

CHAPTER 4: TREATMENT

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CHAPTER 4: TREATMENTJayakhanthan Kolanthaivelu¹, Ng Yau Piow¹, Mohd Rahal Yusoff², Rosli Mohd Ali¹*1 Institut Jantung Negara, 2 Columbia Asia Klang***Summary**

1. Similar lengths of admission was observed in CCU/ICU for all spectrums of ACS and age groups.
2. The use of DAPT was up to 96% for STEMI and more than 90% for NSTEMI. Use of statin was more than 90% for all spectrum of ACS.
3. Use of beta blocker upon discharge was 69% for STEMI, 67.2% for NSTEMI and 66.9% for UA.
4. Use of ACE inhibitor/ARB upon discharge were 56.1%, 50.5%, and 54.5% for STEMI, NSTEMI and UA respectively.
5. 81% of STEMI patients who presented to non-PCI capable centres received fibrinolysis.
6. 16.4% of STEMI patients presenting to PCI-capable centres underwent primary PCI, a significant increase compared to previous report.
7. The median door-to-needle (DTN) time was 45 minutes; and 35.2% achieved DTN time of less than 30 minutes.
8. The median door-to-device (balloon) (DTB) time was 69 minutes; and 63.6% achieved DTB time of less than 90 minutes.

Pattern of admission

The total number of days of admission was almost similar in all the ACS spectrum. Compared to the previous cohort, total numbers of days of admission for STEMI and NSTEMI were 5 days each, and 4 days for UA. The number of days in critical care (ICU/CCU/CICU) was in the range of 2 – 3 days, which was shorter compared to the 2011 – 2013 period.

There was no significant gender difference in the number of days spent in hospital or in critical care units. When compared by age, no significant difference in the length of stay in hospital or critical care units was noted. There was no difference in the number of days spent in hospital or critical care units among all three ethnic groups (Malay, Chinese and Indians).

Pharmacological therapy

Dual anti-platelet (DAPT) use was commendable. More than 96% of the STEMI cohort used aspirin and ADP antagonist upon discharge. For NSTEMI, 93.2% was on aspirin and 91.9% was discharged with an ADP antagonist. The use of aspirin was over 91.6% in the UA cohort; however the use of ADP antagonist in this cohort was only 86.4%. A lower proportion of females were on an ADP antagonist. There was no difference in the use of DAPT between the different age groups and ethnic groups.

Anti-coagulant use was also encouraging during the index hospital admission. Use of anti-coagulant (unfractionated heparin, LMWH, fondaparinux or OAC) was over 90%. There were no differences in terms of ethnicity, age or gender.

Use of lipid lowering agents upon discharge reached 90 – 94% for the HMG CoA reductase group. There were no significant differences between the different age strata, gender or ethnic groups.

The use of beta blockers upon discharge was 69.8% for STEMI, 67.2% for NSTEMI and 66.9% for UA. For patients with STEMI, beta blocker use upon discharge was lower in the elderly (66.1%) compared to the other age strata (75.2% in the young and 71% in the middle-aged). Its use among Malay, Chinese and Indian ethnic groups were similar (68.4%, 68.7% and 69.6% respectively). For the “other ethnic origin”, beta blocker use upon discharge was as high as 76.4%. For patients with NSTEMI/UA, a lower percentage of females were discharged with a beta blocker compared to STEMI (63.5% vs 68.4%). There was no significant difference in its use among the different age and ethnic strata.

As for ACE inhibitors, 56.1%, 50.5% and 54.5% of patients with STEMI, NSTEMI, and UA respectively received these drugs upon discharge. There was a higher use of ARB for the NSTEMI and UA cohorts compared to STEMI (8.1% vs 12.2% vs 3.0% respectively). For STEMI, there was a lower use of ACE inhibitor in the elderly age group (52.5%) and in the female gender (52.9% vs 56.5% in males); however the use of ARB was highest in the elderly age group (4%) and higher in women (4.1% vs 2.8% in males). There was no significant difference in the use of ACE inhibitor upon discharge amongst the different ethnic groups. For NSTEMI/UA, the use of ARB in the middle and elderly age group was higher compared to the young patients (9.6% vs 11.3% vs 4.3% respectively). There was also an increase in the use of ARB upon discharge in women (11.7% vs 9.8%).

Use of diuretics during hospitalisation was also higher in NSTEMI (37.2%) and UA (28.2%) compared to STEMI (22.8%), indicating that patients with NSTEMI presented with a more decompensated heart failure. The use was also higher in the elderly group.

Use of oral hypoglycaemic agent upon discharge was notably higher in NSTEMI and UA (28.9% and 37.3% respectively) compared to STEMI (24.3%). There was a higher use of these agents among females, in the middle-aged and elderly age strata and in the Indian ethnic group.

Insulin use during hospitalisation was higher in the NSTEMI cohort (28.3%) followed by STEMI (26.2%) and UA (22.4%). The use of insulin was highest in the Indian ethnic group, middle and elderly age strata and in females. Upon discharge, insulin was prescribed in 20.1% of patients in the NSTEMI cohort, 18.3% in the UA cohort and 14.4% in the STEMI cohort. In the STEMI cohort, insulin was used more in the middle-aged and elderly groups, women, and the Indian ethnic group. This trend was also seen in the NSTEMI/UA cohort.

Revascularisation

There were 8190 cases of STEMI reported during the period of 2014 – 2015. In general, 69.2% of them received fibrinolytic therapy and 13.7% proceeded directly to primary PCI, which saw an increase of 4.3% compared to the previous cohort. A significant number of patients (13.4%) missed fibrinolytic therapy. Another 3.4% of STEMI patients did not receive fibrinolytic therapy because of contraindications. For those who received fibrinolytic therapy, the median symptom onset to needle time was similar (210 minutes) to the previous period. Women tend to have a longer delay (265 minutes) compared to males (202.5 minutes). Diabetic (225 minutes) and hypertensive (225 minutes) patients also tend to have longer delays compared to patients without diabetes (200 minutes) or hypertension (195 minutes). The elderly also had a longer delay compared to other age group strata. (220 minutes vs 200 minutes)

For STEMI, 81% of patients presented to a non-PCI-capable centre received fibrinolytic therapy as their reperfusion strategy. 18.1 % did not receive any form of reperfusion; 13.8% of which was due to missed MI, 4.2% had a contra-indication for thrombolysis, and 0.1% refused any form of reperfusion therapy. A very small percentage was transferred to a PCI-capable centre for primary angioplasty as their reperfusion strategy (0.1%).

For the majority of patients, the median of symptom onset to needle time still exceeded the 180-minute timeframe. The longest delay in presentation was seen in females (260 minutes), followed by diabetic and hypertensive patients (225 minutes respectively), and the elderly group (220 minutes).

For STEMI patients who presented to a PCI-capable centre, 39% had fibrinolytic therapy as their primary reperfusion strategy, with only 16.4% who underwent primary PCI. About twenty-eight

percent (27.8%) had fibrinolytic therapy at a different centre and was transferred to a PCI-capable centre either due to hemodynamic instability, for rescue PCI, or as part of the pharmaco-invasive strategy. Almost 17% (16.8%) did not receive any form of reperfusion strategy; 13.3% of which was due to missed MI, 3.2% had contra-indication for thrombolysis and 0.3% refused any form of reperfusion therapy. During index hospitalisation, 49.7% underwent in-patient PCI and 1.1% had CABG for STEMI.

The median door-to-needle (DTN) time was 45 minutes; and 35.2% achieved DTN time of less than 30 minutes. Although the median DTN time had remained the same, there were fewer patients achieving a DTN time of less than 30 minutes (35.2%) compared to the previous report (39.2%). Efforts are already underway among the emergency physicians to address this issue to improve the overall DTN time.

The median door-to-device (balloon) (DTB) time was 69 minutes, and 63.6% achieved DTB time of less than 90 minutes. There was great improvement in patients' achieving median DTB time of less than 90 minutes compared to the previous report (63.6% vs 45.3%).

24.6% of NSTEMI and 11.4% of UA had PCI during the index hospitalisation. 1.9% of NSTEMI had CABG during the index hospitalisation.

A higher proportion of middle-aged patients underwent PCI compared to the young and elderly patients (18.2% vs 13.4% vs 13.7% respectively). The proportion of patients in the young age strata receiving PCI during index hospitalisation (13.4%) had dropped from the 2011 – 2013 period (21.8%). Females also had a lower proportion of PCI compared to males (12.9% vs 16.6%). "Other ethnic group" patients (24.6%) had the highest proportion of PCI during the index hospitalisation followed by the Indians (15.7%), Chinese (14.7%) and Malays (14.2%).

Table 4.1 Summary of treatments for patients with ACS by ACS stratum, NCVd-ACS Registry, 2014 – 2015

Year	2011 – 2013			2014			2015			2014 – 2015		
	STEMI	NSTEMI	UA	STEMI	NSTEMI	UA	STEMI	NSTEMI	UA	STEMI	NSTEMI	UA
ACS stratum												
Total	7,502	3,842	3,419	3,886	2,049	2,523	4,304	2,430	2,579	8,190	4,479	5,102
#*Total admission days												
N	7,322	3,766	3,393	3,862	2,033	2,510	4,260	2,410	2,566	8,122	4,443	5,076
Mean (SD)	6.4 (6.5)	7.0 (8.0)	5.3 (6.0)	6.0 (5.6)	6.8 (7.2)	5.1 (6.0)	5.8 (5.4)	6.4 (6.8)	5.0 (5.8)	5.9 (5.5)	6.6 (7.0)	5.0 (5.9)
Median (min, max)	5.0 (1.0, 98.0)	5.0 (1.0, 100.0)	4.0 (1.0, 95.0)	5.0 (1.0, 94.0)	5.0 (1.0, 97.0)	4.0 (1.0, 96.0)	5.0 (1.0, 82.0)	5.0 (1.0, 95.0)	4.0 (1.0, 95.0)	5.0 (1.0, 94.0)	5.0 (1.0, 97.0)	4.0 (1.0, 96.0)
IQR	2.0	4.0	2.0	2.0	4.0	2.0	2.0	4.0	2.0	2.0	4.0	2.0
Missing	180 (2.4)	77 (2.0)	26 (0.8)	24 (0.6)	16 (0.8)	13 (0.5)	44 (1.0)	20 (0.8)	13 (0.5)	68 (0.8)	36 (0.8)	26 (0.5)
Number of days in CCU												
N	4,693	975	334	2,396	469	173	2,706	564	182	5,102	1,033	355
Mean (SD)	3.4 (2.9)	3.7 (3.5)	3.3 (2.9)	3.1 (2.7)	4.2 (4.1)	3.6 (2.9)	2.8 (2.3)	3.6 (3.0)	2.9 (2.9)	3.0 (2.5)	3.9 (3.5)	3.2 (2.9)
Median (min, max)	3.0 (1.0, 30.0)	3.0 (1.0, 30.0)	3.0 (1.0, 23.0)	3.0 (1.0, 30.0)	3.0 (1.0, 30.0)	3.0 (1.0, 15.0)	2.0 (1.0, 30.0)	3.0 (1.0, 28.0)	2.0 (1.0, 22.0)	2.0 (1.0, 30.0)	3.0 (1.0, 30.0)	2.0 (1.0, 22.0)
IQR	2.0	2.0	2.0	2.0	3.0	2.0	1.0	2.0	2.0	2.0	3.0	3.0
No admission to CCU	2,796 (37.3)	2,861 (74.6)	3,085 (90.2)	1,484 (38.2)	1,577 (77.1)	2,349 (93.1)	1,593 (37.1)	1,863 (76.8)	2,397 (92.9)	3,077 (37.6)	3,440 (76.9)	4,746 (93.0)
Missing	13 (0.2)	6 (0.2)	0 (0.0)	6 (0.2)	3 (0.1)	1 (0.0)	5 (0.1)	3 (0.1)	0 (0.0)	11 (0.1)	6 (0.1)	1 (0.0)
Number of days in ICU/CICU												
N	80	39	22	77	59	43	38	19	14	115	78	57
Mean (SD)	3.3 (3.1)	6.1 (5.9)	4.6 (2.9)	3.2 (2.2)	3.8 (2.6)	3.7 (1.9)	4.6 (4.3)	5.1 (3.7)	3.7 (2.0)	3.7 (3.1)	4.2 (2.9)	3.7 (1.9)
Median (min, max)	3.0 (1.0, 23.0)	4.0 (1.0, 26.0)	4.0 (1.0, 13.0)	3.0 (1.0, 15.0)	3.0 (1.0, 12.0)	3.0 (1.0, 8.0)	3.0 (1.0, 21.0)	4.0 (1.0, 15.0)	3.0 (2.0, 9.0)	3.0 (1.0, 21.0)	3.0 (1.0, 15.0)	3.0 (1.0, 9.0)
IQR	2.0	6.0	3.0	2.0	2.0	3.0	4.0	4.0	2.0	3.0	3.0	3.0
No admission to ICU/CICU	7,418 (99.1)	3,803 (99.1)	3,397 (99.4)	3,807 (98.1)	1,990 (97.3)	2,480 (98.3)	4,266 (99.2)	2,411 (99.3)	2,565 (99.5)	8,073 (98.7)	4,401 (98.4)	5,045 (98.9)
Missing	4 (0.1)	0 (0.0)	0 (0.0)	2 (0.1)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	2 (0.0)	0 (0.0)	0 (0.0)

