS. [Table 4.4 & 4.8]

The number of days spent in CCU or ICU was similar in the entire ACS spectrum. [Table 4.2] Patients spent a median of three to four days in CCU/ICU. The number of days spent in CCU/ICU increased with age group and this was observed in all ACS spectrums. [Table 4.2 & 4.6] There was no significant difference in the number of days spent in CCU/ICU between all three ethnic groups and also gender. [Table 4.3, 4.4, 4.7 & 4.8]

Pharmacological Therapy

For all ACS (STEMI, NSTEMI and UA) admissions, more than 94% patients received aspirin and more than 90% patients received statins. [Table 4.1] The use of aspirin in ACS spectrum patients from 2011 to 2013 was higher than previously documented in the 2006 – 2010 NCVD-ACS Registry. There was no difference in the use of aspirin, ADP antagonist and statins in different age groups, gender and ethnic groups. [Table 4.2, 4.3 & 4.4]

There was a major change in prescription trend from LMWH to Fondaparinux in ACS spectrum following the introduction of Fondaparinux to the Malaysian market in 2013. [Table 4.1] Compared to



the previous 2006-2010 NCVD-ACS Registry, there was no difference in usage of beta blockers and ACE inhibitors and the use of these medications remained low. [Table 4.1] Younger patients (young and middle age) were more likely to receive beta blockers compared to the elderly. [Table 4.2] More Indians were on oral hypoglycaemic agents and insulin for diabetes mellitus as compared to Malays and Chinese. [Table 4.4]

Revascularisation

For STEMI patients, 75% of them received fibrinolytic therapy and 9.4% proceeded directly to primary PCI, whereas 11.3% had missed-fibrinolytic. The percentage of patients who missed fibrinolytic seemed to be higher in the elderly as compared to young patients (13% vs. 9.5% respectively). Another 3.9% of STEMI patients did not receive fibrinolytic therapy because of contraindications.

During the same admission, 33.4% STEMI patients underwent PCI, and only 1% underwent CABG. The young patients had higher percentage of PCI as compared to elderly patients (38.2% vs. 29.8%) during the index admission. [Table 4.2] As for the gender comparison, more male patients underwent cardiac catheterisation, primary PCI and PCI compared to female patients. [Table 4.3] Among the ethnic groups, more Indian patients underwent primary PCI, whereas more Chinese patients underwent cardiac catheterisation and PCI during index admission.

Median door-to-needle (DTN) time was 45 minutes and 39.2% achieved DTN of less than 30 minutes. [Table 4.5] There was an improvement in the median DTN over the years as we compared this to the previous report; 45 minutes in 2011-2013 and 50 minutes in 2006-2010. Much effort still needs to be done to achieve the DNT benchmark of 30 minutes.

The median door-to-balloon (DTB) time was 111 minutes and 38.0% achieved DTB time of less than 90 minutes. [Table 4.5]

Among NSTEMI/UA patients, the percentage of patients underwent PCI was higher in young patients (21.8%) as compared to elderly patients (14.4%). [Table 4.6] The opposite trend was observed for CABG (0.4% in younger cohort vs. 2.0% in elderly cohort). More male patients underwent cardiac catheterisation, PCI and CABG compared to female.



Table 4.1 Summary of treatments for patients with ACS by ACS stratum, NCVD-ACS Registry, 2011-2013

Year	2011				2012				2013				2011-2013			
	STEMI	NSTEMI	UA	STEMI	NSTEMI	UA	STEMI	NSTEMI	UA	STEMI	NSTEMI	UA	STEMI	NSTEMI	UA	
ACS Stratum																
Total	2,055	1,094	898	2,386	1,146	1,057	3,061	1,602	1,464	7,502	3,842	3,419				
# Total admission days																
N	2,022	1,074	891	2,300	1,109	1,052	3,000	1,583	1,450	7,322	3,766	3,393				
Mean (SD)	6.4 (5.9)	6.6 (7.5)	5.4 (7.1)	6.1 (6.3)	7.1 (8.4)	5.1 (4.7)	6.5 (7.0)	7.2 (8.2)	5.3 (6.1)	6.4 (6.5)	7.0 (8.0)	5.3 (6.0)				
Median (min, max)	5.0 (1.0, 94.0)	4.0 (1.0, 96.0)	4.0 (1.0, 89.0)	5.0 (1.0, 97.0)	5.0 (1.0, 100.0)	4.0 (1.0, 64.0)	5.0 (1.0, 98.0)	5.0 (1.0, 100.0)	4.0 (1.0, 95.0)	5.0 (1.0, 98.0)	5.0 (1.0, 100.0)	4.0 (1.0, 95.0)				
IQR	3.0	4.0	2.0	2.0	5.0	2.0	2.0	4.0	2.0	2.0	4.0	2.0				
Missing	33	20	7	86	37	5	61	19	14	180	76	26				
Number of days on CCU																
N	1,276	294	81	1,525	337	133	1,892	344	120	4,693	975	334				
Mean (SD)	3.5 (2.8)	3.7 (3.0)	3.8 (3.7)	3.4 (2.9)	3.7 (3.7)	3.2 (2.7)	3.4 (3.0)	3.8 (3.8)	3.2 (2.6)	3.4 (2.9)	3.7 (3.5)	3.3 (2.9)				
Median (min, max)	3.0 (1.0, 30.0)	3.0 (1.0, 20.0)	3.0 (1.0, 23.0)	3.0 (1.0, 27.0)	3.0 (1.0, 24.0)	2.0 (1.0, 17.0)	3.0 (1.0, 28.0)	3.0 (1.0, 30.0)	2.0 (1.0, 15.0)	3.0 (1.0, 30.0)	3.0 (1.0, 30.0)	3.0 (1.0, 23.0)				
IQR	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.0	2.0	2.0	2.0				
No admission to CCU	776	799	817	856	806	924	1164	1256	1344	2796	2861	3085				
Missing	3	1	0	5	3	0	5	2	0	13	6	0				
Number of days on ICU/CICU																
N	25	6	1	9	8	5	46	25	16	80	39	22				
Mean (SD)	2.8 (1.7)	5.3 (4.7)	13.0 (.)	5.7 (6.7)	6.3 (6.9)	4.0 (1.9)	3.1 (2.5)	6.2 (6.0)	4.3 (2.4)	3.3 (3.1)	6.1 (5.9)	4.6 (2.9)				
Median (min, max)	2.0 (1.0, 7.0)	4.5 (1.0, 12.0)	13.0 (13.0, 13.0)	4.0 (1.0, 23.0)	3.5 (1.0, 21.0)	4.0 (2.0, 7.0)	2.5 (1.0, 16.0)	4.0 (1.0, 26.0)	3.5 (1.0, 10.0)	3.0 (1.0, 23.0)	4.0 (1.0, 26.0)	4.0 (1.0, 13.0)				
IQR	2.0	8.0	0	3.0	6.5	1.0	2.0	4.0	3.0	2.0	6.0	3.0				
No admission to ICU/CICU	2,029	1,088	897	2,375	1,138	1,052	3,014	1,577	1,448	7,418	3,803	3,397				
Missing	1	0	0	2	0	0	1	0	0	4	0	0				



Year	2011			2012			2013			2011-2013		
	STEMI	NSTEMI	UA	STEMI	NSTEMI	UA	STEMI	NSTEMI	UA	STEMI	NSTEMI	UA
ACS Stratum												
Total	2,055	1,094	898	2,386	1,146	1,057	3,061	1,602	1,464	7,502	3,842	3,419
Fibrinolytic therapy, No. (%)												
Given at this centre	1,131 (57.0)			1,109 (47.6)			1,477 (49.0)			3,717 (50.8)		
Given at another centre prior to transfer	446 (22.6)			577 (24.8)			747 (24.8)			1,770 (24.2)		
Not given-proceeded directly to primary angioplasty	119 (6.0)			264 (11.3)			308 (10.2)			691 (9.4)		
Not given-Missed thrombolysis	216 (10.8)			279 (12.0)			332 (11.0)			827 (11.3)		
Not given-Patient refusal	7 (0.4)			8 (0.3)			19 (0.6)			34 (0.4)		
Not given-Contraindicated	63 (3.2)			92 (4.0)			130 (4.4)			285 (3.9)		
Not applicable	3			6			15			24		
Not available	11			11			26			48		
Missing	59			40			7			106		
Cardiac catheterisation, No. (%)												
Yes	452 (24.6)	302 (31.6)	110 (16.6)	862 (38.2)	305 (31.9)	168 (19.0)	1,336 (45.8)	603 (40.0)	313 (23.0)	2,650 (37.8)	1,210 (35.4)	591 (20.4)
No	1,325 (72.0)	621 (65.0)	511 (77.0)	1,289 (57.0)	609 (63.6)	691 (78.0)	1,545 (53.0)	896 (59.4)	1,030 (76.0)	4,159 (59.2)	2,126 (62.2)	2,232 (76.8)
Number transferred to another centre	64 (3.4)	32 (3.4)	43 (6.4)	107 (4.8)	43 (4.5)	26 (3.0)	35 (1.2)	8 (0.6)	13 (1.0)	206 (3.0)	83 (2.4)	82 (2.8)
Missing	214	139	234	128	189	172	145	95	108	487	423	514
Percutaneous Coronary Intervention, No. (%)												
Yes	401 (24.2)	191 (21.8)	65 (11.4)	747 (34.6)	218 (24.0)	93 (10.8)	1,070 (38.0)	276 (18.6)	138 (10.6)	2,218 (33.4)	685 (21.0)	296 (10.8)
No	1,253 (75.8)	688 (78.2)	504 (88.6)	1,409 (65.4)	688 (76.0)	766 (89.2)	1,729 (61.2)	1,201 (81.1)	1,162 (89.1)	4,391 (66.2)	2,577 (78.9)	2,432 (89.0)
Not Applicable							24 (0.8)	4 (0.3)	4 (0.3)	24 (0.4)	4 (0.1)	4 (0.2)
Missing	401	215	329	230	240	198	238	121	160	869	576	687

Year	2011			2012			2013			2011-2013		
	STEMI	NSTEMI	UA	STEMI	NSTEMI	UA	STEMI	NSTEMI	UA	STEMI	NSTEMI	UA
ACS Stratum												
Total	2,055	1,094	898	2,386	1,146	1,057	3,061	1,602	1,464	7,502	3,842	3,419
CABG, No. (%)												
Yes	14 (0.8)	29 (3.4)	13 (2.2)	16 (0.8)	17 (2.2)	11 (1.4)	36 (1.4)	37 (2.6)	25 (1.9)	66 (1.0)	83 (2.6)	49 (1.8)
No	1666 (99.2)	822 (96.6)	600 (97.8)	1953 (99.2)	788 (97.8)	784 (98.6)	2609 (97.1)	1405 (97.0)	1280 (97.3)	6228 (98.4)	3015 (97.2)	2664 (97.8)
Not Applicable												
Missing	375	243	285	417	341	262	378	154	148	1170	738	695
Pre-admission aspirin use, No. (%)												
Yes	373 (19.0)	433 (43.0)	488 (58.6)	455 (20.0)	433 (40.6)	539 (54.4)	602 (20.6)	728 (48.6)	923 (65.6)	1,430 (20.0)	1,594 (44.6)	1,950 (60.4)
No	1,581 (81.0)	575 (57.0)	345 (41.4)	1,813 (80.0)	633 (59.4)	450 (45.6)	2,313 (79.4)	771 (51.4)	484 (34.4)	5,707 (80.0)	1,979 (55.4)	1,279 (39.6)
Missing	101	86	65	118	80	68	146	103	57	365	269	190
Pharmacological therapy given during admission, No. (%)												
Aspirin	1,964 (97.6)	1,021 (96.6)	819 (94.2)	2,241 (96.8)	1,084 (97.4)	951 (95.0)	2,843 (97.0)	1,479 (97.0)	1,349 (96.2)	7,048 (97.2)	3,584 (97.0)	3,119 (95.4)
*ADP antagonist	1,767 (89.8)	884 (86.6)	635 (74.4)	1,914 (86.6)	934 (87.0)	808 (82.2)	2,470 (96.0)	1,224 (93.8)	1,200 (92.8)	6,151 (91.2)	3,042 (89.4)	2,643 (84.4)
GP receptor inhibitor	74 (4.4)	32 (3.6)	23 (3.0)	90 (4.2)	26 (2.6)	20 (2.0)	71 (2.8)	4 (0.4)	7 (0.6)	235 (3.8)	62 (2.0)	50 (1.6)
Unfractionated heparin	187 (11.2)	92 (10.2)	82 (10.4)	316 (15.0)	121 (12.4)	74 (7.8)	436 (17.2)	125 (10.4)	86 (7.0)	939 (15.0)	338 (11.0)	242 (8.2)
LMWH	1,012 (57.2)	698 (72.2)	581 (71.2)	1,139 (52.6)	755 (71.8)	652 (66.6)	644 (25.4)	397 (31.8)	254 (20.2)	2,795 (43.2)	1,850 (56.6)	1,487 (48.6)
Fondaparinux							1,240 (54.0)	794 (67.8)	926 (74.4)	1240 (54.0)	794 (67.8)	926 (74.4)
Oral anticoagulant (eg. Warfarin)							27 (1.2)	23 (2.2)	36 (3.0)	27 (1.2)	23 (2.2)	36 (3.0)
Beta blocker	1,184 (65.0)	663 (66.8)	601 (71.2)	1,341 (61.4)	601 (57.6)	650 (66.2)	1,696 (64.2)	908 (69.4)	972 (72.2)	4,221 (63.4)	2,172 (65.0)	2,223 (70.0)
ACE inhibitor	1,057 (58.4)	579 (59.4)	515 (61.6)	1,126 (51.6)	622 (60.8)	573 (58.4)	1,373 (53.0)	693 (54.6)	796 (59.6)	3,556 (54.0)	1,894 (58.0)	1,884 (59.8)



Year	2011			2012			2013			2011-2013		
	STEMI	NSTEMI	UA	STEMI	NSTEMI	UA	STEMI	NSTEMI	UA	STEMI	NSTEMI	UA
ACS Stratium	2,055	1,094	898	2,386	1,146	1,057	3,061	1,602	1,464	7,502	3,842	3,419
	(4.8)	(11.8)	(12.4)	(4.4)	(8.8)	(12.4)	(2.4)	(7.4)	(10.8)	(3.6)	(9.2)	(11.8)
Angiotensin II receptor blocker	1,852	966	781	2,105	1,001	900	2,660	1,296	1,278	6,617	3,263	2,959
	(93.8)	(93.2)	(90.0)	(91.8)	(91.2)	(89.8)	(91.8)	(92.8)	(92.8)	(92.4)	(92.4)	(91.2)
Statin	50	43	51	81	61	71	68	50	59	199	154	181
	(3.0)	(4.8)	(6.4)	(3.8)	(6.2)	(7.4)	(2.8)	(4.2)	(4.8)	(3.2)	(5.0)	(6.0)
Other lipid lowering agent	414	367	234	462	328	251	620	478	375	1,496	1,173	860
	(24.0)	(39.4)	(28.6)	(21.4)	(32.4)	(25.8)	(24.4)	(38.0)	(29.4)	(23.2)	(36.6)	(28.0)
Diuretics	109	183	214	131	173	188	143	244	318	383	600	720
	(6.6)	(20.2)	(26.8)	(6.2)	(17.4)	(19.6)	(5.8)	(20.4)	(25.2)	(6.2)	(19.4)	(23.8)
Calcium antagonist	365	314	302	394	250	307	489	373	419	1,248	937	1,028
	(21.4)	(33.4)	(37.2)	(18.4)	(24.8)	(31.6)	(19.4)	(30.0)	(33.0)	(19.6)	(29.4)	(33.6)
Oral hypoglycaemic agent	426	238	171	493	247	160	658	352	286	1,577	837	617
	(24.2)	(25.8)	(21.2)	(23.0)	(24.4)	(16.4)	(25.8)	(28.4)	(22.6)	(24.4)	(26.4)	(20.2)
Insulin	187	82	36	157	78	50	174	64	68	518	224	154
	(10.8)	(9.2)	(4.6)	(7.4)	(7.8)	(5.2)	(7.2)	(5.4)	(5.4)	(8.2)	(7.2)	(5.2)
Anti-arrhythmic agent												

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

^ Acceptable range is different between the previous report (2009 & 2010) and this current version (2011-2013)

* For CRF version 2013, details of the breakdown are available for ticlopidine, clopidogrel, prasugrel and ticagrelor. These are grouped as ADP antagonist in this current version (2011-2013)



Table 4.2 Treatments for patients with STEMI by age group (years), NCVD-ACS Registry, 2011-2013

Year	2011			2012			2013			2011-2013			
	Age group	Young	Middle-Age	Elderly	Young	Middle-Age	Elderly	Young	Middle-Age	Elderly	Young	Middle-Age	Elderly
Total		171	1,134	750	205	1,270	911	279	1,685	1,097	655	4,089	2,758
#^Total admission days													
N		169	1,114	739	196	1,224	880	274	1,653	1,073	639	3,991	2,692
Mean (SD)		5.8 (4.2)	6.1 (5.3)	6.9 (7.0)	6.2 (5.9)	6.2 (6.8)	6.1 (5.5)	5.9 (6.2)	6.3 (6.7)	7.0 (7.6)	6.0 (5.7)	6.2 (6.4)	6.7 (6.9)
Median (min, max)		5.0 (1.0, 35.0)	5.0 (1.0, 94.0)	5.0 (1.0, 88.0)	5.0 (1.0, 66.0)	5.0 (1.0, 97.0)	5.0 (1.0, 75.0)	5.0 (1.0, 80.0)	5.0 (1.0, 95.0)	5.0 (1.0, 98.0)	5.0 (1.0, 80.0)	5.0 (1.0, 97.0)	5.0 (1.0, 98.0)
IQR		2.0	2.0	3.0	2.0	2.0	2.0	2.0	2.0	3.0	2.0	2.0	3.0
Missing		2	20	11	9	46	31	5	32	24	16	98	66
Number of days on CCU													
N		104	707	465	141	817	567	161	1,053	678	406	2,577	1,710
Mean (SD)		3.4 (2.1)	3.5 (3.0)	3.5 (2.8)	3.5 (2.7)	3.2 (2.4)	3.6 (3.5)	3.2 (2.6)	3.2 (2.6)	3.8 (3.7)	3.3 (2.5)	3.3 (2.6)	3.7 (3.4)
Median (min, max)		3.0 (1.0, 15.0)	3.0 (1.0, 30.0)	3.0 (1.0, 24.0)	3.0 (1.0, 20.0)	3.0 (1.0, 20.0)	3.0 (1.0, 27.0)	3.0 (1.0, 25.0)	3.0 (1.0, 21.0)	3.0 (1.0, 28.0)	3.0 (1.0, 25.0)	3.0 (1.0, 30.0)	3.0 (1.0, 28.0)
IQR		2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
No admission to CCU		67	427	282	64	450	342	117	630	417	248	1,507	1,041
Missing		0	0	3	0	3	2	1	2	2	1	5	7
Number of days on ICU/CICU													
N		0	15	10	0	6	3	6	25	15	6	46	28
Mean (SD)			2.9 (1.8)	2.7 (1.6)		6.7 (8.2)	3.7 (1.5)	1.8 (0.8)	2.9 (1.6)	3.9 (3.7)	1.8 (0.8)	3.4 (3.4)	3.5 (2.9)
Median (min, max)			3.0 (1.0, 7.0)	2.0 (1.0, 6.0)		4.0 (1.0, 23.0)	4.0 (2.0, 5.0)	2.0 (1.0, 3.0)	3.0 (1.0, 8.0)	3.0 (1.0, 16.0)	2.0 (1.0, 3.0)	3.0 (1.0, 23.0)	2.5 (1.0, 16.0)
IQR			3.0	2.0		4.0	3.0	1.0	2.0	3.0	1.0	2.0	2.0
No admission to ICU/CICU		170	1,119	740	205	1,262	908	272	1,660	1,082	647	4,041	2,730
Missing		1	0	0	0	2	0	1	0	0	2	2	0



Year	2011			2012			2013			2011-2013		
	Young	Middle-Age	Elderly	Young	Middle-Age	Elderly	Young	Middle-Age	Elderly	Young	Middle-Age	Elderly
Age group	171	1,134	750	205	1,270	911	279	1,685	1,097	655	4,089	2,758
Fibrinolytic therapy, No. (%)												
Given at this centre	89 (54.0)	658 (60.0)	384 (53.4)	94 (47.0)	596 (48.0)	419 (47.2)	146 (53.1)	817 (49.3)	514 (47.6)	329 (51.4)	2,071 (51.8)	1,317 (49.0)
Given at another centre prior to transfer	51 (31.0)	242 (22.0)	153 (21.2)	54 (27.0)	312 (25.1)	211 (23.8)	65 (23.6)	436 (26.3)	246 (22.8)	170 (26.6)	990 (24.8)	610 (22.7)
Not given-proceeded directly to primary angioplasty	6 (3.6)	69 (6.2)	44 (6.2)	29 (14.4)	140 (11.2)	95 (10.8)	25 (9.1)	174 (10.6)	109 (10.0)	60 (9.4)	383 (9.6)	248 (9.2)
Not given-Missed thrombolysis	15 (9.0)	105 (9.6)	96 (13.4)	18 (9.0)	148 (12.0)	113 (12.8)	28 (10.2)	165 (10.0)	139 (12.8)	61 (9.5)	418 (10.4)	348 (13.0)
Not given-Patient refusal	0 (0)	3 (0.2)	4 (0.6)	1 (0.6)	5 (0.4)	2 (0.2)	3 (1.0)	7 (0.4)	9 (0.8)	4 (0.6)	15 (0.4)	15 (0.6)
Not given-Contraindicated	4 (2.4)	21 (2.0)	38 (5.2)	4 (2.0)	42 (3.3)	46 (5.2)	8 (3.0)	57 (3.4)	65 (6.0)	16 (2.5)	120 (3.0)	149 (5.5)
Not applicable	0	1	2	1	5	0	1	7	7	2	13	9
Not available	2	5	4	1	3	7	2	18	6	5	26	17
Missing	4	30	25	3	19	18	1	4	2	8	53	45
Cardiac catheterisation, No. (%)												
Yes	44 (28.6)	261 (25.5)	147 (22.2)	97 (48.8)	479 (40.0)	286 (33.2)	131 (48.7)	766 (48.0)	439 (41.8)	272 (43.8)	1506 (39.4)	872 (33.8)
No	105 (68.2)	730 (71.4)	490 (73.8)	96 (48.2)	660 (55.2)	533 (61.8)	134 (49.8)	814 (50.9)	597 (57.0)	335 (53.8)	2204 (57.8)	1620 (63.0)
Number transferred to another centre	5 (3.2)	32 (3.1)	27 (4.0)	6 (3.0)	57 (4.8)	44 (5.0)	4 (1.5)	19 (1.1)	12 (1.2)	15 (2.4)	108 (2.8)	83 (3.2)
Missing	17	111	86	6	74	48	10	86	49	33	271	183
Percutaneous Coronary Intervention, No. (%)												
Yes	41 (28.2)	226 (24.6)	134 (22.6)	82 (43.0)	422 (36.6)	243 (29.8)	106 (40.3)	619 (40.0)	345 (34.0)	229 (38.2)	1267 (35.0)	722 (29.8)
No	104 (71.8)	691 (75.4)	458 (77.4)	109 (57.0)	730 (63.4)	570 (70.2)	152 (57.7)	917 (59.4)	660 (65.1)	365 (61.0)	2338 (64.7)	1688 (69.8)
Not Applicable							5 (2.0)	10 (0.6)	9 (0.9)	5 (0.8)	10 (0.3)	9 (0.4)
Missing	26	217	158	14	118	98	16	139	83	56	474	339