Year	2011 – 2013			2014			2015			2014 – 2015		
	STEMI	NSTEMI	UA	STEMI	NSTEMI	UA	STEMI	NSTEMI	UA	STEMI	NSTEMI	UA
ACS stratum												
Total	7,502	3,842	3,419	3,886	2,049	2,523	4,304	2,430	2,579	8,190	4,479	5,102
Fibrinolytic therapy, No. (%)												
Given at this centre	3,717 (50.8)			1,806 (46.7)			1,861 (43.5)			3,667 (45.0)		
Given at another centre prior to transfer	1,770 (24.2)			966 (25.0)			1,007 (23.5)			1,973 (24.2)		
Not given-Proceeded directly to primary angioplasty	691 (9.4)			411 (10.6)			704 (16.5)			1,115 (13.7)		
Not given-Missed thrombolysis	827 (11.3)			531 (13.7)			557 (13.0)			1,088 (13.4)		
Not given-Patient refusal	34 (0.4)			10 (0.3)			14 (0.3)			24 (0.3)		
Not given-Contraindicated	285 (3.9)			141 (3.6)			136 (3.2)			277 (3.4)		
Not applicable	24			9			15			24		
Not available	48			12			10			22		
Missing	106			0			0			0		
Cardiac catheterisation, No. (%)												
Yes	2,650 (37.8)	1,210 (35.4)	591 (20.4)	1,769 (46.9)	618 (31.8)	495 (20.3)	2,161 (51.2)	888 (37.5)	591 (23.4)	3,930 (49.1)	1,506 (34.9)	1,086 (21.8)
No	4,159 (59.2)	2,126 (62.2)	2,232 (76.8)	1,987 (52.6)	1,321 (68.0)	1,939 (79.4)	2,038 (48.3)	1,477 (62.3)	1,934 (76.5)	4,025 (50.3)	2,798 (64.8)	3,873 (77.9)
Number transferred to another centre	206 (3.0)	83 (2.4)	82 (2.8)	18 (0.5)	5 (0.3)	8 (0.3)	24 (0.6)	6 (0.3)	4 (0.2)	42 (0.5)	11 (0.3)	12 (0.2)
Missing	487	423	514	112	105	81	81	59	50	193	164	131
Percutaneous coronary intervention, No. (%)												
Yes	2,218 (33.4)	685 (21.0)	296 (10.8)	1,427 (39.2)	340 (17.9)	254 (10.6)	1,761 (44.0)	545 (23.7)	275 (11.2)	3,188 (41.7)	885 (21.1)	529 (10.9)
No	4,391 (66.2)	2,577 (78.9)	2,432 (89.0)	2,205 (60.5)	1,557 (81.8)	2,142 (89.4)	2,217 (55.5)	1,744 (76.0)	2,178 (88.6)	4,422 (57.9)	3,301 (78.6)	4,320 (89.0)
Not applicable	24 (0.4)	4 (0.1)	4 (0.1)	11 (0.3)	6 (0.3)	1 (0.0)	20 (0.5)	6 (0.3)	5 (0.2)	31 (0.4)	12 (0.3)	6 (0.1)
Missing	869	576	687	243	146	126	306	135	121	549	281	247

Year	2011 – 2013			2014			2015			2014 – 2015		
	STEMI	NSTEMI	UA	STEMI	NSTEMI	UA	STEMI	NSTEMI	UA	STEMI	NSTEMI	UA
ACS stratum												
Total	7,502	3,842	3,419	3,886	2,049	2,523	4,304	2,430	2,579	8,190	4,479	5,102
CABG, No. (%)												
Yes	66 (1.0)	83 (2.7)	49 (1.8)	30 (0.8)	39 (2.1)	44 (1.8)	39 (1.0)	31 (1.3)	37 (1.5)	69 (0.9)	70 (1.7)	81 (1.7)
No	6,228 (98.4)	3,015 (97.1)	2,664 (97.8)	3,539 (98.3)	1,838 (97.3)	2,357 (97.8)	3,987 (98.4)	2,262 (98.1)	2,429 (98.3)	7,526 (98.3)	4,100 (97.7)	4,786 (98.0)
Not applicable	38 (0.6)	6 (0.2)	11 (0.4)	32 (0.9)	12 (0.6)	9 (0.4)	26 (0.6)	13 (0.6)	6 (0.2)	58 (0.8)	25 (0.6)	15 (0.3)
Missing	1,170	738	695	285	160	113	252	124	107	537	284	220
Pre-admission aspirin use, No. (%)												
Yes	1,430 (20.0)	1,594 (44.6)	1,950 (60.4)	683 (18.2)	913 (46.3)	1,601 (65.6)	712 (17.0)	1,051 (44.9)	1,616 (64.2)	1,395 (17.5)	1,964 (45.5)	3,217 (64.9)
No	5,707 (80.0)	1,979 (55.4)	1,279 (39.6)	3,076 (81.8)	1,057 (53.7)	840 (34.4)	3,483 (83.0)	1,292 (55.1)	903 (35.8)	6,559 (82.5)	2,349 (54.5)	1,743 (35.1)
Missing	365	269	190	127	79	82	109	87	60	236	166	142
Pharmacological therapy given during admission, No. (%)												
Aspirin	7,048 (97.2)	3,584 (97.0)	3,119 (95.4)	3,724 (98.0)	1,941 (97.0)	2,412 (97.2)	4,135 (97.2)	2,315 (96.4)	2,435 (95.5)	7,859 (97.6)	4,256 (96.7)	4,847 (96.3)
*ADP antagonist	6,151 (91.2)	3,042 (89.4)	2,643 (84.4)	3,717 (97.6)	1,876 (95.3)	2,335 (95.2)	4,177 (98.3)	2,339 (97.5)	2,379 (94.1)	7,894 (98.0)	4,215 (96.5)	4,714 (94.6)
GP receptor inhibitor	235 (3.8)	62 (2.0)	50 (1.6)	62 (2.0)	4 (0.2)	8 (0.4)	116 (3.0)	8 (0.4)	5 (0.2)	178 (2.5)	12 (0.3)	13 (0.3)
Unfractionated heparin	939 (15.0)	338 (11.0)	242 (8.2)	569 (17.7)	137 (7.5)	72 (3.4)	742 (19.1)	162 (7.2)	100 (4.6)	1,311 (18.5)	299 (7.4)	172 (4.0)
LMWH	2,795 (43.2)	1,850 (56.6)	1,487 (48.6)	556 (17.4)	507 (27.4)	399 (18.6)	638 (16.3)	570 (25.1)	439 (19.6)	1,194 (16.8)	1,077 (26.1)	838 (19.1)
Fondaparinux	1,240 (53.9)	794 (67.7)	926 (74.3)	1,831 (53.4)	1,177 (62.3)	1,791 (76.1)	2,502 (60.3)	1,581 (67.7)	1,844 (74.5)	4,333 (57.2)	2,758 (65.3)	3,635 (75.3)
Oral anticoagulant (eg. Warfarin)	27 (1.3)	23 (2.1)	36 (3.1)	45 (1.4)	47 (2.6)	64 (3.1)	70 (1.8)	58 (2.6)	65 (3.0)	115 (1.6)	105 (2.6)	129 (3.0)
Beta blocker	4,221 (63.4)	2,172 (65.0)	2,223 (70.0)	1,974 (58.7)	1,116 (59.1)	1,545 (65.4)	2,355 (59.3)	1,496 (63.9)	1,643 (66.2)	4,329 (59.0)	2,612 (61.8)	3,188 (65.8)
ACE inhibitor	3,556 (54.0)	1,894 (58.0)	1,884 (59.8)	1,490 (44.8)	861 (46.1)	1,212 (52.6)	1,967 (49.3)	1,145 (49.4)	1,395 (56.8)	3,457 (47.3)	2,006 (48.0)	2,607 (54.8)

Year	2011 – 2013			2014			2015			2014 – 2015		
	STEMI	NSTEMI	UA	STEMI	NSTEMI	UA	STEMI	NSTEMI	UA	STEMI	NSTEMI	UA
ACS stratum												
Total	7,502	3,842	3,419	3,886	2,049	2,523	4,304	2,430	2,579	8,190	4,479	5,102
Pharmacological therapy given during admission, No. (%)												
Angiotensin II receptor blocker	228 (3.6)	281 (9.2)	353 (11.8)	63 (2.0)	118 (6.5)	258 (11.9)	84 (2.2)	150 (6.7)	237 (10.6)	147 (2.1)	268 (6.6)	495 (11.3)
Statin	6,617 (92.4)	3,263 (92.4)	2,959 (91.2)	3,468 (92.1)	1,755 (89.7)	2,276 (93.0)	3,986 (94.1)	2,212 (92.5)	2,409 (94.3)	7,454 (93.2)	3,967 (91.2)	4,685 (93.7)
Other lipid lowering agent	199 (3.2)	154 (5.0)	181 (6.0)	61 (1.9)	54 (3.0)	80 (3.8)	64 (1.7)	56 (2.5)	77 (3.5)	125 (1.8)	110 (2.7)	157 (3.7)
Diuretics	1,496 (23.2)	1,173 (36.6)	860 (28.0)	743 (22.9)	728 (38.8)	640 (29.4)	892 (22.7)	814 (35.8)	610 (27.0)	1,635 (22.8)	1,542 (37.2)	1,250 (28.2)
Calcium antagonist	383 (6.2)	600 (19.4)	720 (23.8)	154 (4.9)	309 (16.8)	558 (25.6)	175 (4.5)	381 (17.0)	569 (25.2)	329 (4.7)	690 (16.9)	1,127 (25.4)
Oral hypoglycaemic agent	1,248 (19.6)	937 (29.4)	1,028 (33.6)	552 (17.2)	479 (26.0)	789 (35.9)	585 (15.1)	573 (25.3)	838 (36.3)	1,137 (16.1)	1,052 (25.6)	1,627 (36.1)
Insulin	1,577 (24.4)	837 (26.4)	617 (20.2)	913 (28.0)	498 (26.8)	489 (22.6)	972 (24.8)	666 (29.5)	500 (22.2)	1,885 (26.2)	1,164 (28.3)	989 (22.4)
Anti-arrhythmic agent	518 (8.2)	224 (7.2)	154 (5.2)	262 (8.4)	132 (7.3)	116 (5.6)	192 (5.0)	119 (5.4)	80 (3.7)	454 (6.5)	251 (6.3)	196 (4.6)
Pharmacological therapy given at discharge, No (%)												
Aspirin	5,767 (96.5)	3,095 (94.6)	2,958 (93.5)	3,154 (96.5)	1,646 (92.9)	2,223 (92.5)	3,501 (95.8)	1,986 (93.5)	2,233 (90.6)	6,655 (96.1)	3,632 (93.2)	4,456 (91.6)
*ADP antagonist	5,140 (91.5)	2,597 (86.1)	2,383 (79.3)	3,153 (96.5)	1,564 (90.0)	2,050 (86.9)	3,547 (97.0)	1,977 (93.3)	2,070 (85.9)	6,700 (96.8)	3,541 (91.9)	4,120 (86.4)
Fondaparinux	104 (5.6)	50 (4.8)	75 (6.3)	61 (2.3)	46 (2.8)	57 (2.8)	73 (2.2)	58 (2.9)	68 (3.0)	134 (2.2)	104 (2.8)	125 (2.9)
Oral anticoagulant (eg. Warfarin)	41 (2.2)	34 (3.4)	30 (2.6)	70 (2.6)	45 (2.8)	73 (3.6)	96 (2.9)	78 (3.9)	84 (4.0)	166 (2.7)	123 (3.4)	157 (3.8)
Beta blocker	4,074 (71.8)	2,046 (68.2)	2,150 (69.6)	2,100 (69.9)	1,090 (64.2)	1,523 (66.4)	2,415 (69.8)	1,455 (69.6)	1,622 (67.3)	4,515 (69.8)	2,545 (67.2)	3,145 (66.9)
ACE inhibitor	3,374 (60.5)	1,760 (59.8)	1,826 (59.6)	1,585 (54.3)	815 (48.5)	1,165 (52.1)	1,989 (57.5)	1,076 (52.1)	1,355 (56.8)	3,574 (56.1)	1,891 (50.5)	2,520 (54.5)
Angiotensin II receptor blocker	221 (4.2)	248 (8.9)	32 (10.9)	84 (3.1)	119 (7.3)	265 (12.7)	96 (2.9)	172 (8.7)	252 (11.7)	180 (3.0)	291 (8.1)	517 (12.2)