Year	2011			2012			2013			2011-2013		
	Young	Middle-Age	Elderly	Young	Middle-Age	Elderly	Young	Middle-Age	Elderly	Young	Middle-Age	Elderly
Total	171	1,134	750	205	1,270	911	279	1,685	1,097	655	4,089	2,758
CABG, No. (%)												
Yes	0 (0)	13 (1.4)	1 (0.2)	1 (0.6)	12 (1.2)	3 (0.4)	1 (0.4)	17 (1.2)	18 (1.8)	2 (0.3)	42 (1.2)	22 (1.0)
No	144 (100.0)	916 (98.6)	606 (99.8)	176 (99.4)	1041 (98.8)	736 (99.6)	242 (98.0)	1428 (97.5)	939 (96.6)	562 (99.0)	3,385 (98.2)	2,281 (98.4)
Not Applicable												
Missing	27	205	143	28	217	172	32	221	125	87	643	440
Pre-admission aspirin use, No. (%)												
Yes	15 (9.2)	175 (16.2)	183 (25.8)	14 (7.4)	223 (18.4)	218 (25.2)	30 (11.0)	304 (19.0)	268 (25.6)	59 (9.4)	702 (18.0)	669 (25.4)
No	148 (90.8)	905 (83.8)	528 (74.2)	173 (92.6)	990 (81.6)	650 (74.8)	243 (89.0)	1292 (81.0)	778 (74.4)	564 (90.6)	3,187 (82.0)	1,956 (74.6)
Missing	8	54	39	18	57	43	6	89	51	32	200	133
Pharmacological therapy given during admission, No. (%)												
Aspirin	160 (96.4)	1,090 (98.2)	714 (97.0)	192 (95.0)	1,206 (97.8)	843 (95.8)	263 (98.2)	1,565 (97.4)	1,015 (96.2)	615 (96.6)	3,861 (97.6)	2,572 (96.4)
*ADP antagonist	145 (89.0)	996 (91.8)	626 (87.2)	160 (84.6)	1022 (87.0)	732 (86.4)	225 (96.6)	1335 (96.0)	910 (96.0)	530 (90.6)	3,353 (91.8)	2,268 (90.2)
GP receptor inhibitor	6 (4.2)	43 (4.8)	25 (4.2)	13 (7.4)	48 (4.2)	29 (3.6)	10 (4.4)	41 (3.0)	20 (2.2)	29 (5.4)	132 (4.0)	74 (3.2)
Unfractionated heparin	18 (12.8)	114 (12.4)	55 (9.2)	36 (20.2)	162 (14.4)	118 (14.6)	34 (14.8)	260 (18.8)	142 (15.6)	88 (16.0)	536 (15.6)	315 (13.6)
LMWH	92 (62.2)	566 (58.4)	354 (54.6)	89 (48.4)	627 (54.2)	423 (51.2)	55 (24.0)	357 (26.0)	232 (25.0)	236 (42.0)	1,550 (44.2)	1,009 (42.0)
Fondaparinux												
Oral anticoagulant (eg. Warfarin)												
Beta blocker	94 (61.4)	682 (67.8)	408 (61.6)	129 (67.6)	774 (66.4)	438 (53.0)	160 (66.4)	687 (66.4)	566 (60.0)	383 (65.4)	2,426 (66.8)	1,412 (58.0)
ACE inhibitor	82 (54.4)	577 (58.0)	398 (59.8)	99 (52.6)	641 (55.4)	386 (46.2)	117 (49.4)	813 (57.0)	443 (47.8)	298 (51.8)	2,031 (56.8)	1,227 (50.6)



Year	2011			2012			2013			2011-2013		
	Young	Middle-Age	Elderly	Young	Middle-Age	Elderly	Young	Middle-Age	Elderly	Young	Middle-Age	Elderly
Total	171 (2.8)	1,134 (4.2)	750 (5.8)	205 (4.6)	1,270 (4.4)	911 (4.4)	279 (1.8)	1,685 (2.4)	1,097 (2.4)	655 (3.0)	4,089 (3.6)	2,758 (4.0)
Angiotensin II receptor blocker	4 (92.0)	39 (103.2)	35 (66.9)	8 (89.6)	49 (113.1)	36 (79.5)	4 (91.8)	31 (92.4)	22 (90.6)	16 (91.2)	119 (36.5)	93 (24.0)
Statin	151 (2.8)	1,032 (94.6)	669 (92.8)	179 (89.6)	1,131 (93.0)	795 (90.6)	247 (91.8)	1,472 (92.4)	941 (90.6)	577 (91.2)	3,635 (93.2)	2,405 (91.2)
Other lipid lowering agent	4 (2.8)	23 (2.6)	23 (3.8)	11 (6.0)	44 (3.8)	26 (3.2)	6 (2.6)	42 (3.2)	20 (2.2)	21 (3.8)	109 (3.2)	69 (3.0)
Diuretics	16 (11.0)	197 (20.8)	201 (31.4)	15 (8.2)	230 (20.2)	217 (26.4)	33 (14.4)	285 (20.6)	302 (32.6)	64 (11.4)	712 (20.6)	720 (30.2)
Calcium antagonist	6 (4.2)	41 (4.4)	62 (10.2)	5 (2.8)	55 (4.8)	71 (8.8)	9 (4.0)	62 (4.6)	72 (8.0)	20 (3.6)	158 (4.6)	205 (8.8)
Oral hypoglycaemic agent	17 (11.8)	227 (24.2)	121 (19.6)	22 (12.0)	233 (20.4)	139 (17.2)	35 (15.2)	289 (21.0)	165 (18.2)	74 (13.2)	749 (21.6)	425 (18.2)
Insulin	19 (12.8)	231 (23.8)	176 (27.4)	23 (12.4)	268 (23.6)	202 (24.6)	40 (17.2)	362 (26.0)	256 (27.8)	82 (14.4)	861 (24.6)	634 (26.6)
Anti-arrhythmic agent	10 (7.0)	98 (10.4)	79 (12.4)	14 (7.8)	74 (6.6)	69 (8.6)	10 (4.6)	74 (5.6)	90 (10.2)	34 (6.2)	246 (7.2)	238 (10.2)

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

^ Acceptable range is different between the previous report (2009 & 2010) and this current version (2011-2013)

* For CRF version 2013, details of the breakdown are available for ticlopidine, clopidogrel, prasugrel and ticagrelor. These are grouped as ADP antagonist in this current version (2011-2013)

** 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



Table 4.3 Treatments for patients with STEMI by gender, NCVD-ACS Registry, 2011-2013

Year	2011		2012		2013		2011-2013	
	Male	Female	Male	Female	Male	Female	Male	Female
Gender								
Total	1,738	317	2,048	338	2,611	450	6,397	1,105
#% Total admission days								
N	1,708	314	1,974	326	2,560	440	6,242	1,080
Mean (SD)	6.3 (5.7)	6.8 (7.0)	6.2 (6.5)	5.9 (4.5)	6.5 (7.0)	6.9 (6.7)	6.3 (6.5)	6.6 (6.3)
Median (min, max)	5.0 (1.0, 94.0)	5.0 (1.0, 74.0)	5.0 (1.0, 97.0)	5.0 (1.0, 43.0)	5.0 (1.0, 98.0)	5.0 (1.0, 62.0)	5.0 (1.0, 98.0)	5.0 (1.0, 74.0)
IQR	2.0	3.0	2.0	3.0	2.0	3.5	2.0	3.0
Missing	30	3	74	12	51	10	155	25
Number of days on CCU								
N	1,085	191	1,329	196	1,622	270	4,036	657
Mean (SD)	3.5 (2.9)	3.5 (2.6)	3.4 (2.9)	3.4 (3.1)	3.4 (3.0)	3.9 (3.5)	3.4 (2.9)	3.6 (3.1)
Median (min, max)	3.0 (1.0, 30.0)	3.0 (1.0, 20.0)	3.0 (1.0, 27.0)	3.0 (1.0, 24.0)	3.0 (1.0, 28.0)	3.0 (1.0, 26.0)	3.0 (1.0, 30.0)	3.0 (1.0, 26.0)
IQR	2.0	2.0	2.0	2.0	2.0	3.0	2.0	2.0
No admission to CCU	650	126	715	141	986	178	2351	445
Missing	3	0	4	1	3	2	10	3
Number of days on ICU/CICU								
N	20	5	8	1	40	6	68	12
Mean (SD)	2.9 (1.8)	2.6 (0.9)	5.9 (7.1)	4.0 (.)	3.2 (2.6)	2.7 (1.9)	3.4 (3.3)	2.8 (1.4)
Median (min, max)	2.5 (1.0, 7.0)	2.0 (2.0, 4.0)	4.0 (1.0, 23.0)	4.0 (4.0, 4.0)	2.5 (1.0, 16.0)	2.5 (1.0, 6.0)	3.0 (1.0, 23.0)	2.5 (1.0, 6.0)
IQR	3.0	1.0	3.5	0	2.0	2.0	2.0	1.5
No admission to ICU/CICU	1717	312	2039	336	2570	444	6326	1092
Missing	1	0	1	1	1	0	3	1
Fibrinolytic therapy, No. (%)								
Given at this centre	966 (57.8)	165 (53.6)	954 (47.6)	155 (47.6)	1267 (49.2)	210 (47.3)	3,187 (51.0)	530 (49.2)
Given at another centre prior to transfer	376 (22.5)	70 (22.8)	505 (25.2)	72 (22.0)	652 (25.4)	95 (21.4)	1,533 (24.5)	237 (22.0)



Year	2011		2012		2013		2011-2013	
	Male	Female	Male	Female	Male	Female	Male	Female
Gender								
Total	1,738	317	2,048	338	2,611	450	6,397	1,105
Not given-proceeded directly to primary angioplasty	102 (6.1)	17 (5.5)	235 (11.8)	29 (8.8)	273 (10.6)	35 (8.0)	610 (9.8)	81 (7.6)
Not given-Missed thrombolysis	175 (10.4)	41 (13.3)	231 (11.6)	48 (14.8)	265 (10.4)	67 (15.1)	671 (10.8)	156 (14.4)
Not given-Patient refusal	7 (0.4)	0 (0)	5 (0.2)	3 (1.0)	15 (0.6)	4 (1.0)	27 (0.4)	7 (0.6)
Not given-Contraindicated	48 (2.8)	15 (4.8)	73 (3.6)	19 (5.8)	98 (3.8)	32 (7.2)	219 (3.5)	66 (6.2)
Not applicable	3	0	6	0	12	3	21	3
Not available	10	1	8	3	23	3	41	7
Missing	51	8	31	9	6	1	88	18
Cardiac catheterisation, No. (%)								
Yes	395 (25.4)	57 (19.6)	763 (39.5)	99 (30.4)	1,162 (46.7)	174 (40.4)	2,320 (38.8)	330 (31.5)
No	1,099 (71.0)	226 (77.6)	1,080 (55.9)	209 (64.4)	1,290 (52.0)	255 (59.2)	3,469 (58.2)	690 (66.0)
Number transferred to another centre	56 (3.6)	8 (2.8)	90 (4.6)	17 (5.2)	33 (1.3)	2 (0.4)	179 (3.0)	27 (2.5)
Missing	188	26	115	13	126	19	429	58
Percutaneous Coronary Intervention, No. (%)								
Yes	354 (25.2)	47 (18.6)	668 (36.2)	79 (25.8)	927 (38.6)	143 (33.8)	1,949 (34.4)	269 (27.4)
No	1,048 (74.8)	205 (81.4)	1,181 (63.8)	228 (74.2)	1,453 (60.6)	276 (65.2)	3,682 (65.2)	709 (72.2)
Not Applicable					20 (0.8)	4 (1.0)	20 (0.4)	4 (0.4)
Missing	336	65	199	31	211	27	746	123
CABG, No. (%)								
Yes	12 (0.8)	2 (0.8)	16 (1.0)	0 (0)	35 (1.5)	1 (0.2)	63 (1.2)	3 (0.3)
No	1,412 (99.2)	254 (99.2)	1,679 (99.0)	274 (100.0)	2,210 (97.0)	399 (99.0)	5,301 (98.2)	927 (99.4)
Not Applicable					35 (1.5)	3 (0.8)	35 (0.6)	3 (0.3)
Missing	314	61	353	64	331	47	998	172



Year	2011		2012		2013		2011-2013	
	Male	Female	Male	Female	Male	Female	Male	Female
Gender								
Total	1738	317	2048	338	2611	450	6397	1105
Pre-admission aspirin use, No. (%)								
Yes	315 (19.0)	58 (19.0)	389 (20.0)	66 (20.4)	489 (19.8)	113 (26.0)	1,193 (19.6)	237 (22.4)
No	1,335 (81.0)	246 (81.0)	1,554 (80.0)	259 (79.6)	1,993 (80.2)	320 (74.0)	4,882 (80.4)	825 (77.6)
Missing	88	13	105	13	129	17	322	43
Pharmacological therapy given during admission, No. (%)								
Aspirin	1,666 (97.8)	298 (96.2)	1,928 (96.8)	313 (96.0)	2,430 (97.2)	413 (96.2)	6,024 (97.2)	1,024 (96.2)
*ADP antagonist	1,503 (90.4)	264 (87.4)	1,636 (86.2)	278 (88.2)	2,102 (96.2)	368 (95.6)	5,241 (91.2)	910 (90.8)
GP receptor inhibitor	63 (4.4)	11 (4.2)	77 (4.2)	13 (4.4)	65 (3.0)	6 (1.6)	205 (3.8)	30 (3.2)
Unfractionated heparin	160 (11.4)	27 (10.6)	287 (15.8)	29 (9.6)	369 (17.2)	67 (18.0)	816 (15.2)	123 (13.2)
LMWH	858 (57.4)	154 (56.6)	986 (53.0)	153 (50.0)	549 (25.4)	95 (25.4)	2,393 (43.4)	402 (42.2)
Fondaparinux					1,060 (54.2)	180 (53.0)	1,060 (54.2)	180 (53.0)
Oral anticoagulant (eg. Warfarin)					20 (1.0)	7 (2.2)	20 (1.0)	7 (2.2)
Beta blocker	1,006 (65.4)	178 (62.8)	1,159 (61.8)	182 (59.0)	1,457 (64.6)	239 (61.2)	3,622 (64.0)	599 (61.0)
ACE inhibitor	901 (58.8)	156 (56.0)	987 (52.6)	139 (45.2)	1,179 (53.4)	194 (50.2)	3,067 (54.6)	489 (50.4)
Angiotensin II receptor blocker	59 (4.2)	19 (7.4)	74 (4.2)	19 (6.4)	50 (2.4)	7 (2.0)	183 (3.4)	45 (4.8)
Statin	1,581 (94.2)	271 (91.6)	1,818 (92.2)	287 (88.8)	2,276 (91.8)	384 (90.8)	5,675 (92.6)	942 (90.4)
Other lipid lowering agent	35 (2.4)	15 (5.8)	75 (4.2)	6 (2.0)	59 (2.8)	9 (2.4)	169 (3.2)	30 (3.2)
Diuretics	336 (23.0)	78 (29.4)	389 (21.2)	73 (23.8)	500 (23.0)	120 (32.0)	1,225 (22.4)	271 (28.6)
Calcium antagonist	85 (6.0)	24 (9.2)	100 (5.6)	31 (10.2)	116 (5.6)	27 (7.6)	301 (5.6)	82 (9.0)
Oral hypoglycaemic agent	288 (20.2)	77 (28.6)	314 (17.2)	80 (26.4)	393 (18.2)	96 (26.0)	995 (18.4)	253 (27.0)
Insulin	315 (21.2)	111 (40.0)	381 (20.8)	112 (36.4)	492 (22.8)	166 (44.0)	1,188 (21.6)	389 (40.4)
Anti-arrhythmic agent	158 (10.8)	29 (10.8)	136 (7.6)	21 (7.0)	154 (7.4)	20 (5.6)	448 (8.4)	70 (7.6)

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

^ Acceptable range is different between the previous report (2009 & 2010) and this current version (2011-2013)

*For CRF version 2013, details of the breakdown are available for ticlopidine, clopidogrel, prasugrel and ticagrelor. These are grouped as ADP antagonist in this current version (2011-2013)



Table 4.4 Treatments for patients with STEMI by ethnic group, NCVD-ACS Registry, 2011-2013

Year	2011				2012				2013				2011-2013			
	Malay	Chinese	Indian	##Others	Malay	Chinese	Indian	##Others	Malay	Chinese	Indian	##Others	Malay	Chinese	Indian	##Others
ACS Stratum																
Total	1,140	389	336	190	1,387	386	345	268	1,791	487	464	319	4,318	1,262	1,145	777
# Total admission days																
N	1,124	384	330	184	1,335	371	334	260	1,751	478	458	313	4,210	1,233	1,122	757
Mean (SD)	6.3 (5.4)	6.4 (5.6)	6.9 (8.2)	6.1 (4.4)	6.3 (6.5)	5.7 (4.4)	6.2 (6.6)	6.0 (6.7)	6.7 (7.4)	6.2 (6.4)	6.8 (6.6)	5.9 (5.9)	6.4 (6.7)	6.1 (5.6)	6.7 (7.1)	6.0 (5.9)
Median (min, max)	5.0 (1.0, 74.0)	5.0 (1.0, 66.0)	5.0 (1.0, 94.0)	5.0 (1.0, 35.0)	5.0 (1.0, 97.0)	5.0 (1.0, 41.0)	5.0 (1.0, 95.0)	5.0 (1.0, 67.0)	5.0 (1.0, 98.0)	5.0 (1.0, 63.0)	5.0 (1.0, 80.0)	5.0 (1.0, 65.0)	5.0 (1.0, 98.0)	5.0 (1.0, 66.0)	5.0 (1.0, 95.0)	5.0 (1.0, 67.0)
IQR	3.0	2.0	3.0	3.0	2.0	2.0	2.0	2.0	2.0	2.0	3.0	2.0	2.0	2.0	3.0	2.0
Missing	16	5	6	6	52	15	11	8	40	9	6	6	108	29	23	20
Number of days on CCU																
N	726	224	191	135	917	239	183	186	1,168	289	231	204	2,811	752	605	525
Mean (SD)	3.3 (2.4)	3.7 (3.5)	3.8 (3.2)	3.7 (3.2)	3.3 (2.7)	3.5 (3.6)	3.7 (3.0)	3.4 (2.4)	3.5 (3.2)	3.2 (2.6)	3.4 (2.9)	3.5 (2.6)	3.4 (2.9)	3.4 (3.2)	3.6 (3.0)	3.5 (2.7)
Median (min, max)	3.0 (1.0, 24.0)	3.0 (1.0, 30.0)	3.0 (1.0, 24.0)	3.0 (1.0, 24.0)	3.0 (1.0, 25.0)	3.0 (1.0, 27.0)	3.0 (1.0, 24.0)	3.0 (1.0, 20.0)	3.0 (1.0, 28.0)	3.0 (1.0, 25.0)	3.0 (1.0, 26.0)	3.0 (1.0, 22.0)	3.0 (1.0, 28.0)	3.0 (1.0, 30.0)	3.0 (1.0, 26.0)	3.0 (1.0, 24.0)
IQR	2.0	2.0	2.0	2.0	2.0	2.0	3.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
No admission to CCU	412	165	145	54	467	146	161	82	620	198	231	115	1,499	509	537	251
Missing	2	0	0	1	3	1	1	0	3	0	2	0	8	1	3	1
Number of days on ICU/CICU																
N	16	3	4	2	7	1	0	1	25	5	9	7	48	9	13	10
Mean (SD)	3.2 (1.6)	1.3 (0.6)	2.0 (0.8)	3.5 (3.5)	6.6 (7.5)	3.0 (.)	3.0 (.)	2.0 (.)	3.5 (3.0)	1.8 (1.3)	3.2 (1.6)	2.6 (1.5)	3.8 (3.7)	1.8 (1.1)	2.8 (1.5)	2.7 (1.8)
Median (min, max)	3.0 (1.0, 7.0)	1.0 (1.0, 2.0)	2.0 (1.0, 3.0)	3.5 (1.0, 6.0)	5.0 (1.0, 23.0)	3.0 (3.0, 3.0)	3.0 (3.0, 3.0)	2.0 (2.0, 2.0)	3.0 (1.0, 16.0)	1.0 (1.0, 4.0)	3.0 (1.0, 6.0)	2.0 (1.0, 5.0)	3.0 (1.0, 23.0)	1.0 (1.0, 4.0)	3.0 (1.0, 6.0)	2.0 (1.0, 6.0)



Year	2011					2012					2013					2011-2013										
	Malay	Chinese	Indian	#Others		Malay	Chinese	Indian	#Others		Malay	Chinese	Indian	#Others		Malay	Chinese	Indian	#Others		Malay	Chinese	Indian	#Others		
ACS Stratum																										
Total	1,140	389	336	190		1,387	386	345	268		1,791	487	464	319		4,318	1,262	1,145	777							
IQR	2.0	1.0	1.0	5.0		4.0	0		0		2.0	1.0	2.0	3.0		2.0	1.0	1.0	3.0							
No admission to ICU/CICU	1,123	386	332	188		1,380	384	344	267		1,765	482	455	312		4,268	1,252	1,131	767							
Missing	1	0	0	0		0	1	1	0		1	0	0	0		2	1	1	0							
Fibrinolytic therapy, No. (%)																										
Given at this centre	648 (58.8)	225 (60.2)	182 (56.6)	76 (41.0)		658 (48.4)	167 (44.6)	188 (56.6)	96 (36.6)		878 (49.9)	233 (48.6)	233 (51.2)	133 (42.0)		2,184 (51.7)	625 (50.9)	603 (54.4)	305 (40.0)							
Given at another centre prior to transfer	246 (22.4)	67 (18.0)	62 (19.2)	71 (38.4)		344 (25.2)	80 (21.4)	47 (14.2)	106 (40.4)		431 (24.5)	100 (20.8)	92 (20.2)	124 (39.1)		1,021 (24.2)	247 (20.1)	201 (18.1)	301 (39.4)							
Not given-proceeded directly to primary angioplasty	64 (5.8)	16 (4.2)	32 (10.0)	7 (3.8)		150 (11.0)	54 (14.4)	42 (12.6)	18 (6.8)		182 (10.4)	54 (11.2)	58 (12.8)	14 (4.4)		396 (9.4)	124 (10.1)	132 (12.0)	39 (5.1)							
Not given-Missed thrombolysis	108 (9.8)	51 (13.6)	35 (10.8)	22 (11.8)		155 (11.4)	52 (13.8)	47 (14.2)	25 (9.6)		181 (10.2)	62 (13.0)	57 (12.6)	32 (10.0)		444 (10.5)	165 (13.4)	139 (12.5)	79 (10.3)							
Not given-Patient refusal	2 (0.2)	4 (1.0)	0 (0)	1 (0.6)		5 (0.4)	1 (0.2)	0 (0)	2 (0.8)		11 (0.6)	6 (1.2)	1 (0.2)	1 (0.4)		18 (0.4)	11 (0.9)	1 (0.0)	4 (0.5)							
Not given-Contraindicated	33 (3.0)	11 (3.0)	11 (3.4)	8 (4.4)		48 (3.6)	21 (5.6)	8 (2.4)	15 (5.8)		78 (4.4)	25 (5.2)	14 (3.0)	13 (4.1)		159 (3.8)	57 (4.6)	33 (3.0)	36 (4.7)							
Not applicable	1	0	2	0		2	1	2	1		7	2	6	0		10	3	10	1							
Not available	5	3	3	0		5	3	3	0		17	4	3	2		27	10	9	2							
Missing	33	12	9	5		20	7	8	5		6	1	0	0		59	20	17	10							



Year	2011				2012				2013				2011-2013			
	Malay	Chinese	Indian	##Others	Malay	Chinese	Indian	##Others	Malay	Chinese	Indian	##Others	Malay	Chinese	Indian	##Others
ACS Stratum																
Total	1,140	389	336	190	1,387	386	345	268	1,791	487	464	319	4,318	1,262	1,145	777
Cardiac catheterisation, No. (%)																
Yes	214 (21.4)	99 (27.8)	88 (29.1)	51 (28.3)	497 (37.6)	163 (44.8)	109 (33.2)	93 (37.8)	755 (44.4)	240 (50.8)	203 (46.0)	138 (45.6)	1,466 (36.4)	502 (42.1)	400 (37.3)	282 (38.7)
No	752 (75.0)	247 (69.2)	207 (68.6)	119 (66.1)	760 (57.6)	189 (52.0)	197 (59.8)	143 (58.2)	929 (54.7)	226 (47.9)	230 (52.0)	160 (52.8)	2,441 (60.8)	662 (55.5)	634 (59.1)	422 (57.9)
Number transferred to another centre	36 (3.6)	11 (3.0)	7 (2.3)	10 (5.6)	62 (4.8)	12 (3.2)	23 (7.0)	10 (4.0)	15 (0.9)	6 (1.3)	9 (2.0)	5 (1.6)	113 (2.8)	29 (2.4)	39 (3.6)	25 (3.4)
Missing	138	32	34	10	68	22	16	22	92	15	22	16	298	69	72	48
Percutaneous Coronary Intervention, No. (%)																
Yes	198 (22.4)	85 (25.8)	76 (28.4)	42 (24.4)	430 (34.2)	141 (39.8)	101 (33.4)	75 (31.0)	601 (36.6)	187 (40.4)	164 (38.6)	118 (40.7)	1,229 (32.4)	413 (36.0)	341 (34.3)	235 (33.4)
No	686 (77.6)	245 (74.2)	192 (71.6)	130 (75.6)	828 (65.8)	213 (60.2)	201 (66.6)	167 (69.0)	1030 (62.6)	275 (59.2)	255 (60.2)	169 (58.3)	2,544 (67.2)	733 (63.8)	648 (65.2)	466 (66.2)
Not Applicable									14 (0.8)	2 (0.4)	5 (1.2)	3 (1.0)	14 (0.4)	2 (0.2)	5 (0.5)	3 (0.4)
Missing	256	59	68	18	129	32	43	26	146	23	40	29	531	114	151	73
CABG, No. (%)																
Yes	9 (1.0)	1 (0.4)	4 (1.6)	0 (0)	8 (0.6)	5 (1.6)	1 (0.4)	2 (1.0)	26 (1.6)	4 (1.0)	3 (0.8)	3 (1.2)	43 (1.2)	10 (0.9)	8 (0.8)	5 (0.8)
No	912 (99.0)	326 (99.6)	259 (98.4)	169 (100.0)	1162 (99.4)	306 (98.4)	270 (99.6)	215 (99.0)	1541 (97.2)	424 (96.8)	404 (97.8)	240 (97.6)	3615 (98.3)	1,056 (98.2)	933 (98.6)	624 (98.8)
Not Applicable									19 (1.2)	10 (2.2)	6 (1.4)	3 (1.2)	19 (0.5)	10 (0.9)	6 (0.6)	3 (0.4)
Missing	219	62	73	21	217	75	74	51	205	49	51	73	641	186	198	145