Year	2011 – 2013			2014			2015			2014 – 2015		
	STEMI	NSTEMI	UA	STEMI	NSTEMI	UA	STEMI	NSTEMI	UA	STEMI	NSTEMI	UA
ACS stratum												
Total	7,502	3,842	3,419	3,886	2,049	2,523	4,304	2,430	2,579	8,190	4,479	5,102
Statin	5,552 (93.2)	2,898 (92.1)	2,872 (91.1)	3,041 (93.8)	1,565 (89.5)	2,186 (91.6)	3,433 (94.2)	1,950 (92.0)	2,285 (92.6)	6,474 (94.0)	3,515 (90.9)	4,471 (92.1)
Other lipid lowering agent	192 (3.6)	122 (4.4)	161 (5.5)	67 (2.5)	49 (3.0)	77 (3.8)	77 (2.3)	69 (3.5)	80 (3.8)	144 (2.4)	118 (3.3)	157 (3.8)
Diuretics	833 (15.5)	853 (29.9)	747 (25.1)	475 (17.1)	531 (31.9)	547 (25.8)	579 (17.2)	603 (30.1)	536 (24.6)	1,054 (17.1)	1,134 (30.9)	1,083 (25.2)
Calcium antagonist	281 (5.3)	491 (17.5)	673 (22.8)	133 (4.9)	274 (16.7)	526 (24.9)	143 (4.3)	328 (16.5)	531 (24.1)	276 (4.5)	602 (16.6)	1,057 (24.5)
Oral hypoglycaemic agent	1,447 (26.7)	948 (32.8)	1,032 (34.5)	708 (25.3)	475 (28.6)	798 (37.3)	791 (23.5)	591 (29.2)	839 (37.4)	1,499 (24.3)	1,066 (28.9)	1,637 (37.3)
Insulin	650 (12.2)	501 (17.6)	477 (16.1)	436 (15.8)	307 (18.6)	382 (18.2)	447 (13.3)	428 (21.3)	402 (18.4)	883 (14.4)	735 (20.1)	784 (18.3)
Anti-arrhythmic agent	317 (6.0)	149 (5.4)	142 (4.8)	188 (6.9)	101 (6.2)	101 (5.0)	94 (2.8)	77 (3.9)	58 (2.7)	282 (4.7)	178 (4.9)	159 (3.8)

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

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

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

Table 4.2 Treatments for patients with STEMI by age group (years), NCVS-ACS Registry, 2014 – 2015

Year	2011 – 2013			2014			2015			2014 – 2015		
	Young	Middle-aged	Elderly	Young	Middle-aged	Elderly	Young	Middle-aged	Elderly	Young	Middle-aged	Elderly
Age group												
Total	655	4,089	2,758	353	2,122	1,411	428	2,328	1,548	781	4,450	2,959
# Total admission days												
N	639	3,991	2,692	352	2,110	1,400	426	2,307	1,527	778	4,417	2,927
Mean (SD)	6.0 (5.7)	6.2 (6.4)	6.7 (6.9)	5.3 (3.0)	5.9 (5.2)	6.4 (6.6)	5.0 (3.4)	5.7 (4.6)	6.4 (6.7)	5.1 (3.2)	5.8 (4.9)	6.4 (6.6)
Median (min, max)	5.0 (1.0, 80.0)	5.0 (1.0, 97.0)	5.0 (1.0, 98.0)	5.0 (1.0, 26.0)	5.0 (1.0, 71.0)	5.0 (1.0, 94.0)	4.5 (1.0, 38.0)	5.0 (1.0, 63.0)	5.0 (1.0, 82.0)	5.0 (1.0, 38.0)	5.0 (1.0, 71.0)	5.0 (1.0, 94.0)
IQR	2.0	2.0	3.0	2.0	2.0	3.0	2.0	2.0	4.0	2.0	2.0	3.0
Missing	16 (2.4)	98 (2.4)	66 (2.4)	1 (0.3)	12 (0.6)	11 (0.8)	2 (0.5)	21 (0.9)	21 (1.4)	3 (0.4)	33 (0.7)	32 (1.1)
Number of days in CCU												
N	406	2,577	1,710	227	1,290	879	271	1,464	971	498	2,754	1,850
Mean (SD)	3.3 (2.5)	3.3 (2.6)	3.7 (3.4)	3.0 (2.3)	3.1 (2.5)	3.2 (2.9)	2.6 (1.7)	2.8 (2.2)	2.9 (2.5)	2.7 (2.0)	2.9 (2.4)	3.1 (2.7)
Median (min, max)	3.0 (1.0, 25.0)	3.0 (1.0, 30.0)	3.0 (1.0, 28.0)	3.0 (1.0, 20.0)	2.0 (1.0, 30.0)	3.0 (1.0, 28.0)	2.0 (1.0, 15.0)	2.0 (1.0, 30.0)	2.0 (1.0, 29.0)	2.0 (1.0, 20.0)	2.0 (1.0, 30.0)	2.0 (1.0, 29.0)
IQR	2.0	2.0	2.0	1.0	2.0	2.0	2.0	1.0	1.0	1.0	2.0	2.0
No admission to CCU	248 (37.9)	1,507 (36.9)	1,041 (37.8)	125 (35.5)	828 (39.1)	531 (37.7)	157 (36.9)	861 (37.0)	575 (37.1)	282 (36.2)	1,689 (38.0)	1,106 (37.4)
Missing	1 (0.2)	5 (0.1)	7 (0.3)	1 (0.3)	4 (0.2)	1 (0.1)	3 (0.7)	2 (0.1)	0 (0.0)	1 (0.1)	7 (0.2)	3 (0.1)
Number of days in ICU/CICU												
N	6	46	28	3	48	26	0	26	12	3	74	38
Mean (SD)	1.8 (0.8)	3.4 (3.4)	3.5 (2.9)	2.7 (2.1)	3.1 (2.2)	3.5 (2.2)	0.0 (0.0)	3.6 (2.5)	6.8 (6.4)	2.7 (2.1)	3.3 (2.3)	4.6 (4.2)
Median (min, max)	2.0 (1.0, 3.0)	3.0 (1.0, 23.0)	2.5 (1.0, 16.0)	2.0 (1.0, 5.0)	3.0 (1.0, 15.0)	3.0 (1.0, 11.0)	0.0 (0.0, 0.0)	3.0 (1.0, 10.0)	4.0 (1.0, 21.0)	2.0 (1.0, 5.0)	3.0 (1.0, 15.0)	3.0 (1.0, 21.0)
IQR	1.0	2.0	2.0	4.0	2.0	2.0	0	4.0	6.5	4.0	2.0	3.0
No admission to ICU/CICU	647 (98.9)	4,041 (98.9)	2,730 (99.2)	349 (99.1)	2,073 (97.9)	1,385 (98.2)	428 (100.7)	2,302 (99.0)	1,536 (99.2)	777 (99.6)	4,375 (98.5)	2,921 (98.8)
Missing	2 (0.3)	2 (0.0)	0 (0.0)	1 (0.3)	1 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	1 (0.1)	1 (0.0)	0 (0.0)

Year	2011 – 2013			2014			2015			2014 – 2015		
	Young	Middle-aged	Elderly	Young	Middle-aged	Elderly	Young	Middle-aged	Elderly	Young	Middle-aged	Elderly
Age group												
Total	655	4,089	2,758	353	2,122	1,411	428	2,328	1,548	781	4,450	2,959
Fibrinolytic therapy, No. (%)												
Given at this centre	329 (51.4)	2,071 (51.8)	1,317 (49.0)	183 (52.1)	1,011 (47.9)	612 (43.6)	194 (45.9)	1,020 (44.1)	647 (41.9)	377 (48.7)	2,031 (45.9)	1,259 (42.7)
Given at another centre prior to transfer	170 (26.6)	990 (24.8)	610 (22.7)	81 (23.1)	547 (25.9)	338 (24.1)	97 (22.9)	554 (24.0)	356 (23.1)	178 (23.0)	1,101 (24.9)	694 (23.6)
Not given-Proceeded directly to primary angioplasty	60 (9.4)	383 (9.6)	248 (9.2)	43 (12.3)	223 (10.6)	145 (10.3)	81 (19.1)	375 (16.2)	248 (16.1)	124 (16.0)	598 (13.5)	393 (13.3)
Not given-Missed thrombolysis	61 (9.5)	418 (10.4)	348 (13.0)	39 (11.1)	262 (12.4)	230 (16.4)	40 (9.5)	299 (12.9)	218 (14.1)	79 (10.2)	561 (12.7)	448 (15.2)
Not given-Patient refusal	4 (0.6)	15 (0.4)	15 (0.6)	0 (0.0)	7 (0.3)	3 (0.2)	1 (0.2)	6 (0.3)	7 (0.5)	1 (0.1)	13 (0.3)	10 (0.3)
Not given-Contraindicated	16 (2.5)	120 (3.0)	149 (5.5)	5 (1.4)	61 (2.9)	75 (5.3)	10 (2.4)	59 (2.6)	67 (4.3)	15 (1.9)	120 (2.7)	142 (4.8)
Not applicable	2	13	9	1	5	3	2	9	4	3	14	7
Not available	5	26	17	1	6	5	3	6	1	4	12	6
Missing	8	53	45	0	0	0	0	0	0	0	0	0
Cardiac catheterisation, No. (%)												
Yes	272 (43.8)	1,506 (39.4)	872 (33.8)	175 (50.7)	989 (48.2)	605 (44.0)	222 (52.4)	1,227 (53.6)	712 (47.1)	397 (51.6)	2,216 (51.0)	1,317 (45.6)
No	335 (53.8)	2,204 (57.8)	1,620 (63.0)	168 (48.7)	1,055 (51.4)	764 (55.5)	200 (47.2)	1,048 (45.8)	790 (52.3)	368 (47.9)	2,103 (48.4)	1,554 (53.8)
Number transferred to another centre	15 (2.4)	108 (2.8)	83 (3.2)	2 (0.6)	9 (0.4)	7 (0.5)	2 (0.5)	13 (0.6)	9 (0.6)	4 (0.5)	22 (0.5)	16 (0.6)
Missing	33	271	183	8	69	35	4	40	37	12	109	72
Percutaneous coronary intervention, No. (%)												
Yes	229 (38.2)	1,267 (35.0)	722 (29.8)	143 (43.1)	806 (40.6)	478 (36.0)	193 (47.7)	1,008 (46.7)	560 (39.0)	336 (45.6)	1,814 (43.8)	1,038 (37.6)
No	365 (60.9)	2,338 (64.7)	1,688 (69.8)	188 (56.6)	1,173 (59.1)	844 (63.7)	210 (51.9)	1,141 (52.9)	866 (60.3)	398 (54.0)	2,314 (55.9)	1,710 (61.9)
Not applicable	5 (0.8)	10 (0.3)	9 (0.4)	1 (0.3)	6 (0.3)	4 (0.3)	2 (0.5)	8 (0.4)	10 (0.7)	3 (0.4)	14 (0.3)	14 (0.5)
Missing	56	474	339	21	137	85	23	171	112	44	308	197

Year	2011 – 2013			2014			2015			2014 – 2015		
	Young	Middle-aged	Elderly	Young	Middle-aged	Elderly	Young	Middle-aged	Elderly	Young	Middle-aged	Elderly
Age group												
Total	655	4,089	2,758	353	2,122	1,411	428	2,328	1,548	781	4,450	2,959
CABG, No. (%)												
Yes	2 (0.4)	42 (1.2)	22 (0.9)	1 (0.3)	19 (1.0)	10 (0.8)	0 (0.0)	25 (1.1)	14 (1.0)	1 (0.1)	44 (1.1)	24 (0.9)
No	562 (98.9)	3,385 (98.2)	2,281 (98.4)	324 (98.5)	1,914 (98.2)	1,301 (98.4)	402 (99.5)	2,155 (98.2)	1,430 (98.3)	726 (99.0)	4,069 (98.2)	2,731 (98.4)
Not applicable	4 (0.7)	19 (0.6)	15 (0.6)	4 (1.2)	17 (0.9)	11 (0.8)	2 (0.5)	14 (0.6)	10 (0.7)	6 (0.8)	31 (0.7)	21 (0.8)
Missing	87	643	440	24	172	89	24	134	94	48	306	183
Pre-admission aspirin use, No. (%)												
Yes	59 (9.4)	702 (18.0)	669 (25.4)	36 (10.5)	348 (16.9)	299 (22.0)	40 (9.5)	367 (16.1)	305 (20.3)	76 (10.0)	715 (16.5)	604 (21.1)
No	564 (90.6)	3,187 (82.0)	1,956 (74.6)	306 (89.5)	1,708 (83.1)	1,062 (78.0)	380 (90.5)	1,906 (83.9)	1,197 (79.7)	686 (90.0)	3,614 (83.5)	2,259 (78.9)
Missing	32	200	133	11	66	50	8	55	46	19	121	96
Pharmacological therapy given during admission, No. (%)												
Aspirin	615 (96.6)	3,861 (97.6)	2,572 (96.4)	344 (98.0)	2,038 (98.5)	1,342 (97.2)	421 (98.8)	2,245 (97.3)	1,469 (96.5)	765 (98.5)	4,283 (97.9)	2,811 (96.8)
*ADP antagonist	530 (90.6)	3,353 (91.8)	2,268 (90.2)	344 (98.6)	2,036 (98.0)	1,337 (96.7)	418 (98.8)	2,261 (98.1)	1,498 (98.4)	762 (98.7)	4,297 (98.1)	2,835 (97.6)
GP receptor inhibitor	29 (5.4)	132 (4.0)	74 (3.2)	8 (2.8)	39 (2.3)	15 (1.3)	17 (4.3)	65 (3.1)	34 (2.5)	25 (3.7)	104 (2.7)	49 (1.9)
Unfractionated heparin	88 (16.0)	536 (15.6)	315 (13.6)	59 (20.6)	325 (18.5)	185 (15.9)	76 (19.3)	429 (20.3)	237 (17.3)	135 (19.8)	754 (19.5)	422 (16.6)
LMWH	236 (42.0)	1,550 (44.2)	1,009 (42.0)	44 (15.3)	274 (15.7)	238 (20.3)	46 (11.6)	304 (14.3)	288 (20.8)	90 (13.2)	578 (14.9)	526 (20.6)
Fondaparinux	132 (61.7)	687 (55.4)	421 (49.9)	175 (55.7)	1,048 (56.3)	608 (48.4)	263 (63.1)	1,414 (62.3)	825 (56.3)	438 (59.9)	2,462 (59.6)	1,433 (52.7)
Oral anticoagulant (eg. Warfarin)	4 (2.0)	8 (0.7)	15 (1.9)	5 (1.8)	20 (1.2)	20 (1.7)	9 (2.3)	25 (1.2)	36 (2.6)	14 (2.1)	45 (1.2)	56 (2.2)
Beta blocker	383 (65.4)	2,426 (66.8)	1,412 (58.0)	208 (66.5)	1,130 (61.5)	636 (52.3)	265 (65.6)	1,325 (61.1)	765 (54.8)	473 (66.0)	2,455 (61.3)	1,401 (53.7)
ACE inhibitor	298 (51.8)	2,031 (56.8)	1,227 (50.6)	143 (47.7)	843 (46.7)	504 (41.4)	214 (52.5)	1,119 (51.5)	634 (45.0)	357 (50.4)	1,962 (49.3)	1,138 (43.3)

Year	2011 – 2013			2014			2015			2014 – 2015		
	Young	Middle-aged	Elderly	Young	Middle-aged	Elderly	Young	Middle-aged	Elderly	Young	Middle-aged	Elderly
Age group												
Total	655	4,089	2,758	353	2,122	1,411	428	2,328	1,548	781	4,450	2,959
Pharmacological therapy given during admission, No. (%)												
Angiotensin II receptor blocker	16 (3.0)	119 (3.6)	93 (4.0)	2 (0.7)	31 (1.8)	30 (2.6)	7 (1.8)	43 (2.0)	34 (2.5)	9 (1.3)	74 (1.9)	64 (2.5)
Statin	577 (91.2)	3,635 (93.2)	2,405 (91.2)	320 (93.6)	1,896 (92.2)	1,252 (91.5)	399 (94.1)	2,173 (94.6)	1,414 (93.4)	719 (93.9)	4,069 (93.5)	2,666 (92.5)
Other lipid lowering agent	21 (3.8)	109 (3.2)	69 (3.0)	7 (2.4)	39 (2.3)	15 (1.3)	6 (1.5)	33 (1.6)	25 (1.8)	13 (1.9)	72 (1.9)	40 (1.6)
Diuretics	64 (11.4)	712 (20.6)	720 (30.2)	28 (9.8)	374 (21.2)	341 (28.7)	45 (11.3)	437 (20.5)	410 (29.5)	73 (10.7)	811 (20.8)	751 (29.1)
Calcium antagonist	20 (3.6)	158 (4.6)	205 (8.8)	11 (3.9)	67 (3.9)	76 (6.6)	13 (3.3)	84 (4.0)	78 (5.7)	24 (3.5)	151 (3.9)	154 (6.1)
Oral hypoglycaemic agent	74 (13.2)	749 (21.6)	425 (18.2)	33 (11.6)	321 (18.3)	198 (17.0)	35 (8.9)	338 (16.0)	212 (15.6)	68 (10.0)	659 (17.0)	410 (16.3)
Insulin	82 (14.4)	861 (24.6)	634 (26.6)	57 (19.9)	500 (28.0)	356 (29.8)	45 (11.4)	573 (26.8)	354 (25.6)	102 (15.0)	1,073 (27.3)	710 (27.5)
Anti-arrhythmic agent	34 (6.2)	246 (7.2)	238 (10.2)	18 (6.3)	142 (8.4)	102 (8.9)	20 (5.1)	88 (4.2)	84 (6.2)	38 (5.6)	230 (6.0)	186 (7.4)
Pharmacological therapy given at discharge, No (%)												
Aspirin	549 (95.8)	3,305 (97.1)	1,913 (95.7)	316 (96.6)	1,785 (96.6)	1,053 (96.2)	376 (96.7)	1,993 (96.2)	1,132 (94.9)	692 (96.6)	3,778 (96.4)	2,185 (95.5)
*ADP antagonist	489 (90.4)	2,934 (92.1)	1,717 (90.8)	314 (96.9)	1,778 (96.3)	1,061 (96.8)	377 (96.4)	2,013 (97.4)	1,157 (96.7)	691 (96.6)	3,791 (96.9)	2,218 (96.7)
Fondaparinux	13 (7.4)	54 (5.2)	37 (5.8)	5 (1.9)	38 (2.5)	18 (2.0)	7 (1.9)	43 (2.3)	23 (2.1)	12 (1.9)	81 (2.4)	41 (2.0)
Oral anticoagulant (eg. Warfarin)	8 (4.4)	19 (1.9)	14 (2.2)	8 (3.0)	35 (2.3)	27 (2.9)	7 (1.9)	51 (2.7)	38 (3.5)	15 (2.4)	86 (2.5)	65 (3.3)
Beta blocker	392 (72.5)	2,352 (72.5)	1,330 (70.3)	222 (74.7)	1,220 (71.7)	658 (65.5)	285 (75.6)	1,391 (70.5)	739 (66.5)	507 (75.2)	2,611 (71.0)	1,397 (66.1)
ACE inhibitor	311 (58.9)	1,952 (61.6)	1,111 (59.1)	165 (57.1)	921 (55.6)	499 (51.2)	221 (58.2)	1,170 (59.6)	598 (53.7)	386 (57.7)	2,091 (57.8)	1,097 (52.5)
Angiotensin II receptor blocker	19 (3.8)	122 (4.1)	80 (4.5)	2 (0.8)	46 (3.0)	36 (3.9)	6 (1.6)	47 (2.5)	43 (4.0)	8 (1.3)	93 (2.7)	79 (4.0)
Statin	518 (90.9)	3,171 (93.4)	1,863 (93.4)	303 (94.1)	1,720 (94.0)	1,018 (93.2)	368 (93.9)	1,945 (94.4)	1,120 (94.1)	671 (94.0)	3,665 (94.2)	2,138 (93.7)
Other lipid lowering agent	15 (2.9)	119 (4.0)	58 (3.2)	12 (4.5)	36 (2.4)	19 (2.1)	10 (2.7)	44 (2.3)	23 (2.1)	22 (3.5)	80 (2.3)	42 (2.1)

Year	2011 – 2013			2014			2015			2014 – 2015		
	Young	Middle-aged	Elderly	Young	Middle-aged	Elderly	Young	Middle-aged	Elderly	Young	Middle-aged	Elderly
Age group												
Total	655	4,089	2,758	353	2,122	1,411	428	2,328	1,548	781	4,450	2,959
Pharmacological therapy given at discharge, No (%)												
Dietetics	37 (7.2)	416 (13.7)	380 (20.9)	23 (8.6)	253 (16.2)	199 (21.0)	22 (6.0)	311 (16.3)	246 (22.5)	45 (7.1)	564 (16.2)	445 (21.8)
Calcium antagonist	15 (3.0)	120 (4.0)	146 (8.2)	5 (1.9)	66 (4.3)	62 (6.7)	9 (2.4)	74 (3.9)	60 (5.5)	14 (2.2)	140 (4.1)	122 (6.1)
Oral hypoglycaemic agent	95 (18.3)	890 (28.9)	462 (25.4)	52 (19.2)	408 (25.8)	248 (26.2)	54 (14.7)	482 (25.1)	255 (23.5)	106 (16.6)	890 (25.4)	503 (24.8)
Insulin	37 (7.3)	379 (12.5)	234 (13.0)	29 (10.8)	255 (16.4)	152 (16.3)	15 (4.1)	270 (14.1)	162 (14.9)	44 (6.9)	525 (15.1)	314 (15.6)
Anti-arrhythmic agent	27 (5.3)	177 (5.9)	113 (6.3)	17 (6.5)	110 (7.2)	61 (6.7)	11 (3.0)	39 (2.1)	44 (4.1)	28 (4.5)	149 (4.3)	105 (5.3)

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

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

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

** Young is defined as age 20 to less than 40 years, middle-aged is defined as age 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, NCDV-ACS Registry, 2014 – 2015