Year	2011				2012				2013				2011-2013			
	Malay	Chinese	Indian	#Others	Malay	Chinese	Indian	#Others	Malay	Chinese	Indian	#Others	Malay	Chinese	Indian	#Others
ACS Stratum																
Total	1,140	389	336	190	1,387	386	345	268	1,791	487	464	319	4,318	1,262	1,145	777
Pre-admission aspirin use, No. (%)																
Yes	217 (20.0)	71 (19.2)	66 (20.8)	19 (10.4)	285 (21.6)	65 (17.8)	76 (23.2)	29 (11.4)	346 (20.4)	93 (19.8)	124 (27.8)	39 (12.8)	848 (20.6)	229 (19.0)	266 (24.4)	87 (11.8)
No	869 (80.0)	297 (80.8)	250 (79.2)	165 (89.6)	1038 (78.4)	299 (82.2)	252 (76.8)	224 (88.6)	1,350 (79.6)	375 (80.2)	322 (72.2)	266 (87.2)	3257 (79.4)	971 (81.0)	824 (75.6)	655 (88.2)
Missing	54	21	20	6	64	22	17	15	95	19	18	14	213	62	55	35
Pharmacological therapy given during admission, No. (%)																
Aspirin	1,095 (97.6)	368 (97.6)	315 (97.0)	186 (99.4)	1,298 (96.8)	368 (97.6)	328 (96.8)	247 (95.0)	1,655 (96.8)	455 (96.4)	428 (97.8)	305 (98.0)	4,048 (97.0)	1,191 (97.2)	1,071 (97.2)	738 (97.4)
*ADP antagonist	971 (88.6)	343 (92.0)	287 (90.6)	166 (92.8)	1,098 (86.6)	323 (88.4)	288 (87.6)	205 (82.0)	1,440 (96.4)	414 (95.6)	374 (96.4)	242 (94.6)	3,509 (91.0)	1,080 (92.2)	949 (91.8)	613 (89.4)
GP receptor inhibitor	39 (4.4)	14 (4.4)	15 (5.6)	6 (3.6)	47 (4.0)	17 (4.8)	12 (3.8)	14 (6.0)	41 (3.0)	14 (3.4)	11 (3.0)	5 (1.8)	127 (3.6)	45 (4.2)	38 (4.0)	25 (3.6)
Unfractionated heparin	99 (11.0)	33 (10.4)	31 (11.6)	24 (14.2)	209 (17.2)	39 (11.2)	55 (17.4)	13 (5.6)	268 (18.6)	68 (16.6)	78 (20.2)	22 (7.8)	576 (16.2)	140 (13.0)	164 (17.0)	59 (8.6)
LMWH	505 (52.4)	201 (60.2)	165 (57.2)	141 (78.4)	573 (46.0)	214 (60.8)	171 (53.2)	181 (72.4)	257 (17.8)	127 (30.6)	107 (27.2)	153 (52.8)	1,335 (36.6)	542 (49.2)	443 (44.2)	475 (66.0)
Fondaparinux									752 (56.2)	208 (53.8)	192 (55.4)	88 (38.4)	752 (56.2)	208 (53.8)	192 (55.4)	88 (38.4)
Oral anticoagulant (eg Warfarin)									16 (1.4)	3 (0.8)	5 (1.6)	3 (1.2)	16 (1.4)	3 (0.8)	5 (1.6)	3 (1.2)
Beta blocker	657 (65.6)	228 (65.2)	185 (63.2)	114 (64.0)	766 (61.2)	230 (63.8)	194 (60.0)	151 (61.2)	961 (63.4)	272 (62.6)	270 (66.8)	193 (66.4)	2,384 (63.2)	730 (63.6)	649 (63.6)	458 (64.0)



Year	2011				2012				2013				2011-2013			
	Malay	Chinese	Indian	##Others	Malay	Chinese	Indian	##Others	Malay	Chinese	Indian	##Others	Malay	Chinese	Indian	##Others
ACS Stratum																
Total	1,140	389	336	190	1,387	386	345	268	1,791	487	464	319	4,318	1,262	1,145	777
ACE inhibitor	602 (60.4)	200 (57.4)	163 (55.6)	92 (52.8)	661 (52.8)	175 (48.4)	169 (52.8)	121 (49.4)	787 (52.8)	230 (54.8)	221 (55.8)	135 (47.2)	2,050 (54.8)	605 (53.6)	553 (54.8)	348 (49.4)
Angiotensin II receptor blocker	45 (5.0)	7 (2.2)	18 (6.6)	8 (4.8)	51 (4.2)	13 (3.8)	16 (5.0)	13 (5.6)	28 (2.0)	12 (3.0)	9 (2.4)	8 (2.8)	124 (3.6)	32 (3.0)	43 (4.4)	29 (4.2)
Statin	1,023 (93.6)	344 (92.2)	304 (94.8)	181 (96.2)	1,223 (92.0)	342 (92.4)	302 (89.8)	238 (91.8)	1,561 (92.0)	426 (92.2)	403 (92.6)	270 (88.6)	3,807 (92.4)	1,112 (92.2)	1,009 (92.4)	689 (91.6)
Other lipid lowering agent	28 (3.0)	11 (3.4)	8 (3.0)	3 (1.8)	45 (3.8)	8 (2.2)	20 (6.4)	8 (3.4)	34 (2.4)	14 (3.4)	15 (4.0)	5 (1.8)	107 (3.0)	33 (3.0)	43 (4.4)	16 (2.4)
Diuretics	216 (23.0)	76 (22.8)	68 (24.0)	54 (31.2)	267 (21.6)	78 (22.0)	65 (20.4)	52 (21.4)	382 (26.2)	87 (20.8)	91 (23.6)	60 (21.0)	865 (23.8)	241 (21.8)	224 (22.8)	166 (23.8)
Calcium antagonist	61 (6.8)	22 (6.8)	16 (6.0)	10 (6.0)	75 (6.2)	24 (6.8)	20 (6.4)	12 (5.2)	88 (6.2)	30 (7.4)	13 (3.4)	12 (4.2)	224 (6.4)	76 (7.0)	49 (5.0)	34 (5.0)
Oral hypoglycaemic agent	201 (21.6)	58 (17.4)	83 (30.0)	23 (13.8)	230 (18.8)	52 (14.8)	85 (26.8)	27 (11.2)	278 (19.4)	74 (17.8)	111 (28.6)	26 (9.2)	709 (19.8)	184 (16.8)	279 (28.4)	76 (11.0)
Insulin	266 (27.4)	51 (15.2)	91 (31.8)	18 (10.6)	299 (24.4)	61 (17.4)	107 (33.2)	26 (10.8)	385 (26.4)	81 (19.6)	148 (37.6)	44 (15.4)	950 (26.0)	193 (17.6)	346 (34.6)	88 (12.6)
Anti-arrhythmic agent	103 (11.0)	37 (11.2)	36 (12.8)	11 (6.6)	83 (7.0)	28 (8.0)	22 (7.0)	24 (10.0)	107 (7.6)	25 (6.2)	27 (7.2)	15 (5.4)	293 (8.2)	90 (8.4)	85 (8.8)	50 (7.4)

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

^ Acceptable range is different between the previous report (2009 & 2010) and this current version (2011-2013)

* For CRF version 2013, details of the breakdown are available for ticlopidine, clopidogrel, prasugrel and ticagrelor. These are grouped as ADP antagonist in this current version (2011-2013)

"Others" includes Orang Asli, Kadazan, Melanau, Murut, Bajau, Bidayuh, Iban, other Malaysian and Foreigner

Table 4.5 Door to needle and balloon time distribution for patients with STEMI by year, NCVD-ACS Registry, 2011-2013

ACS stratum	STEMI only			
	2011	2012	2013	2011-2013
*Door-to-needle time, min	1577	1686	2224	5487
N	1,009	960	1,387	3,356
Mean (SD)	105.7 (201.8)	134.6 (240.1)	132.9 (226.9)	125.2 (223.9)
Median (min, max)	40.0 (2.0, 1,390.0)	45.0 (1.0, 1,380.0)	49.0 (1.0, 1,440.0)	45.0 (1.0, 1,440.0)
IQR	55.0	78.5	85.0	75.0
Not available	568	726	837	2131
**Door-to-balloon time, min	254	523	731	1508
N	113	256	203	572
Mean (SD)	216.5 (252.0)	246.4 (321.1)	214.9 (301.0)	229.3 (301.3)
Median (min, max)	120.0 (5.0, 1,305.0)	113.5 (15.0, 1,440.0)	104.0 (5.0, 1,440.0)	111.0 (5.0, 1,440.0)
IQR	133.0	164.0	119.0	139.0
Not available	141	267	528	936

* Door-to-needle time only available for STEMI patients who were given fibrinolytic therapy

** Door-to-balloon time only available for STEMI patients who had urgent PCI procedure



Table 4.6 Treatments for patients with NSTEMI/UA by age group (years), NCVDR-ACS Registry, 2011-2013

Year	2011			2012			2013			2011-2013		
	Young	Middle-Age	Elderly	Young	Middle-Age	Elderly	Young	Middle-Age	Elderly	Young	Middle-Age	Elderly
Age group												
Total	73	865	1,054	102	941	1,160	128	1,359	1,579	303	3,165	3,793
# Total admission days												
N	72	852	1,041	100	921	1,140	128	1,346	1,559	300	3,119	3,740
Mean (SD)	4.5 (2.9)	5.8 (7.3)	6.4 (7.6)	5.8 (7.3)	5.4 (5.1)	6.8 (8.0)	5.2 (6.0)	6.0 (7.2)	6.6 (7.5)	5.2 (5.9)	5.8 (6.7)	6.6 (7.7)
Median (min, max)	4.0 (1.0, 19.0)	4.0 (1.0, 95.0)	4.0 (1.0, 96.0)	4.0 (1.0, 64.0)	4.0 (1.0, 65.0)	5.0 (1.0, 100.0)	4.0 (1.0, 51.0)	4.0 (1.0, 95.0)	4.0 (1.0, 100.0)	4.0 (1.0, 64.0)	4.0 (1.0, 95.0)	4.0 (1.0, 100.0)
IQR	2.0	2.0	4.0	3.0	3.0	4.0	2.0	3.0	4.0	2.0	3.0	4.0
Missing	1	13	13	2	20	20	0	13	20	3	46	53
Number of days on CCU												
N	14	152	209	23	191	256	22	197	245	59	540	710
Mean (SD)	3.4 (1.2)	3.6 (2.7)	3.8 (3.6)	2.4 (1.4)	3.2 (2.7)	3.9 (4.0)	3.0 (2.6)	3.8 (3.9)	3.6 (3.3)	2.8 (1.9)	3.5 (3.2)	3.8 (3.6)
Median (min, max)	3.0 (2.0, 6.0)	3.0 (1.0, 23.0)	3.0 (1.0, 20.0)	2.0 (1.0, 5.0)	3.0 (1.0, 20.0)	2.0 (1.0, 24.0)	2.0 (1.0, 11.0)	3.0 (1.0, 30.0)	3.0 (1.0, 21.0)	2.0 (1.0, 11.0)	3.0 (1.0, 30.0)	3.0 (1.0, 24.0)
IQR	1.0	3.0	2.0	2.0	2.0	2.0	1.0	2.0	2.0	1.0	2.0	2.0
No admission to CCU	59	713	844	79	750	901	106	1,162	1,332	244	2,625	3,077
Missing	0	0	1	0	0	3	0	0	2	0	0	6
Number of days on ICU/CICU												
N	0	2	5	1	5	7	0	21	20	1	28	32
Mean (SD)		10.0 (4.2)	5.0 (5.1)	7.0 (.)	4.6 (4.4)	5.7 (6.8)		4.2 (2.8)	6.7 (6.4)	7.0 (.)	4.7 (3.4)	6.2 (6.1)
Median (min, max)		10.0 (7.0, 13.0)	2.0 (1.0, 12.0)	7.0 (7.0, 7.0)	3.0 (1.0, 12.0)	4.0 (2.0, 21.0)		3.0 (1.0, 11.0)	4.5 (1.0, 26.0)	7.0 (7.0, 7.0)	3.5 (1.0, 13.0)	4.0 (1.0, 26.0)
IQR		6.0	8.0	0	3.0	2.0		2.0	4.0	0	3.5	4.0
No admission to ICU/CICU	73	863	1,049	101	936	1,153	128	1,338	1,559	302	3,137	3,761
Missing	0	0	0	0	0	0	0	0	0	0	0	0