Year	2011 – 2013		2014		2015		2014 – 2015	
	Male	Female	Male	Female	Male	Female	Male	Female
Gender								
Total	6,397	1,105	3,384	502	3,733	571	7,117	1,073
#*Total admission days								
N	6,242	1,080	3,362	500	3,694	566	7,056	1,066
Mean (SD)	6.3 (6.5)	6.6 (6.3)	6.0 (5.5)	6.0 (6.4)	5.7 (5.1)	6.6 (6.6)	5.9 (5.3)	6.3 (6.5)
Median (min, max)	5.0 (1.0, 98.0)	5.0 (1.0, 74.0)	5.0 (1.0, 94.0)	5.0 (1.0, 94.0)	5.0 (1., 82.0)	5.0 (1.0, 63.0)	5.0 (1.0, 94.0)	5.0 (1.0, 94.0)
IQR	2.0	3.0	2.0	2.0	2.0	3.0	2.0	3.0
Missing	155 (2.4)	25 (2.3)	22 (0.7)	2 (0.4)	39 (1.0)	5 (0.9)	61 (0.9)	7 (0.7)
Number of days in CCU								
N	4,036	657	2,097	299	2,352	354	4,449	653
Mean (SD)	3.4 (2.9)	3.6 (3.1)	3.1 (2.7)	3.1 (2.2)	2.8 (2.2)	3.0 (2.5)	3.0 (2.5)	3.0 (2.4)
Median (min, max)	3.0 (1.0, 30.0)	3.0 (1.0, 26.0)	3.0 (1.0, 30.0)	3.0 (1.0, 18.0)	2.0 (1.0, 30.0)	2.0 (1.0, 21.0)	2.0 (1.0, 30.0)	2.0 (1.0, 21.0)
IQR	2.0	2.0	2.0	2.0	1.0	2.0	2.0	2.0
No admission to CCU	2,351 (36.8)	445 (40.4)	1,282 (37.9)	202 (40.3)	1,378 (36.9)	215 (37.8)	2,660 (37.4)	417 (39.0)
Missing	10 (0.2)	3 (0.3)	5 (0.1)	1 (0.2)	3 (0.1)	2 (0.4)	8 (0.1)	3 (0.3)
Number of days in ICU/CICU								
N	68	12	63	14	35	3	98	17
Mean (SD)	3.4 (3.3)	2.8 (1.4)	3.1 (2.3)	3.7 (1.6)	4.8 (4.4)	2.3 (2.3)	3.7 (3.3)	3.5 (1.7)
Median (min, max)	3.0 (1.0, 23.0)	2.5 (1.0, 6.0)	3.0 (1.0, 15.0)	3.5 (1.0, 7.0)	3.0 (1.0, 21.0)	1.0 (1.0, 5.0)	3.0 (1.0, 21.0)	3.0 (1.0, 7.0)
IQR	2.0	1.5	2.0	2.0	4.0	4.0	2.0	3.0
No admission to ICU/CICU	6,326 (99.0)	1,092 (99.1)	3,319 (98.2)	488 (97.4)	3,698 (99.1)	568 (99.8)	7,017 (98.7)	1,056 (98.7)
Missing	3 (0.0)	1 (0.1)	2 (0.1)	0 (0.0)	(0.0)	0 (0.0)	2 (0.0)	0 (0.0)

Year	2011 – 2013		2014		2015		2014 – 2015	
	Male	Female	Male	Female	Male	Female	Male	Female
Gender								
Total	6,397	1,105	3,384	502	3,733	571	7,117	1,073
Fibrinolytic therapy, No. (%)								
Given at this centre	3,187 (51.0)	530 (49.2)	1,588 (47.1)	218 (44.0)	1,648 (44.4)	213 (37.6)	3,236 (45.7)	431 (40.5)
Given at another centre prior to transfer	1,533 (24.5)	237 (22.0)	857 (25.4)	109 (22.0)	873 (23.5)	134 (23.6)	1,730 (24.4)	243 (22.9)
Not given-Proceeded directly to primary angioplasty	610 (9.8)	81 (7.6)	364 (10.8)	47 (9.5)	616 (16.6)	88 (15.5)	980 (13.8)	135 (12.7)
Not given-Missed thrombolysis	671 (10.8)	156 (14.4)	435 (12.9)	96 (19.4)	461 (12.4)	96 (16.9)	896 (12.7)	192 (18.1)
Not given-Patient refusal	27 (0.4)	7 (0.6)	7 (0.2)	3 (0.6)	11 (0.3)	3 (0.5)	18 (0.3)	6 (0.6)
Not given-Contraindicated	219 (3.5)	66 (6.2)	118 (3.5)	23 (4.6)	103 (2.8)	33 (5.8)	221 (3.1)	56 (5.3)
Not applicable	21	3	7	2	13	2	20	4
Not available	41	7	8	4	8	2	16	6
Missing	88	18	0	0	0	0	0	0
Cardiac catheterisation, No. (%)								
Yes	2,320 (38.8)	330 (31.5)	1,593 (48.4)	176 (36.4)	1,905 (52.0)	256 (46.0)	3,498 (50.3)	432 (41.5)
No	3,469 (58.2)	690 (66.0)	1,681 (51.1)	306 (63.2)	1,740 (47.5)	298 (53.5)	3,421 (49.2)	604 (58.0)
Number transferred to another centre	179 (3.0)	27 (2.5)	16 (0.5)	2 (0.4)	21 (0.6)	3 (0.5)	37 (0.5)	5 (0.5)
Missing	429	58	94	18	67	14	161	32
Percutaneous coronary intervention, No. (%)								
Yes	1,949 (34.5)	269 (27.4)	1,287 (40.6)	140 (29.7)	1,563 (45.1)	198 (37.0)	2,850 (43.0)	338 (33.6)
No	3,682 (65.2)	709 (72.2)	1,875 (59.1)	330 (69.9)	1,881 (54.3)	336 (62.8)	3,756 (56.6)	666 (66.1)
Not applicable	20 (0.4)	4 (0.4)	9 (0.3)	2 (0.4)	19 (0.5)	1 (0.2)	28 (0.4)	3 (0.3)
Missing	746	123	213	30	270	36	483	66

Year	2011 – 2013		2014		2015		2014 – 2015	
	Male	Female	Male	Female	Male	Female	Male	Female
Gender								
Total	6,397	1,105	3,384	502	3,733	571	7,117	1,073
CABG, No. (%)								
Yes	63 (1.2)	3 (0.3)	28 (0.9)	2 (0.4)	35 (1.0)	4 (0.7)	63 (0.9)	6 (0.6)
No	5,301 (98.2)	927 (99.4)	3,073 (98.2)	466 (98.9)	3,456 (98.4)	531 (98.2)	6,529 (98.3)	997 (98.5)
Not applicable	35 (0.6)	3 (0.3)	29 (0.9)	3 (0.6)	20 (0.6)	6 (1.1)	49 (0.7)	9 (0.9)
Missing	998	172	254	31	222	30	476	61
Pre-admission aspirin use, No. (%)								
Yes	1,193 (19.6)	237 (22.4)	606 (18.5)	77 (15.8)	615 (16.9)	97 (17.4)	1,221 (17.7)	174 (16.7)
No	4,882 (80.4)	825 (77.6)	2,666 (81.5)	410 (84.2)	3,022 (83.1)	461 (82.6)	5,688 (82.3)	871 (83.3)
Missing	322	43	112	15	96	13	208	28
Pharmacological therapy given during admission, No. (%)								
Aspirin	6,024 (97.2)	1,024 (96.2)	3,249 (98.2)	475 (96.3)	3,594 (97.3)	541 (96.3)	6,843 (97.7)	1,016 (96.3)
*ADP antagonist	5,241 (91.2)	910 (90.8)	3,237 (97.8)	480 (96.6)	3,628 (98.4)	549 (97.7)	6,865 (98.1)	1,029 (97.2)
GP receptor inhibitor	205 (3.8)	30 (3.2)	56 (2.0)	6 (1.5)	102 (3.0)	14 (2.7)	158 (2.6)	20 (2.2)
Unfractionated heparin	816 (15.2)	123 (13.2)	497 (17.8)	72 (17.3)	640 (19.1)	102 (19.5)	1,137 (18.5)	174 (18.5)
LMWH	2,393 (43.4)	402 (42.2)	492 (17.7)	64 (15.4)	534 (15.8)	104 (19.7)	1,026 (16.6)	168 (17.8)
Fondaparinux	1,060 (54.1)	180 (52.9)	1,577 (52.9)	254 (56.3)	2,207 (61.2)	295 (54.4)	3,784 (57.4)	549 (55.3)
Oral anticoagulant (eg. Warfarin)	20 (1.1)	7 (2.2)	37 (1.4)	8 (1.9)	66 (2.0)	4 (0.8)	103 (1.7)	12 (1.3)
Beta blocker	3,622 (64.0)	599 (61.0)	1,728 (59.1)	246 (56.0)	2,065 (60.0)	290 (54.9)	3,793 (59.6)	536 (55.4)
ACE inhibitor	3,067 (54.6)	489 (50.4)	1,308 (45.2)	182 (42.3)	1,723 (49.7)	244 (46.3)	3,031 (47.7)	426 (44.5)
Angiotensin II receptor blocker	183 (3.4)	45 (4.8)	48 (1.8)	15 (3.6)	70 (2.1)	14 (2.7)	118 (1.9)	29 (3.1)
Statin	5,675 (92.6)	942 (90.4)	3,026 (92.3)	442 (90.2)	3,473 (94.5)	513 (91.8)	6,499 (93.5)	955 (91.0)
Other lipid lowering agent	169 (3.2)	30 (3.2)	55 (2.0)	6 (1.5)	53 (1.6)	11 (2.1)	108 (1.8)	17 (1.8)
Diuretics	1,225 (22.4)	271 (28.6)	629 (22.3)	114 (27.1)	741 (21.8)	151 (28.5)	1,370 (22.0)	265 (27.9)
Calcium antagonist	301 (5.6)	82 (9.0)	126 (4.6)	28 (6.8)	141 (4.2)	34 (6.5)	267 (4.4)	62 (6.7)

Year	2011 – 2013		2014		2015		2014 – 2015	
	Male	Female	Male	Female	Male	Female	Male	Female
Gender								
Total	6,397	1,105	3,384	502	3,733	571	7,117	1,073
Pharmacological therapy given during admission, No. (%)								
Oral hypoglycaemic agent	995 (18.4)	253 (27.0)	455 (16.3)	97 (23.2)	478 (14.3)	107 (20.4)	933 (15.2)	204 (21.6)
Insulin	1,188 (21.6)	389 (40.4)	708 (25.0)	205 (47.0)	757 (22.3)	215 (40.5)	1,465 (23.6)	420 (43.4)
Anti-arrhythmic agent	448 (8.4)	70 (7.6)	229 (8.4)	33 (8.1)	166 (5.0)	26 (5.0)	395 (6.5)	59 (6.4)
Pharmacological therapy given at discharge, No. (%)								
Aspirin	5,018 (96.7)	749 (95.2)	2,788 (96.6)	366 (95.8)	3,088 (96.1)	413 (94.1)	5,876 (96.3)	779 (94.9)
*ADP antagonist	4,465 (91.7)	675 (90.7)	2,786 (96.6)	367 (95.8)	3,128 (97.3)	419 (95.4)	5,914 (97.0)	786 (95.6)
Fondaparinux	90 (5.6)	14 (5.5)	56 (2.3)	5 (1.6)	66 (2.2)	7 (1.7)	122 (2.3)	12 (1.7)
Oral anticoagulant (eg. Warfarin)	38 (2.4)	3 (1.2)	65 (2.7)	5 (1.6)	86 (2.9)	10 (2.4)	151 (2.8)	15 (2.1)
Beta blocker	3,534 (71.7)	540 (72.4)	1,841 (69.6)	259 (72.8)	2,136 (70.1)	279 (67.1)	3,977 (69.9)	538 (69.7)
ACE inhibitor	2,929 (60.5)	445 (60.5)	1,401 (54.3)	184 (54.6)	1,775 (58.4)	214 (51.4)	3,176 (56.5)	398 (52.9)
Angiotensin II receptor blocker	179 (3.9)	42 (6.0)	71 (3.0)	13 (4.1)	79 (2.7)	17 (4.2)	150 (2.8)	30 (4.1)
Statin	4,839 (93.5)	713 (90.8)	2,693 (94.0)	348 (92.3)	3,027 (94.3)	406 (93.5)	5,720 (94.2)	754 (93.0)
Other lipid lowering agent	163 (3.5)	29 (4.1)	61 (2.5)	6 (1.9)	64 (2.2)	13 (3.2)	125 (2.3)	19 (2.6)
Diuretics	690 (14.8)	143 (20.2)	398 (16.2)	77 (23.6)	485 (16.4)	94 (22.9)	883 (16.3)	171 (23.2)
Calcium antagonist	226 (4.9)	55 (7.9)	116 (4.8)	17 (5.4)	114 (3.9)	29 (7.1)	230 (4.3)	46 (6.4)
Oral hypoglycaemic agent	1,179 (25.1)	268 (37.2)	585 (23.7)	123 (36.8)	654 (22.1)	137 (33.3)	1,239 (22.8)	260 (34.9)
Insulin	491 (10.6)	159 (22.6)	332 (13.7)	104 (31.7)	336 (11.4)	111 (26.9)	668 (12.4)	215 (29.0)
Anti-arrhythmic agent	270 (5.9)	47 (6.7)	167 (7.0)	21 (6.7)	81 (2.8)	13 (3.2)	248 (4.7)	34 (4.7)

Total admission days is derived from Outcome date-admission date + 1

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

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

Table 4.4 Treatments for patients with STEMI by ethnic group, NCDV-ACS Registry, 2014 – 2015

Year	2011 – 2013					2014					2015					2014 – 2015										
	Malay	Chinese	Indian	#Others		Malay	Chinese	Indian	#Others		Malay	Chinese	Indian	#Others		Malay	Chinese	Indian	#Others		Malay	Chinese	Indian	#Others		
ACS stratum																										
Total	4,318	1,262	1,145	777		2,128	634	629	495		2,344	702	660	598		4,472	1,336	1,289	1,093							
#*Total admission days																										
N	4,210	1,233	1,122	757		2,113	632	626	491		2,321	696	654	589		4,434	1,328	1,280	1,080							
Mean (SD)	6.4 (6.7)	6.1 (5.6)	6.7 (7.1)	6.0 (5.9)		6.1 (5.5)	6.1 (5.8)	6.0 (5.4)	5.7 (6.3)		6.0 (5.3)	6.0 (6.0)	5.9 (4.9)	5.1 (5.3)		6.0 (5.4)	6.0 (5.9)	5.9 (5.1)	5.4 (5.8)							
Median (min, max)	5.0 (1.0, 98.0)	5.0 (1.0, 66.0)	5.0 (1.0, 95.0)	5.0 (1.0, 67.0)		5.0 (1.0, 94.0)	5.0 (1.0, 70.0)	5.0 (1.0, 66.0)	5.0 (1.0, 94.0)		5.0 (1.0, 74.0)	5.0 (1.0, 82.0)	5.0 (1.0, 56.0)	4.0 (1.0, 63.0)		5.0 (1.0, 94.0)	5.0 (1.0, 82.0)	5.0 (1.0, 66.0)	4.0 (1.0, 94.0)							
IQR	2.0	2.0	3.0	2.0		2.0	3.0	2.0	3.0		2.0	3.0	2.0	2.0		2.0	2.0	2.0	2.0							
Missing	108 (2.5)	29 (2.3)	23 (2.0)	20 (2.6)		15 (0.7)	2 (0.3)	3 (0.5)	4 (0.8)		23 (1.0)	6 (0.9)	6 (0.9)	9 (1.5)		38 (0.8)	8 (0.6)	9 (0.7)	13 (1.2)							
Number of days in CCU																										
N	2,811	752	605	525		1,418	364	361	253		1,482	431	409	384		2,900	795	770	637							
Mean (SD)	3.4 (2.9)	3.4 (3.2)	3.6 (3.0)	3.5 (2.7)		3.2 (2.8)	3.1 (2.4)	2.9 (2.0)	3.4 (3.0)		2.7 (2.2)	2.9 (2.1)	2.8 (2.5)	3.1 (2.2)		2.9 (2.6)	3.0 (2.2)	2.8 (2.3)	3.3 (2.5)							
Median (min, max)	3.0 (1.0, 28.0)	3.0 (1.0, 30.0)	3.0 (1.0, 26.0)	3.0 (1.0, 24.0)		3.0 (1.0, 30.0)	3.0 (1.0, 21.0)	2.0 (1.0, 16.0)	3.0 (1.0, 25.0)		2.0 (1.0, 30.0)	2.0 (1.0, 17.0)	2.0 (1.0, 29.0)	3.0 (1.0, 18.0)		2.0 (1.0, 30.0)	3.0 (1.0, 21.0)	2.0 (1.0, 29.0)	3.0 (1.0, 25.0)							
IQR	2.0	2.0	2.0	2.0		2.0	2.0	3.0	2.0		2.0	1.0	1.0	2.0		3.0	2.0	1.0	2.0							
No admission to CCU	1,499 (34.8)	509 (40.4)	537 (47.0)	251 (32.3)		707 (33.3)	269 (42.5)	266 (42.4)	242 (48.9)		862 (36.8)	270 (38.6)	249 (37.8)	212 (35.5)		1,569 (35.1)	539 (40.4)	515 (40.1)	454 (41.6)							
Missing	8 (0.2)	1 (0.1)	3 (0.3)	1 (0.1)		3 (0.1)	1 (0.2)	2 (0.3)	0 (0.0)		1 (0.0)	2 (0.3)	2 (0.3)	0 (0.0)		3 (0.1)	2 (0.1)	4 (0.3)	2 (0.2)							

Year	2011 – 2013				2014				2015				2014 – 2015			
	Malay	Chinese	Indian	#Others	Malay	Chinese	Indian	#Others	Malay	Chinese	Indian	#Others	Malay	Chinese	Indian	#Others
ACS stratum																
Total	4,318	1,262	1,145	777	2,128	634	629	495	2,344	702	660	598	4,472	1,336	1,289	1,093
Number of days in ICU/CICU																
N	48	9	13	10	33	10	27	7	19	8	5	6	52	18	32	13
Mean (SD)	3.8 (3.7)	1.8 (1.1)	2.8 (1.5)	2.7 (1.8)	3.2 (1.9)	4.0 (1.8)	3.1 (2.7)	2.9 (1.5)	4.1 (4.5)	5.9 (5.2)	3.4 (1.8)	5.5 (4.3)	3.5 (3.1)	4.8 (3.7)	3.2 (2.6)	4.1 (3.3)
Median (min, max)	3.0 (1.0, 23.0)	1.0 (1.0, 4.0)	3.0 (1.0, 6.0)	2.0 (1.0, 6.0)	3.0 (1.0, 11.0)	4.5 (1.0, 7.0)	2.0 (1.0, 15.0)	2.0 (2.0, 5.0)	3.0 (1.0, 21.0)	5.0 (1.0, 17.0)	3.0 (1.0, 6.0)	5.0 (1.0, 11.0)	3.0 (1.0, 21.0)	4.5 (1.0, 17.0)	3.0 (1.0, 15.0)	2.0 (1.0, 11.0)
IQR	2.0	1.0	1.0	3.0	2.0	3.0	1.0	3.0	3.0	5.5	1.0	9.0	2.0	4.0	1.0	3.0
No admission to ICU/CICU	4,268 (99.0)	1,252 (99.3)	1,131 (99.0)	767 (98.8)	2,094 (98.5)	624 (98.6)	601 (95.9)	488 (98.6)	2,325 (99.2)	694 (99.1)	655 (99.5)	592 (99.0)	4,419 (98.9)	1,318 (98.8)	1,256 (97.7)	1,080 (99.0)
Missing	2 (0.0)	1 (0.1)	1 (0.1)	0 (0.0)	1 (0.0)	1 (0.2)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	1 (0.0)	1 (0.1)	0 (0.0)	0 (0.0)
Fibrinolytic therapy, No. (%)																
Given at this centre	2,184 (51.7)	625 (50.9)	603 (54.4)	305 (40.0)	1,005 (47.4)	285 (45.2)	321 (51.2)	195 (39.9)	1,037 (44.6)	295 (42.2)	285 (43.3)	244 (40.9)	2,042 (45.9)	580 (43.6)	606 (47.2)	439 (40.4)
Given at another centre prior to transfer	1,021 (24.2)	247 (20.1)	201 (18.1)	301 (39.4)	558 (26.3)	111 (17.6)	98 (15.6)	199 (40.7)	562 (24.2)	114 (16.3)	104 (15.8)	227 (38.0)	1,120 (25.2)	225 (16.9)	202 (15.7)	426 (39.2)
Not given-Proceeded directly to primary angioplasty	396 (9.4)	124 (10.1)	132 (12.0)	39 (5.1)	216 (10.2)	75 (11.9)	91 (14.5)	29 (5.9)	372 (16.0)	133 (19.0)	153 (23.3)	46 (7.7)	588 (13.2)	208 (15.7)	244 (19.0)	75 (6.9)
Not given-Missed thrombolysis	444 (10.5)	165 (13.4)	139 (12.5)	79 (10.3)	261 (12.3)	120 (19.0)	102 (16.3)	48 (9.8)	275 (11.8)	128 (18.3)	95 (14.4)	59 (9.9)	536 (12.1)	248 (18.7)	197 (15.3)	107 (9.9)
Not given-Patient refusal	18 (0.4)	11 (0.9)	1 (0.0)	4 (0.5)	5 (0.2)	4 (0.6)	1 (0.2)	0 (0.0)	7 (0.3)	5 (0.7)	0 (0.0)	2 (0.3)	12 (0.3)	9 (0.7)	1 (0.1)	2 (0.2)
Not given-Contraindicated	159 (3.8)	57 (4.6)	33 (3.0)	36 (4.7)	74 (3.5)	35 (5.6)	14 (2.2)	18 (3.7)	72 (3.1)	24 (3.4)	21 (3.2)	19 (3.2)	146 (3.3)	59 (4.4)	35 (2.7)	37 (3.4)
Not applicable	10	3	10	1	2	3	0	4	11	3	1	0	13	6	1	4
Not available	27	10	9	2	7	1	2	2	8	0	1	1	15	1	3	3
Missing	59	20	17	10	0	0	0	0	0	0	0	0	0	0	0	0

Year	2011 – 2013				2014				2015				2014 – 2015			
	Malay	Chinese	Indian	#Others	Malay	Chinese	Indian	#Others	Malay	Chinese	Indian	#Others	Malay	Chinese	Indian	#Others
ACS stratum																
Total	4,318	1,262	1,145	777	2,128	634	629	495	2,344	702	660	598	4,472	1,336	1,289	1,093
Cardiac catheterisation, No. (%)																
Yes	1,466 (36.4)	502 (42.1)	400 (37.3)	282 (38.7)	896 (43.3)	333 (53.7)	293 (47.9)	247 (52.4)	1,080 (46.9)	400 (58.2)	369 (56.3)	312 (54.1)	1,976 (45.2)	733 (56.1)	662 (52.2)	559 (53.3)
No	2,441 (60.8)	662 (55.5)	634 (59.1)	422 (57.9)	1,168 (56.4)	285 (46.0)	313 (51.1)	221 (46.9)	1,208 (52.4)	284 (41.3)	285 (43.5)	261 (45.2)	2,376 (54.3)	569 (43.5)	598 (47.2)	482 (46.0)
Number transferred to another centre	113 (2.8)	29 (2.4)	39 (3.6)	25 (3.4)	7 (0.3)	2 (0.3)	6 (1.0)	3 (0.6)	16 (0.7)	3 (0.4)	1 (0.2)	4 (0.7)	23 (0.5)	5 (0.4)	7 (0.6)	7 (0.7)
Missing	298	69	72	48	57	14	17	24	40	15	5	21	97	29	22	45
Percutaneous coronary intervention, No. (%)																
Yes	1,229 (32.5)	413 (36.0)	341 (34.3)	235 (33.4)	730 (36.9)	263 (43.3)	243 (39.8)	191 (42.7)	880 (40.9)	332 (48.6)	307 (47.6)	242 (46.5)	1,610 (39.0)	595 (46.1)	550 (43.8)	433 (44.8)
No	2,544 (67.2)	733 (63.9)	648 (65.2)	466 (66.2)	1,243 (62.8)	343 (56.5)	364 (59.7)	255 (57.0)	1,257 (58.5)	348 (51.0)	337 (52.2)	275 (52.9)	2,500 (60.5)	691 (53.6)	701 (55.9)	530 (54.8)
Not applicable	14 (0.4)	2 (0.2)	5 (0.5)	3 (0.4)	6 (0.3)	1 (0.2)	3 (0.5)	1 (0.2)	13 (0.6)	3 (0.4)	1 (0.2)	3 (0.6)	19 (0.5)	4 (0.3)	4 (0.3)	4 (0.4)
Missing	531	114	151	73	149	27	19	48	194	19	15	78	343	46	34	126
CABG, No. (%)																
Yes	43 (1.2)	10 (0.9)	8 (0.8)	5 (0.8)	13 (0.7)	7 (1.2)	5 (0.8)	5 (1.2)	17 (0.8)	9 (1.3)	6 (0.9)	7 (1.3)	30 (0.7)	16 (1.3)	11 (0.9)	12 (1.3)
No	3,615 (98.3)	1,056 (98.1)	933 (98.5)	624 (98.8)	1,956 (98.1)	587 (98.2)	597 (98.7)	399 (98.5)	2,173 (98.5)	658 (98.1)	628 (98.4)	528 (98.3)	4,129 (98.3)	1,245 (98.1)	1,225 (98.6)	927 (98.4)
Not applicable	19 (0.5)	10 (0.9)	6 (0.6)	3 (0.5)	24 (1.2)	4 (0.7)	3 (0.5)	1 (0.2)	16 (0.7)	4 (0.6)	4 (0.6)	2 (0.4)	40 (1.0)	8 (0.6)	7 (0.6)	3 (0.3)
Missing	641	186	198	145	135	36	24	90	138	31	22	61	273	67	46	151