Year	2011				2012				2013				2011-2013			
	Age group	Young	Middle-Age	Elderly	Young	Middle-Age	Elderly	Young	Middle-Age	Elderly	Young	Middle-Age	Elderly	Young	Middle-Age	Elderly
Total		73	865	1,054	102	941	1,160	128	1,359	1,579	303	3,165	3,793			
Cardiac catheterisation, No. (%)																
Yes	14 (26.4)	207 (30.0)	191 (21.8)	22 (25.9)	222 (28.2)	229 (23.6)	35 (30.0)	448 (35.6)	433 (29.1)	71 (27.8)	877 (32.0)	853 (25.6)				
No	35 (66.0)	451 (65.1)	646 (74.0)	57 (67.0)	530 (67.4)	713 (73.6)	81 (69.2)	802 (63.7)	1,043 (70.1)	173 (67.8)	1,783 (65.2)	2,402 (72.2)				
Number transferred to another centre	4 (7.6)	34 (4.9)	37 (4.2)	6 (7.1)	35 (4.4)	28 (2.8)	1 (0.8)	9 (0.7)	11 (0.8)	11 (4.4)	78 (2.8)	76 (2.2)				
Missing	20	173	180	17	154	190	11	100	92	48	427	462				
Percutaneous Coronary Intervention, No. (%)																
Yes	10 (20.4)	132 (21.2)	114 (14.6)	20 (26.0)	153 (20.0)	138 (15.0)	22 (19.5)	192 (15.7)	200 (13.8)	52 (21.8)	477 (18.3)	452 (14.4)				
No	39 (79.6)	489 (78.8)	664 (85.4)	57 (74.0)	610 (80.0)	787 (85.0)	90 (79.6)	1,025 (84.0)	1,248 (86.0)	186 (77.8)	2,124 (81.5)	2,699 (85.6)				
Not Applicable																
Missing	24	244	276	25	178	235	15	138	128	64	560	639				
CABG, No. (%)																
Yes	1 (2.0)	20 (3.2)	21 (2.6)	0 (0)	15 (2.2)	13 (1.6)	0 (0)	36 (3.0)	26 (1.8)	1 (0.4)	71 (2.8)	60 (2.0)				
No	47 (98.0)	600 (96.8)	775 (97.4)	71 (100.0)	662 (97.8)	839 (98.4)	111 (97.4)	1,161 (96.2)	1,413 (97.8)	229 (98.3)	2,423 (96.8)	3,027 (97.8)				
Not Applicable																
Missing	25	245	258	31	264	308	14	153	135	70	662	701				
Pre-admission aspirin use, No. (%)																
Yes	21 (32.4)	383 (48.0)	517 (53.0)	37 (39.4)	413 (47.2)	522 (48.0)	42 (33.8)	689 (54.0)	920 (61.2)	100 (35.4)	1,485 (50.4)	1,959 (55.0)				
No	44 (67.6)	416 (52.0)	460 (47.0)	57 (60.6)	462 (52.8)	564 (52.0)	82 (66.2)	589 (46.0)	584 (38.8)	183 (64.6)	1,467 (49.6)	1,608 (45.0)				
Missing	8	66	77	8	66	74	4	81	75	20	213	226				



Year	2011			2012			2013			2011-2013		
	Young	Middle-Age	Elderly	Young	Middle-Age	Elderly	Young	Middle-Age	Elderly	Young	Middle-Age	Elderly
Total	73	865	1,054	102	941	1,160	128	1,359	1,579	303	3,165	3,793
Pharmacological therapy given during admission, No. (%)												
Aspirin	67 (91.8)	812 (97.0)	961 (94.4)	91 (94.8)	881 (97.6)	1,063 (95.2)	119 (97.6)	1,254 (97.4)	1,455 (96.0)	277 (95.2)	2,947 (97.4)	3,479 (95.4)
*ADP antagonist	56 (80.0)	657 (81.2)	806 (81.0)	74 (79.6)	742 (85.6)	926 (84.6)	93 (94.0)	1,053 (92.8)	1,278 (93.4)	223 (85.2)	2,452 (87.2)	3,010 (87.0)
GP receptor inhibitor	2 (3.4)	26 (3.6)	27 (3.0)	4 (4.6)	18 (2.2)	24 (2.4)	0 (0)	7 (0.6)	4 (0.4)	6 (2.4)	51 (2.0)	55 (1.6)
Unfractionated heparin	3 (5.4)	82 (11.6)	89 (9.6)	11 (12.6)	75 (9.2)	109 (10.6)	8 (8.0)	79 (7.6)	124 (9.6)	22 (9.0)	236 (9.2)	322 (9.8)
LMWH	39 (63.0)	557 (72.4)	683 (71.8)	65 (69.2)	596 (69.0)	746 (69.6)	27 (25.8)	257 (24.0)	367 (27.4)	131 (50.2)	1410 (52.2)	1796 (53.4)
Fondaparinux							63 (69.2)	788 (75.4)	869 (67.8)	63 (69.2)	788 (75.4)	869 (67.8)
Oral anticoagulant (e.g. Warfarin)							1 (1.2)	25 (2.6)	33 (2.8)	1 (1.2)	25 (2.6)	33 (2.8)
Beta blocker	49 (74.2)	544 (69.8)	671 (67.6)	49 (53.8)	550 (64.0)	652 (60.6)	62 (60.2)	850 (73.0)	968 (69.6)	160 (61.6)	1944 (69.4)	2291 (66.2)
ACE inhibitor	30 (48.4)	505 (65.4)	559 (57.2)	49 (53.8)	511 (60.4)	635 (59.6)	61 (58.6)	682 (60.2)	746 (54.6)	140 (54.2)	1698 (61.8)	1940 (57.0)
Angiotensin II receptor blocker	4 (6.8)	75 (10.6)	125 (13.4)	4 (4.4)	87 (10.6)	114 (11.0)	5 (5.0)	85 (8.2)	135 (10.4)	13 (5.2)	247 (9.6)	374 (11.4)
Statin	60 (85.8)	755 (92.6)	932 (91.6)	88 (90.8)	810 (90.6)	1003 (90.4)	100 (91.0)	1135 (93.4)	1339 (92.4)	248 (89.6)	2700 (92.4)	3274 (91.6)
Other lipid lowering agent	4 (6.8)	51 (7.2)	39 (4.2)	8 (9.0)	58 (7.0)	66 (6.4)	3 (3.0)	58 (5.6)	48 (3.6)	15 (6.0)	167 (6.4)	153 (4.8)
Diuretics	5 (8.6)	202 (27.6)	394 (41.0)	12 (13.4)	192 (23.0)	375 (35.6)	13 (12.8)	293 (27.2)	547 (40.4)	30 (12.0)	687 (26.0)	1316 (39.0)
Calcium antagonist	4 (6.8)	128 (18.0)	265 (28.4)	11 (12.6)	99 (12.0)	251 (24.2)	16 (16.2)	184 (17.6)	362 (27.6)	31 (12.6)	411 (15.8)	878 (26.8)
Oral hypoglycaemic agent	14 (23.0)	256 (34.6)	346 (36.4)	18 (20.2)	232 (27.6)	307 (29.0)	18 (17.8)	352 (32.6)	422 (31.6)	50 (20.0)	840 (31.6)	1075 (32.2)
Insulin	11 (18.0)	164 (22.6)	234 (24.8)	10 (11.4)	164 (19.6)	233 (22.0)	9 (9.0)	280 (26.0)	349 (26.2)	30 (12.0)	608 (23.0)	816 (24.4)
Anti-arrhythmic agent	6 (10.2)	42 (6.0)	70 (7.6)	3 (3.4)	45 (5.4)	80 (7.6)	4 (4.0)	46 (4.4)	82 (6.4)	13 (5.2)	133 (5.2)	232 (7.2)

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

^ Acceptable range is different between the previous report (2009 & 2010) and this current version (2011-2013)

* For CRP version 2013, details of the breakdown are available for ticlopidine, clopidogrel, prasugrel and ticagrelor. These are grouped as ADP antagonist in this current version (2011-2013)

** 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



Table 4.7 Treatments for patients with NSTEMI/UA by gender, NCVD-ACS Registry, 2011-2013

Year	2011		2012		2013		2011-2013	
	Male	Female	Male	Female	Male	Female	Male	Female
Total	1,407	585	1,580	623	2,254	812	5,241	2,020
# Total admission days								
N	1,385	580	1,552	609	2,230	803	5,167	1,992
Mean (SD)	6.0 (7.2)	6.3 (7.7)	6.0 (6.8)	6.5 (7.2)	6.2 (7.0)	6.5 (8.1)	6.1 (7.0)	6.5 (7.7)
Median (min, max)	4.0 (1.0, 96.0)	4.0 (1.0, 86.0)	4.0 (1.0, 100.0)	4.0 (1.0, 77.0)	4.0 (1.0, 95.0)	4.0 (1.0, 100.0)	4.0 (1.0, 100.0)	4.0 (1.0, 100.0)
IQR	3.0	4.0	3.0	4.0	3.0	4.0	3.0	4.0
Missing	22	5	28	14	24	9	74	28
Number of days on CCU								
N	290	85	352	118	338	126	980	329
Mean (SD)	3.6 (3.2)	3.9 (3.1)	3.5 (3.2)	3.7 (4.1)	3.7 (3.6)	3.4 (3.2)	3.6 (3.3)	3.7 (3.5)
Median (min, max)	3.0 (1.0, 23.0)	3.0 (1.0, 19.0)	3.0 (1.0, 24.0)	2.0 (1.0, 23.0)	3.0 (1.0, 30.0)	2.0 (1.0, 25.0)	3.0 (1.0, 30.0)	3.0 (1.0, 25.0)
IQR	2.0	3.0	2.0	2.0	2.0	2.0	2.0	2.0
No admission to CCU	1116	500	1227	503	1915	685	4258	1688
Missing	1	0	1	2	1	1	3	3
Number of days on ICU/CICU								
N	5	2	9	4	34	7	48	13
Mean (SD)	5.8 (6.1)	8.0 (1.4)	3.2 (1.9)	10.3 (8.1)	5.9 (5.3)	3.4 (1.9)	5.4 (5.0)	6.2 (5.4)
Median (min, max)	2.0 (1.0, 13.0)	8.0 (7.0, 9.0)	3.0 (1.0, 7.0)	8.0 (4.0, 21.0)	4.0 (1.0, 26.0)	3.0 (1.0, 6.0)	4.0 (1.0, 26.0)	4.0 (1.0, 21.0)
IQR	11.0	2.0	2.0	12.5	4.0	4.0	4.5	4.0
No admission to ICU/CICU	1,402	583	1,571	619	2,220	805	5,193	2,007
Missing	0	0	0	0	0	0	0	0



Year	2011		2012		2013		2011-2013	
	Male	Female	Male	Female	Male	Female	Male	Female
Gender								
Total	1,407	585	1,580	623	2,254	812	5,241	2,020
Cardiac catheterisation, No. (%)								
Yes	321 (28.2)	91 (18.8)	364 (27.2)	109 (21.5)	708 (33.7)	208 (27.2)	1,393 (30.4)	408 (23.2)
No	763 (67.2)	369 (76.4)	923 (69.1)	377 (74.5)	1,376 (65.6)	550 (72.0)	3,062 (67.0)	1,296 (74.0)
Number transferred to another centre	52 (4.6)	23 (4.8)	49 (3.7)	20 (4.0)	15 (0.7)	6 (0.8)	116 (2.6)	49 (2.8)
Missing	271	102	244	117	155	48	670	267
Percutaneous Coronary Intervention, No. (%)								
Yes	199 (19.2)	57 (13.8)	256 (20.0)	55 (11.4)	333 (16.4)	81 (10.9)	788 (18.0)	193 (11.8)
No	833 (80.8)	359 (86.2)	1,030 (80.0)	424 (88.6)	1,702 (83.4)	661 (88.8)	3,565 (81.8)	1,444 (88.1)
Not Applicable					6 (0.2)	2 (0.3)	6 (0.2)	2 (0.1)
Missing	375	169	294	144	213	68	882	381
CABG, No. (%)								
Yes	29 (2.8)	13 (3.2)	22 (1.8)	6 (1.4)	51 (2.5)	11 (1.5)	102 (2.4)	30 (1.8)
No	1,031 (97.2)	391 (96.8)	1,139 (98.2)	433 (98.6)	1,966 (97.0)	719 (97.7)	4,136 (97.4)	1,543 (97.8)
Not Applicable					11 (0.5)	6 (0.8)	11 (0.2)	6 (0.4)
Missing	347	181	419	184	226	76	992	441
Pre-admission aspirin use, No. (%)								
Yes	641 (49.2)	280 (52.0)	727 (49.0)	245 (42.8)	1,211 (56.6)	440 (57.6)	2,579 (52.4)	965 (51.4)
No	661 (50.8)	259 (48.0)	755 (51.0)	328 (57.2)	931 (43.4)	324 (42.4)	2,347 (47.6)	911 (48.6)
Missing	105	46	98	50	112	48	315	144