Year	2011 – 2013				2014				2015				2014 – 2015			
	Malay	Chinese	Indian	##Others	Malay	Chinese	Indian	##Others	Malay	Chinese	Indian	##Others	Malay	Chinese	Indian	##Others
ACS stratum																
Total	4,318	1,262	1,145	777	2,128	634	629	495	2,344	702	660	598	4,472	1,336	1,289	1,093
Pre-admission aspirin use, No. (%)																
Yes	848 (20.6)	229 (19.0)	266 (24.4)	87 (11.8)	352 (17.1)	107 (17.4)	132 (21.6)	92 (19.3)	381 (16.7)	115 (16.8)	120 (18.6)	96 (16.5)	733 (16.9)	222 (17.1)	252 (20.1)	188 (17.8)
No	3257 (79.4)	971 (81.0)	824 (75.6)	655 (88.2)	1,705 (82.9)	508 (82.6)	478 (78.4)	385 (80.7)	1,903 (83.3)	570 (83.2)	525 (81.4)	485 (83.5)	3,608 (83.1)	1,078 (82.9)	1,003 (79.9)	870 (82.2)
Missing	213	62	55	35	71	19	19	18	60	17	15	17	131	36	34	35
Pharmacological therapy given during admission, No. (%)																
Aspirin	4,048 (97.0)	1,191 (97.2)	1,071 (97.2)	738 (97.4)	2,023 (97.8)	608 (97.9)	608 (98.2)	485 (98.6)	2,253 (97.4)	678 (97.8)	640 (97.1)	564 (95.3)	4,276 (97.6)	1,286 (97.9)	1,248 (97.7)	1,049 (96.8)
*ADP antagonist	3,509 (91.0)	1,080 (92.2)	949 (91.8)	613 (89.4)	2,034 (98.1)	605 (97.3)	607 (97.9)	471 (95.7)	2,267 (98.2)	679 (97.8)	644 (98.2)	587 (99.3)	4,301 (98.1)	1,284 (97.6)	1,251 (98.0)	1,058 (97.7)
GP receptor inhibitor	127 (3.6)	45 (4.2)	38 (4.0)	25 (3.6)	28 (1.7)	6 (1.1)	10 (1.9)	18 (4.0)	54 (2.7)	15 (2.2)	12 (1.9)	35 (6.1)	82 (2.3)	21 (1.8)	22 (1.9)	53 (5.2)
Unfractionated heparin	576 (16.2)	140 (13.0)	164 (17.0)	59 (8.6)	355 (21.2)	79 (14.7)	103 (19.1)	32 (7.0)	454 (22.7)	111 (16.6)	127 (19.9)	50 (8.8)	809 (22.0)	190 (15.8)	230 (19.5)	82 (8.0)
LMWH	1,335 (36.6)	542 (49.2)	443 (44.2)	475 (66.0)	183 (10.9)	124 (23.3)	72 (13.5)	177 (38.6)	215 (10.7)	159 (23.6)	85 (13.1)	179 (31.3)	398 (10.8)	283 (23.4)	157 (13.3)	356 (34.6)
Fondaparinux	752 (56.2)	208 (53.7)	192 (55.5)	88 (38.4)	1,027 (55.7)	294 (51.5)	318 (57.2)	192 (41.7)	1,395 (62.6)	376 (55.3)	376 (57.8)	355 (60.2)	2,422 (59.5)	670 (53.6)	694 (57.5)	547 (52.1)
Oral anticoagulant (eg. Warfarin)	16 (1.3)	3 (0.8)	5 (1.5)	3 (1.3)	25 (1.5)	9 (1.7)	7 (1.3)	4 (0.9)	45 (2.3)	6 (0.9)	8 (1.2)	11 (1.9)	70 (1.9)	15 (1.3)	15 (1.3)	15 (1.5)
Beta blocker	2,384 (63.2)	730 (63.6)	649 (63.6)	458 (64.0)	1,032 (58.1)	312 (55.9)	326 (58.4)	304 (64.5)	1,178 (57.0)	383 (56.4)	387 (59.8)	407 (70.7)	2,210 (57.5)	695 (56.2)	713 (59.2)	711 (67.9)
ACE inhibitor	2,050 (54.8)	605 (53.6)	553 (54.8)	348 (49.4)	813 (46.1)	236 (42.5)	237 (43.2)	204 (44.5)	974 (46.6)	336 (49.7)	291 (45.1)	366 (63.3)	1,787 (46.4)	572 (46.5)	528 (44.3)	570 (55.0)

Year	2011 – 2013				2014				2015				2014 – 2015			
	Malay	Chinese	Indian	##Others	Malay	Chinese	Indian	##Others	Malay	Chinese	Indian	##Others	Malay	Chinese	Indian	##Others
ACS stratum																
Total	4,318	1,262	1,145	777	2,128	634	629	495	2,344	702	660	598	4,472	1,336	1,289	1,093
Angiotensin II receptor blocker	124 (3.6)	32 (3.0)	43 (4.4)	29 (4.2)	30 (1.8)	9 (1.7)	16 (3.0)	8 (1.8)	37 (1.9)	18 (2.7)	14 (2.2)	15 (2.6)	67 (1.8)	27 (2.3)	30 (2.6)	23 (2.3)
Statin	3,807 (92.4)	1,112 (92.2)	1,009 (92.4)	689 (91.6)	1,899 (92.9)	557 (90.6)	576 (93.5)	436 (88.6)	2,182 (94.8)	635 (92.3)	611 (93.1)	558 (94.9)	4,081 (93.9)	1,192 (91.5)	1,187 (93.3)	994 (92.0)
Other lipid lowering agent	107 (3.0)	33 (3.0)	43 (4.4)	16 (2.4)	24 (1.5)	16 (3.0)	11 (2.1)	10 (2.2)	36 (1.8)	13 (1.9)	13 (2.0)	2 (0.4)	60 (1.6)	29 (2.4)	24 (2.1)	12 (1.2)
Diuretics	865 (23.8)	241 (21.8)	224 (22.8)	166 (23.8)	417 (24.4)	117 (21.8)	131 (24.3)	78 (17.0)	490 (24.1)	139 (20.7)	158 (24.6)	105 (18.4)	907 (24.2)	256 (21.2)	289 (24.5)	183 (17.8)
Calcium antagonist	224 (6.4)	76 (7.0)	49 (5.0)	34 (5.0)	82 (5.0)	31 (5.9)	23 (4.4)	18 (4.0)	96 (4.8)	26 (3.9)	34 (5.3)	19 (3.3)	178 (4.9)	57 (4.8)	57 (4.9)	37 (3.6)
Oral hypoglycaemic agent	709 (19.8)	184 (16.8)	279 (28.4)	76 (11.0)	286 (17.0)	76 (14.2)	138 (25.7)	52 (11.6)	290 (14.5)	88 (13.3)	146 (22.8)	61 (10.7)	576 (15.7)	164 (13.7)	284 (24.1)	113 (11.1)
Insulin	950 (26.0)	193 (17.6)	346 (34.6)	88 (12.6)	535 (31.0)	108 (20.0)	213 (38.9)	57 (12.6)	562 (27.6)	100 (15.0)	242 (37.5)	68 (11.9)	1,097 (29.2)	208 (17.2)	455 (38.1)	125 (12.2)
Anti-arrhythmic agent	293 (8.2)	90 (8.4)	85 (8.8)	50 (7.4)	131 (8.0)	44 (8.4)	34 (6.5)	53 (11.9)	94 (4.7)	34 (5.1)	33 (5.2)	31 (5.4)	225 (6.2)	78 (6.6)	67 (5.8)	84 (8.3)
Pharmacological therapy given at discharge, No. (%)																
Aspirin	3,331 (96.9)	963 (96.0)	897 (95.9)	576 (95.8)	1,704 (96.9)	504 (95.6)	523 (97.2)	423 (95.1)	1,882 (96.0)	556 (96.0)	554 (96.5)	509 (94.3)	3,586 (96.4)	1,060 (95.8)	1,077 (96.9)	932 (94.6)
*ADP antagonist	2,970 (92.1)	885 (91.9)	801 (91.3)	484 (87.8)	1,711 (97.3)	504 (95.8)	528 (97.6)	410 (93.0)	1,908 (97.3)	560 (96.6)	548 (95.5)	531 (98.3)	3,619 (97.3)	1,064 (96.2)	1,076 (96.5)	941 (95.9)
Fondaparinux	59 (5.5)	15 (4.9)	18 (6.4)	12 (6.4)	30 (2.1)	12 (2.7)	14 (3.1)	5 (1.2)	33 (1.9)	9 (1.6)	10 (1.8)	21 (4.0)	63 (2.0)	21 (2.1)	24 (2.4)	26 (2.8)
Oral anticoagulant (eg. Warfarin)	22 (2.1)	7 (2.3)	8 (2.8)	4 (2.1)	36 (2.6)	12 (2.7)	9 (1.9)	13 (3.2)	52 (3.1)	10 (1.8)	8 (1.4)	26 (5.0)	88 (2.8)	22 (2.2)	17 (1.7)	39 (4.2)
Beta blocker	2,354 (72.7)	678 (70.6)	642 (71.8)	400 (68.6)	1,085 (69.1)	346 (70.6)	353 (68.9)	316 (73.5)	1,212 (67.8)	387 (67.1)	400 (70.2)	416 (78.8)	2,297 (68.4)	733 (68.7)	753 (69.6)	732 (76.4)

Year	2011 – 2013				2014				2015				2014 – 2015			
	Malay	Chinese	Indian	##Others	Malay	Chinese	Indian	##Others	Malay	Chinese	Indian	##Others	Malay	Chinese	Indian	##Others
ACS stratum																
Total	4,318	1,262	1,145	777	2,128	634	629	495	2,344	702	660	598	4,472	1,336	1,289	1,093
Pharmacological therapy given at discharge, No. (%)																
ACE inhibitor	1,979 (62.4)	569 (59.6)	533 (60.7)	293 (51.2)	863 (56.0)	240 (50.8)	254 (52.0)	228 (54.7)	1,005 (56.2)	329 (57.4)	296 (52.1)	359 (68.0)	1,868 (56.1)	569 (54.4)	550 (52.1)	587 (62.1)
Angiotensin II receptor blocker	114 (3.8)	30 (3.3)	44 (5.3)	33 (6.0)	40 (2.9)	16 (3.6)	17 (3.7)	11 (2.7)	40 (2.3)	21 (3.7)	19 (3.4)	16 (3.1)	80 (2.6)	37 (3.7)	36 (3.5)	27 (2.9)
Statin	3,196 (93.4)	933 (93.1)	866 (92.7)	557 (92.7)	1,639 (93.9)	479 (93.0)	504 (93.3)	419 (94.8)	1,853 (94.6)	537 (92.7)	534 (93.5)	509 (95.1)	3,492 (94.3)	1,016 (92.9)	1,038 (93.4)	928 (95.0)
Other lipid lowering agent	110 (3.6)	30 (3.3)	40 (4.8)	12 (2.2)	31 (2.2)	17 (3.9)	10 (2.2)	9 (2.2)	41 (2.4)	16 (2.8)	16 (2.8)	4 (0.8)	72 (2.3)	33 (3.3)	26 (2.6)	13 (1.4)
Diuretics	489 (16.1)	132 (14.5)	137 (16.2)	75 (13.4)	258 (17.9)	67 (14.9)	94 (20.0)	56 (13.5)	301 (17.5)	81 (14.3)	118 (20.8)	79 (15.2)	559 (17.7)	148 (14.6)	212 (20.4)	135 (14.4)
Calcium antagonist	166 (5.6)	57 (6.3)	37 (4.4)	21 (3.8)	70 (5.0)	23 (5.3)	16 (3.5)	24 (5.9)	66 (3.9)	22 (3.9)	36 (6.4)	19 (3.6)	136 (4.4)	45 (4.5)	52 (5.1)	43 (4.6)
Oral hypoglycaemic agent	838 (27.2)	201 (21.9)	321 (37.2)	87 (15.7)	372 (25.5)	85 (18.8)	184 (38.1)	67 (16.3)	420 (24.4)	110 (19.4)	184 (32.6)	77 (14.7)	792 (25.0)	195 (19.2)	368 (35.1)	144 (15.4)
Insulin	373 (12.3)	72 (7.9)	176 (20.8)	29 (5.3)	271 (18.8)	42 (9.5)	93 (19.8)	30 (7.4)	253 (14.7)	44 (7.8)	133 (23.5)	17 (3.3)	524 (16.6)	86 (8.5)	226 (21.9)	47 (5.1)
Anti-arrhythmic agent	173 (5.7)	54 (6.0)	57 (6.8)	33 (6.0)	85 (6.1)	29 (6.7)	25 (5.5)	49 (12.0)	39 (2.3)	20 (3.6)	14 (2.5)	21 (4.1)	124 (4.0)	49 (4.9)	39 (3.8)	70 (7.5)