Year	2011		2012		2013		2011-2013	
	Male	Female	Male	Female	Male	Female	Male	Female
Total	1,407	585	1,580	623	2,254	812	5,241	2,020
Pharmacological therapy given during admission, No. (%)								
Aspirin	1,293 (95.4)	547 (95.4)	1,482 (96.6)	553 (95.0)	2,080 (96.6)	748 (96.8)	4,855 (96.4)	1,848 (96.0)
*ADP antagonist	1,084 (82.0)	435 (78.6)	1,275 (85.6)	467 (82.6)	1,773 (93.0)	651 (93.6)	4,132 (87.6)	1,553 (85.6)
GP receptor inhibitor	40 (3.4)	15 (3.0)	36 (2.6)	10 (1.8)	10 (0.6)	1 (0.2)	86 (2.0)	26 (1.6)
Unfractionated heparin	124 (10.6)	50 (10.0)	151 (10.8)	44 (8.2)	159 (9.0)	52 (8.0)	434 (10.0)	146 (8.6)
LMWH	897 (71.8)	382 (71.4)	1021 (69.6)	386 (88.6)	482 (26.0)	169 (25.4)	2400 (52.6)	937 (53.2)
Fondaparinux					1,284 (72.4)	436 (67.6)	1,284 (72.4)	436 (67.6)
Oral anticoagulant (eg. Warfarin)					45 (2.8)	14 (2.4)	45 (2.8)	14 (2.4)
Beta blocker	880 (68.4)	384 (69.6)	916 (62.4)	335 (59.8)	1,402 (71.4)	478 (69.2)	3,198 (67.8)	1,197 (66.4)
ACE inhibitor	756 (59.4)	338 (62.8)	874 (60.2)	321 (58.2)	1,124 (58.6)	365 (53.2)	2,754 (59.4)	1,024 (57.8)
Angiotensin II receptor blocker	149 (12.4)	55 (11.0)	145 (10.2)	60 (11.2)	153 (8.6)	72 (11.0)	447 (10.2)	187 (11.2)
Statin	1,230 (91.8)	517 (91.6)	1,381 (90.6)	520 (90.2)	1,907 (93.2)	667 (91.6)	4,518 (92.0)	1,704 (91.2)
Other lipid lowering agent	70 (6.0)	24 (4.8)	92 (6.6)	40 (7.6)	91 (5.0)	18 (2.8)	253 (5.8)	82 (4.8)
Diuretics	406 (33.2)	195 (37.2)	395 (27.4)	184 (33.8)	582 (31.4)	271 (40.0)	1,383 (30.6)	650 (37.2)
Calcium antagonist	245 (20.6)	152 (29.6)	230 (16.2)	131 (24.4)	375 (20.8)	187 (28.4)	850 (19.2)	470 (27.6)
Oral hypoglycaemic agent	390 (31.6)	226 (43.6)	374 (26.0)	183 (33.2)	560 (30.4)	232 (34.4)	1,324 (29.4)	641 (36.8)
Insulin	238 (19.6)	171 (33.2)	251 (17.4)	156 (28.4)	431 (23.6)	207 (30.6)	920 (20.6)	534 (30.6)
Anti-arrhythmic agent	85 (7.2)	33 (6.6)	87 (6.2)	41 (7.6)	92 (5.2)	40 (6.2)	264 (6.0)	114 (6.8)

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

^ Acceptable range is different between the previous report (2009 & 2010) and this current version (2011-2013)

* For CRF version 2013, details of the breakdown are available for ticlopidine, clopidogrel, prasugrel and ticagrelor. These are grouped as ADP antagonist in this current version (2011-2013)



Table 4.8 Treatments for patients with NSTEMI/UA by ethnic group, NCVD-ACS Registry, 2011-2013

Year	2011				2012				2013				2011-2013			
	Malay	Chinese	Indian	##Others	Malay	Chinese	Indian	##Others	Malay	Chinese	Indian	##Others	Malay	Chinese	Indian	##Others
Total	851	479	561	101	905	607	538	153	1,385	826	660	195	3,141	1,912	1,759	449
# Total admission days																
N	841	472	552	100	885	601	527	148	1,365	821	654	193	3,091	1,894	1,733	441
Mean (SD)	6.2 (6.8)	5.7 (6.7)	6.3 (9.0)	5.4 (4.0)	6.1 (6.5)	6.1 (7.7)	6.5 (6.8)	5.8 (6.7)	6.3 (6.9)	6.6 (8.0)	6.1 (7.2)	5.5 (7.3)	6.2 (6.8)	6.2 (7.6)	6.3 (7.7)	5.6 (6.5)
Median (min, max)	4.0 (1.0, 95.0)	4.0 (1.0, 89.0)	4.0 (1.0, 96.0)	4.0 (1.0, 20.0)	4.0 (1.0, 100.0)	4.0 (1.0, 89.0)	4.0 (1.0, 70.0)	4.0 (1.0, 64.0)	4.0 (1.0, 73.0)	4.0 (1.0, 100.0)	4.0 (1.0, 85.0)	4.0 (1.0, 63.0)	4.0 (1.0, 100.0)	4.0 (1.0, 100.0)	4.0 (1.0, 96.0)	4.0 (1.0, 64.0)
IQR	4.0	3.0	3.0	3.0	4.0	3.0	4.0	3.0	3.0	3.0	3.0	2.0	3.0	3.0	3.0	2.0
Missing	10	7	9	1	20	6	11	5	20	5	6	2	50	18	26	8
Number of days on CCU																
N	190	79	66	40	211	117	68	74	255	92	80	37	656	288	214	151
Mean (SD)	3.7 (3.3)	3.8 (3.4)	3.2 (2.2)	4.3 (3.6)	3.7 (3.6)	3.1 (3.4)	3.8 (3.7)	3.7 (2.8)	3.8 (3.6)	3.8 (3.3)	3.0 (2.6)	3.8 (5.0)	3.7 (3.5)	3.5 (3.4)	3.3 (2.9)	3.9 (3.6)
Median (min, max)	3.0 (1.0, 23.0)	3.0 (1.0, 20.0)	3.0 (1.0, 12.0)	3.0 (1.0, 20.0)	3.0 (1.0, 24.0)	2.0 (1.0, 23.0)	3.0 (1.0, 20.0)	3.0 (1.0, 15.0)	3.0 (1.0, 26.0)	3.0 (1.0, 16.0)	2.0 (1.0, 15.0)	2.0 (1.0, 30.0)	3.0 (1.0, 26.0)	2.0 (1.0, 23.0)	3.0 (1.0, 20.0)	3.0 (1.0, 30.0)
IQR	2.0	2.0	3.0	2.5	2.0	2.0	2.5	3.0	2.0	2.0	2.0	2.0	2.0	2.0	3.0	3.0
No admission to CCU	660	400	495	61	694	489	469	78	1,130	733	579	158	2,484	1,622	1,543	297
Missing	0	0	0	0	0	1	1	1	0	1	1	0	1	2	2	1
Number of days on ICU/CICU																
N	3	1	1	2	6	1	5	1	28	6	5	2	37	8	11	5
Mean (SD)	5.3 (6.7)	7.0 (7.0)	12.0 (12.0)	5.0 (5.7)	7.0 (7.9)	4.0 (4.0)	4.0 (2.1)	4.0 (4.0)	5.2 (4.2)	4.0 (2.0)	4.8 (3.3)	15.0 (15.6)	5.5 (5.0)	4.4 (2.0)	5.1 (3.4)	8.8 (10.0)
Median (min, max)	2.0 (1.0, 13.0)	7.0 (7.0, 7.0)	12.0 (12.0, 12.0)	5.0 (1.0, 9.0)	3.0 (1.0, 21.0)	4.0 (4.0, 4.0)	4.0 (2.0, 7.0)	4.0 (4.0, 4.0)	4.0 (1.0, 22.0)	4.0 (1.0, 6.0)	3.0 (2.0, 10.0)	15.0 (4.0, 26.0)	4.0 (1.0, 22.0)	4.5 (1.0, 7.0)	4.0 (2.0, 12.0)	4.0 (1.0, 26.0)



Year	2011				2012				2013				2011-2013			
	Malay	Chinese	Indian	##Others	Malay	Chinese	Indian	##Others	Malay	Chinese	Indian	##Others	Malay	Chinese	Indian	##Others
ACS Stratum																
Total	851	479	561	101	905	607	538	153	1,385	826	660	195	3,141	1,912	1,759	449
IQR	12.0	0	0	8.0	10.0	0	3.0	0	4.0	3.0	3.0	22.0	4.0	3.0	5.0	5.0
No admission to ICU/CICU	848	478	560	99	899	606	533	152	1,357	820	655	193	3,104	1,904	1,748	444
Missing	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cardiac catheterisation, No. (%)																
Yes	186 (26.2)	94 (23.8)	123 (28.4)	9 (10.7)	193 (25.4)	111 (21.5)	121 (28.0)	48 (36.0)	372 (29.4)	260 (32.5)	203 (33.0)	81 (44.0)	751 (27.5)	465 (27.2)	447 (30.2)	138 (34.4)
No	487 (68.8)	280 (70.8)	292 (67.6)	73 (87.0)	536 (70.4)	391 (75.7)	293 (67.8)	80 (60.2)	881 (69.6)	534 (67.0)	409 (66.4)	102 (55.4)	1904 (69.6)	1205 (70.6)	994 (67.2)	255 (63.6)
Number transferred to another centre	35 (5.0)	21 (5.4)	17 (4.0)	2 (2.3)	32 (4.2)	14 (2.8)	18 (4.2)	5 (3.8)	12 (1.0)	4 (0.5)	4 (0.6)	1 (0.6)	79 (2.9)	39 (2.2)	39 (2.6)	8 (2.0)
Missing	143	84	129	17	144	91	106	20	120	28	44	11	407	203	279	48
Percutaneous Coronary Intervention, No. (%)																
Yes	117 (18.0)	59 (16.6)	78 (21.6)	2 (2.6)	126 (17.4)	71 (14.2)	83 (20.0)	31 (24.8)	177 (14.4)	113 (14.4)	81 (13.4)	43 (25.2)	420 (16.2)	243 (14.8)	242 (17.5)	76 (20.4)
No	536 (82.0)	296 (83.4)	284 (78.4)	76 (97.4)	599 (82.6)	429 (85.8)	332 (80.0)	94 (75.2)	1043 (85.2)	668 (85.4)	524 (86.4)	128 (74.8)	2178 (83.6)	1393 (85.0)	1140 (82.4)	298 (79.6)
Not Applicable									5 (0.4)	2 (0.2)	1 (0.2)	0 (0)	5 (0.2)	2 (0.2)	1 (0.1)	0 (0)
Missing	198	124	199	23	180	107	123	28	160	43	54	24	538	274	376	75
CABG, No. (%)																
Yes	17 (2.6)	6 (1.6)	17 (4.4)	2 (2.8)	4 (0.6)	9 (2.0)	11 (3.0)	4 (3.8)	32 (2.6)	21 (2.8)	6 (1.0)	3 (2.0)	53 (2.1)	36 (2.2)	34 (2.4)	9 (2.7)
No	623 (97.4)	364 (98.4)	364 (95.6)	71 (97.2)	653 (99.4)	458 (98.0)	358 (97.0)	103 (96.2)	1192 (97.0)	744 (97.0)	598 (97.7)	151 (97.4)	2468 (97.7)	1566 (97.6)	1320 (97.0)	325 (97.0)
Not Applicable									6 (0.4)	2 (0.2)	8 (1.3)	1 (0.6)	6 (0.2)	2 (0.2)	8 (0.6)	1 (0.3)
Missing	211	109	180	28	248	140	169	46	155	59	48	40	614	308	397	114



Year	2011					2012					2013					2011-2013					
	Malay	Chinese	Indian	#Others	Total	Malay	Chinese	Indian	#Others	Total	Malay	Chinese	Indian	#Others	Total	Malay	Chinese	Indian	#Others	Total	
ACS Stratum																					
Total	851	479	561	101	905	607	538	153	1,385*	826	660	195	3,141	1,912	1,759	449					
Pre-admission aspirin use, No. (%)																					
Yes	370 (47.0)	221 (49.0)	289 (56.8)	41 (43.6)	391 (46.4)	260 (46.0)	256 (51.2)	65 (44.8)	717 (55.2)	451 (56.8)	404 (64.6)	79 (42.2)	1478 (50.4)	932 (51.4)	949 (58.0)	185 (43.4)					
No	418 (53.0)	230 (51.0)	219 (43.2)	53 (56.4)	453 (53.6)	306 (54.0)	244 (48.8)	80 (55.2)	581 (44.8)	344 (43.2)	222 (35.4)	108 (57.8)	1452 (49.6)	880 (48.6)	685 (42.0)	241 (56.6)					
Missing	63	28	53	7	61	41	38	8	87	31	34	8	211	100	125	23					
Pharmacological therapy given during admission, No. (%)																					
Aspirin	789 (96.2)	450 (95.4)	510 (94.4)	91 (95.8)	828 (95.8)	567 (96.4)	493 (96.2)	147 (98.0)	1270 (96.8)	761 (96.0)	607 (96.6)	190 (99.0)	2,887 (96.4)	1,778 (96.0)	1,610 (95.8)	428 (98.0)					
*ADP antagonist	648 (80.4)	373 (82.0)	433 (82.4)	65 (73.8)	705 (83.8)	494 (85.4)	426 (85.6)	117 (85.4)	1070 (94.0)	669 (93.4)	533 (93.0)	152 (87.8)	2,423 (87.0)	1,536 (87.8)	1,392 (87.2)	334 (84.0)					
GP receptor inhibitor	25 (3.4)	12 (3.0)	15 (3.2)	3 (3.4)	15 (1.8)	12 (2.2)	13 (2.8)	6 (4.8)	7 (0.6)	4 (0.6)	0 (0)	0 (0)	47 (1.8)	28 (1.8)	28 (1.8)	9 (2.4)					
Unfractionated heparin	90 (12.6)	34 (8.4)	41 (8.6)	9 (10.6)	79 (10.0)	40 (7.2)	66 (14.0)	10 (8.0)	115 (11.0)	37 (5.4)	53 (9.8)	6 (3.6)	284 (11.2)	111 (6.8)	160 (10.8)	25 (6.6)					
LMWH	517 (68.2)	329 (76.4)	363 (72.4)	70 (75.2)	555 (67.2)	410 (71.6)	325 (65.8)	117 (84.2)	253 (23.4)	200 (28.4)	142 (25.6)	56 (32.2)	1325 (49.6)	939 (55.0)	830 (53.6)	243 (59.8)					
Fondaparinux									771 (74.0)	464 (69.6)	403 (73.6)	82 (50.4)	771 (74.0)	464 (69.6)	403 (73.6)	82 (50.4)					
Oral anticoagulant (eg. Warfarin)									22 (2.4)	18 (2.8)	12 (2.4)	7 (4.4)	22 (2.4)	18 (2.8)	12 (2.4)	7 (4.4)					
Beta blocker	521 (66.8)	326 (72.6)	357 (68.8)	60 (66.6)	518 (62.6)	350 (61.8)	299 (60.2)	84 (60.8)	815 (70.4)	532 (72.8)	419 (72.0)	114 (62.0)	1,854 (67.0)	1,208 (69.2)	1,075 (67.4)	258 (62.6)					
ACE inhibitor	478 (61.8)	254 (58.2)	314 (61.4)	48 (52.8)	494 (60.6)	315 (56.0)	316 (64.8)	70 (51.4)	664 (58.6)	391 (54.8)	344 (59.6)	90 (50.2)	1,636 (60.0)	960 (56.0)	974 (61.8)	208 (51.2)					
Angiotensin II receptor blocker	88 (12.2)	45 (11.0)	61 (12.6)	10 (11.8)	78 (9.8)	62 (11.2)	55 (11.6)	10 (7.8)	92 (8.8)	62 (9.0)	54 (10.0)	17 (10.0)	258 (10.0)	169 (10.2)	170 (11.4)	37 (9.6)					



Year	2011					2012					2013					2011-2013				
	Malay	Chinese	Indian	#Others		Malay	Chinese	Indian	#Others		Malay	Chinese	Indian	#Others		Malay	Chinese	Indian	#Others	
ACS Stratatum																				
Total	851	479	561	101		905	607	538	153		1,385	826	660	195		3,141	1,912	1,759	449	
Statin	740 (91.2)	418 (90.8)	502 (93.4)	87 (92.6)		778 (90.8)	513 (87.6)	469 (91.4)	141 (96.0)		1,141 (93.2)	707 (92.4)	557 (92.6)	169 (91.4)		2,659 (92.0)	1,638 (90.4)	1,528 (92.6)	397 (93.2)	
Other lipid lowering agent	42 (6.0)	25 (6.2)	25 (5.2)	2 (2.4)		54 (6.8)	38 (7.0)	28 (6.0)	12 (9.4)		59 (5.6)	20 (3.0)	27 (5.0)	3 (1.8)		155 (6.0)	83 (5.0)	80 (5.4)	17 (4.4)	
Diuretics	242 (33.0)	155 (35.8)	172 (34.6)	32 (36.8)		242 (29.8)	152 (27.2)	149 (30.8)	36 (27.6)		393 (35.6)	241 (34.4)	187 (33.6)	32 (18.4)		877 (33.2)	548 (32.4)	508 (33.0)	100 (25.6)	
Calcium antagonist	157 (22.0)	98 (23.6)	129 (26.8)	13 (15.2)		154 (19.4)	102 (18.4)	79 (16.6)	26 (20.4)		251 (23.6)	169 (24.8)	105 (19.2)	37 (21.8)		562 (21.8)	369 (22.4)	313 (20.8)	76 (19.8)	
Oral hypoglycaemic agent	241 (32.6)	131 (31.2)	218 (43.0)	26 (30.2)		215 (26.6)	133 (24.0)	186 (38.0)	23 (17.8)		327 (30.0)	196 (28.4)	228 (40.8)	41 (23.6)		783 (29.8)	460 (27.6)	632 (40.6)	90 (23.2)	
Insulin	168 (23.0)	72 (17.6)	154 (30.6)	15 (17.4)		151 (18.8)	91 (16.2)	148 (30.2)	17 (13.2)		291 (26.8)	132 (19.0)	193 (34.8)	22 (12.8)		610 (23.2)	295 (17.8)	495 (32.0)	54 (14.0)	
Anti-arrhythmic agent	58 (8.2)	29 (7.2)	20 (4.2)	11 (12.8)		58 (7.2)	35 (6.4)	25 (5.2)	10 (7.8)		63 (6.0)	43 (6.4)	17 (3.2)	9 (5.2)		179 (7.0)	107 (6.6)	62 (4.2)	30 (7.8)	

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

^ Acceptable range is different between the previous report (2009 & 2010) and this current version (2011-2013)

* For CRF version 2013, details of the breakdown are available for ticlopidine, clopidogrel, prasugrel and ticagrelor. These are grouped as ADP antagonist in this current version (2011-2013)

"Others" includes Orang Asli, Kadazan, Melanau, Murut, Bajau, Bidayuh, Iban, other Malaysian and Foreigner



Table 4.9 Treatments for patients with ACS by type of participating centres, NCVD-ACS Registry, 2011-2013

Year	2011						2012					
	STEMI		NSTEMI		Unstable Angina		STEMI		NSTEMI		Unstable Angina	
ACS stratum	Cardiologist centre	Physician centre	Cardiologist centre	Physician centre	Cardiologist centre	Physician centre	Cardiologist centre	Physician centre	Cardiologist centre	Physician centre	Cardiologist centre	Physician centre
	No. (%)	No. (%)	No. (%)	No. (%)	No. (%)	No. (%)	No. (%)	No. (%)	No. (%)	No. (%)	No. (%)	No. (%)
Total	1,373	682	923	171	784	114	1,785	601	916	230	953	104
Fibrinolytic therapy, No (%)												
Given at this centre	633 (48.2)	498 (74.7)					665 (38.4)	444 (74.8)				
Given at another centre prior to transfer	354 (27.0)	92 (13.8)					524 (30.2)	53 (9.0)				
Not given-proceeded directly to primary angioplasty	118 (9.0)	0 (0)					264 (15.2)	0 (0)				
Not given-Missed thrombolysis	167 (12.6)	49 (7.4)					216 (12.4)	63 (10.6)				
Not given-Patient refusal	6 (0.4)	1 (0.2)					4 (0.2)	4 (0.6)				
Not given-Contraindicated	37 (2.8)	26 (3.9)					62 (3.6)	30 (5.0)				
Not applicable	3	0					6	0				
Not available	11	0					9	2				
Missing	44	16					35	5				
Percutaneous coronary intervention, No (%)												
Yes	397 (33.2)	0 (0)	191 (25.8)	0 (0)	65 (12.4)	0 (0)	744 (45.0)	0 (0)	218 (30.0)	0 (0)	93 (11.6)	0 (0)
No	800 (66.8)	453 (100.0)	551 (74.2)	137 (100.0)	461 (87.6)	43 (100.0)	912 (55.0)	497 (100.0)	510 (70.0)	178 (100.0)	709 (88.4)	57 (100.0)
Not applicable												
Missing	176	229	181	34	258	71	129	104	188	52	151	47
CABG, No (%)												
Yes	4 (0.4)	0 (0)	29 (3.8)	0 (0)	13 (2.2)	0 (0)	16 (1.0)	0 (0)	17 (2.6)	0 (0)	11 (1.4)	0 (0)
No	1175 (99.6)	491 (100.0)	720 (96.2)	102 (100.0)	571 (97.8)	29 (100.0)	1520 (99.0)	433 (100.0)	655 (97.4)	133 (100.0)	746 (98.6)	38 (100.0)
Not applicable												
Missing	194	191	174	69	200	85	249	168	244	97	196	66



Year	ACS stratum	2013						2011-2013							
		STEMI		NSTEMI		Unstable Angina		STEMI		NSTEMI		Unstable Angina			
		Cardiologist centre	Physician centre	Cardiologist centre	Physician centre	Cardiologist centre	Physician centre	Cardiologist centre	Physician centre	Cardiologist centre	Physician centre	Cardiologist centre	Physician centre		
		No. (%)	No. (%)	No. (%)	No. (%)	No. (%)	No. (%)	No. (%)	No. (%)	No. (%)	No. (%)	No. (%)	No. (%)	No. (%)	No. (%)
	Total	2536	525	1,503	99	1,399	65	5,694	1,808	3,342	500	3,136	283		
	Fibrinolytic therapy, No (%)														
	Given at this centre	1,039 (41.6)	438 (84.6)					2,337 (42.2)	1,380 (77.6)						
	Given at another centre prior to transfer	724 (29.0)	33 (4.4)					1,602 (28.8)	168 (9.4)						
	Not given-proceeded directly to primary angioplasty	308 (12.4)	0 (0)					690 (12.4)	0 (0)						
	Not given-Missed thrombolysis	295 (11.8)	37 (7.2)					678 (12.2)	149 (8.4)						
	Not given-Patient refusal	18 (0.8)	1 (0.2)					28 (0.6)	6 (0.4)						
	Not given-Contraindicated	111 (4.4)	19 (3.6)					210 (3.8)	75 (4.2)						
	Not applicable	12	3					21	3						
	Not available	24	2					44	4						
	Missing	5	2					84	23						
	Percutaneous coronary intervention, No (%)														
	Yes	1,067 (44.8)	0 (0)	276 (19.4)	0 (0)	138 (10.8)	0 (0)	2,208 (42.2)	0 (0)	685 (23.8)	0 (0)	296 (11.4)	0 (0)		
	No	1,304 (54.8)	425 (95.8)	1,141 (80.4)	60 (96.8)	1,127 (88.8)	35 (100.0)	3,016 (57.6)	1,375 (98.6)	2,202 (76.2)	375 (99.4)	2,297 (88.4)	135 (100.0)		
	Not applicable	8 (0.4)	19 (4.2)	2 (0.2)	2 (3.2)	4 (0.4)	0 (0)	8 (0.2)	19 (1.4)	2 (0.0)	2 (0.6)	4 (0.2)	0 (0)		
	Missing	157	81	84	37	130	30	462	414	453	123	539	148		
	CABG, No (%)														
	Yes	34 (1.5)	0 (0)	37 (2.7)	0 (0)	25 (2.0)	0 (0)	54 (1.0)	0 (0)	83 (3.0)	0 (0)	49 (1.8)	0 (0)		
	No	2,239 (97.8)	370 (94.0)	1,351 (97.0)	54 (96.4)	1,246 (97.2)	34 (100.0)	4,934 (98.6)	1,294 (98.2)	2,726 (96.9)	289 (99.4)	2,563 (97.8)	101 (100.0)		
	Not applicable	16 (0.7)	24 (6.0)	4 (0.3)	2 (3.6)	11 (0.8)	0 (0)	16 (0.4)	24 (1.8)	4 (0.1)	2 (0.6)	11 (0.4)	0 (0)		
	Missing	247	131	111	43	117	31	690	490	529	209	513	182		