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

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

* For CRF version 2013, details of the breakdown are available for ticlopidine, clopidogrel, prasugrel and ticagrelor. These drugs 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, NCVS-ACS Registry, 2014 – 2015

ACS stratum	STEMI only			
	2011 – 2013	2014	2015	2014 – 2015
Year				
STEMI (Total)	7,502	3,886	4,304	8,190
*Door-to-needle time, min	3,717	1,806	1,861	3,667
N	3,347	1,729	1,773	3,502
Mean (SD)	124.3 (222.5)	120.6 (214.2)	95.5 (171.0)	107.9 (193.9)
Median (min, max)	45.0 (1.0, 1440.0)	48.0 (1.0, 1440.0)	45.0 (2.0, 1440.0)	45.0 (1.0, 1440.0)
IQR	75.0	79.0	60.0	68.0
Not available	370 (10.0)	77 (4.3)	88 (4.7)	165 (4.5)
Door-to-needle time, No (%)				
≤ 30 min	1,315 (39.3)	582 (33.7)	651 (36.7)	1,233 (35.2)
> 30 min	2,032 (60.7)	1,147 (66.3)	1,122 (63.3)	2,269 (64.8)
Missing	370	77	88	165
**Door-to-balloon time, min	675	363	625	988
N	400	261	525	786
Mean (SD)	165.0 (222.4)	137.8 (175.9)	101.5 (134.5)	113.5 (150.3)
Median (min, max)	98.0 (5.0, 1440.0)	90.0 (5.0, 1380.0)	61.0 (9.0, 1210.0)	69.0 (5.0, 1380.0)
IQR	86.0	79.0	62.0	73.0
Not available	275 (40.7)	102 (28.1)	100 (16.0)	202 (20.4)
Door-to-balloon time, No (%)				
≤ 90 min	181 (45.3)	132 (50.6)	368 (70.1)	500 (63.6)
> 90 min	219 (54.8)	129 (49.4)	157 (29.9)	286 (36.4)
Missing	275	102	100	202

* 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), NCVd-ACS Registry, 2014 – 2015

Year	2011 – 2013			2014			2015			2014 – 2015		
	Young	Middle-aged	Elderly	Young	Middle-aged	Elderly	Young	Middle-aged	Elderly	Young	Middle-aged	Elderly
Age group												
Total	303	3,165	3,793	205	1,962	2,405	239	2,150	2,620	444	4,112	5,025
# Total admission days												
N	300	3,119	3,740	204	1,952	2,387	237	2,135	2,604	441	4,087	4,991
Mean (SD)	5.2 (5.9)	5.8 (6.7)	6.6 (7.7)	4.7 (3.9)	5.6 (6.7)	6.2 (6.8)	4.4 (3.6)	5.4 (6.6)	6.0 (6.3)	4.6 (3.7)	5.5 (6.6)	6.1 (6.6)
Median (min, max)	4.0 (1.0, 64.0)	4.0 (1.0, 95.0)	4.0 (1.0, 100.0)	4.0 (1.0, 36.0)	4.0 (1.0, 96.0)	4.0 (1.0, 97.0)	3.0 (1.0, 43.0)	4.0 (1.0, 95.0)	4.0 (1.0, 92.0)	4.0 (1.0, 43.0)	4.0 (1.0, 96.0)	4.0 (1.0, 97.0)
IQR	2.0	3.0	4.0	2.0	3.0	4.0	2.0	2.0	3.0	2.0	2.0	3.0
Missing	3 (1.0)	47 (1.5)	53 (1.4)	1 (0.5)	10 (0.5)	18 (0.7)	2 (0.8)	15 (0.7)	16 (0.6)	3 (0.7)	25 (0.6)	34 (0.7)
Number of days in CCU												
N	59	540	710	24	247	371	30	298	418	54	545	789
Mean (SD)	2.8 (1.9)	3.5 (3.2)	3.8 (3.6)	3.0 (2.3)	3.8 (3.7)	4.3 (3.9)	2.7 (1.5)	3.1 (2.6)	3.7 (3.3)	2.9 (1.9)	3.4 (3.1)	4.0 (3.6)
Median (min, max)	2.0 (1.0, 11.0)	3.0 (1.0, 30.0)	3.0 (1.0, 24.0)	2.5 (1.0, 10.0)	3.0 (1.0, 23.0)	3.0 (1.0, 30.0)	2.0 (1.0, 7.0)	2.0 (1.0, 22.0)	3.0 (1.0, 28.0)	2.0 (1.0, 10.0)	3.0 (1.0, 23.0)	3.0 (1.0, 30.0)
IQR	1.0	2.0	2.0	2.5	2.0	3.0	1.0	2.0	3.0	1.0	2.0	3.0
No admission to CCU	244 (80.5)	2,625 (82.9)	3,077 (81.3)	181 (89.6)	1,712 (87.3)	2,033 (84.5)	209 (88.6)	1,852 (86.1)	2,199 (83.9)	390 (88.4)	3,564 (86.8)	4,232 (84.2)
Missing	0 (0.0)	0 (0.0)	6 (0.2)	3 (1.5)	1 (0.1)	0 (0.0)	3 (1.3)	0 (0.0)	0 (0.0)	3 (0.7)	4 (0.1)	0 (0.0)
Number of days in ICU/CICU												
N	1	28	32	3	40	59	1	17	15	4	57	74
Mean (SD)	7.0 (.)	4.7 (3.4)	6.2 (6.1)	3.7 (2.9)	3.5 (1.8)	4.0 (2.6)	2.0 (0.0)	4.3 (3.3)	4.9 (3.0)	3.3 (2.5)	3.7 (2.4)	4.2 (2.7)
Median (min, max)	7.0 (7.0, 7.0)	3.5 (1.0, 13.0)	4.0 (1.0, 26.0)	2.0 (2.0, 7.0)	3.0 (1.0, 10.0)	3.0 (1.0, 12.0)	2.0 (2.0, 2.0)	3.0 (1.0, 15.0)	5.0 (1.0, 12.0)	2.0 (2.0, 7.0)	3.0 (1.0, 15.0)	3.0 (1.0, 12.0)
IQR	0	3.5	4.0	5.0	2.0	3.0	0	1.0	5.0	2.5	2.0	4.0
No admission to ICU/CICU	302 (99.7)	3,137 (99.1)	302 (99.7)	202 (100.0)	1,922 (98.0)	2,346 (97.5)	238 (100.8)	2,133 (99.2)	2,605 (99.4)	440 (99.8)	4,055 (98.7)	4,951 (98.5)
Missing	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)

Year	2011 – 2013			2014			2015			2014 – 2015		
	Young	Middle-aged	Elderly	Young	Middle-aged	Elderly	Young	Middle-aged	Elderly	Young	Middle-aged	Elderly
Age group												
Total	303	3,165	3,793	205	1,962	2,405	239	2,150	2,620	444	4,112	5,025
Cardiac catheterisation, No. (%)												
Yes	71 (27.8)	877 (32.0)	853 (25.6)	33 (16.8)	537 (28.5)	543 (23.5)	62 (26.5)	715 (34.0)	702 (27.4)	95 (22.0)	1,252 (31.4)	1,245 (25.6)
No	173 (67.8)	1,783 (65.2)	2,402 (72.2)	163 (82.7)	1,338 (71.1)	1,759 (76.2)	172 (73.5)	1,385 (65.8)	1,854 (72.4)	335 (77.7)	2,723 (68.3)	3,613 (74.2)
Number transferred to another centre	11 (4.4)	78 (2.8)	76 (2.2)	1 (0.5)	6 (0.3)	6 (0.3)	0 (0.0)	5 (0.2)	5 (0.2)	1 (0.2)	11 (0.3)	11 (0.2)
Missing	48	427	462	8	81	97	5	45	59	13	126	156
Percutaneous coronary intervention, No. (%)												
Yes	52 (21.8)	477 (18.3)	452 (14.3)	22 (11.2)	294 (16.0)	278 (12.3)	35 (15.2)	411 (20.2)	374 (15.1)	57 (13.4)	705 (18.2)	652 (13.7)
No	186 (77.8)	2,124 (81.5)	2,699 (85.6)	173 (88.3)	1,546 (83.9)	1,980 (87.5)	193 (83.9)	1,620 (79.5)	2,109 (84.9)	366 (85.9)	3,166 (81.6)	4,089 (86.2)
Not applicable	1 (0.4)	4 (0.2)	3 (0.1)	1 (0.5)	2 (0.1)	4 (0.2)	2 (0.9)	8 (0.4)	1 (0.0)	3 (0.7)	10 (0.3)	5 (0.1)
Missing	64	560	639	9	120	143	9	111	136	18	231	279
CABG, No. (%)												
Yes	1 (0.4)	71 (2.8)	60 (1.9)	2 (1.0)	44 (2.4)	37 (1.6)	2 (0.9)	34 (1.7)	32 (1.3)	4 (1.0)	78 (2.0)	69 (1.4)
No	229 (98.3)	2,423 (96.8)	3,027 (97.9)	189 (98.4)	1,782 (97.0)	2,224 (98.0)	222 (97.4)	1,993 (97.8)	2,476 (98.6)	411 (97.9)	3,775 (97.4)	4,700 (98.3)
Not applicable	3 (1.3)	9 (0.4)	5 (0.2)	1 (0.5)	12 (0.7)	8 (0.4)	4 (1.8)	11 (0.5)	4 (0.2)	5 (1.2)	23 (0.6)	12 (0.3)
Missing	70	662	701	13	124	136	11	112	108	24	236	244
Pre-admission aspirin use, No. (%)												
Yes	100 (35.4)	1,485 (50.4)	1,959 (55.0)	83 (41.9)	1,050 (55.1)	1,381 (59.8)	83 (35.9)	1,083 (51.9)	1,501 (59.0)	166 (38.7)	2,133 (53.5)	2,882 (59.4)
No	183 (64.6)	1,467 (49.6)	1,608 (45.0)	115 (58.1)	854 (44.9)	928 (40.2)	148 (64.1)	1,002 (48.1)	1,045 (41.0)	263 (61.3)	1,856 (46.5)	1,973 (40.6)
Missing	20	213	226	7	58	96	8	65	74	15	123	170

Year	2011 – 2013			2014			2015			2014 – 2015		
	Young	Middle-aged	Elderly	Young	Middle-aged	Elderly	Young	Middle-aged	Elderly	Young	Middle-aged	Elderly
Age group												
Total	303	3,165	3,793	205	1,962	2,405	239	2,150	2,620	444	4,112	5,025
Pharmacological therapy given during admission, No. (%)												
Aspirin	277 (95.2)	2,947 (97.4)	3,479 (95.4)	196 (98.5)	1,871 (97.2)	2,286 (96.9)	228 (96.2)	2,037 (95.9)	2,485 (96.0)	424 (97.2)	3,908 (96.5)	4,771 (96.4)
*ADP antagonist	223 (85.2)	2,452 (87.2)	3,010 (87.0)	185 (95.4)	1,820 (95.7)	2,206 (94.8)	218 (92.8)	2,027 (95.6)	2,473 (96.2)	403 (93.9)	3,847 (95.6)	4,679 (95.5)
GP receptor inhibitor	6 (2.4)	51 (2.0)	55 (1.6)	5 (2.9)	7 (0.4)	0 (0.0)	11 (5.2)	2 (0.1)	0 (0.0)	16 (4.2)	9 (0.3)	0 (0.0)
Unfractionated heparin	22 (9.0)	236 (9.2)	322 (9.8)	3 (1.8)	88 (5.3)	118 (5.6)	15 (7.4)	107 (5.8)	140 (5.9)	18 (4.9)	195 (5.6)	258 (5.8)
LMWH	131 (50.2)	1,410 (52.2)	1,796 (53.4)	31 (17.9)	295 (17.6)	580 (27.1)	34 (16.3)	359 (18.8)	616 (25.6)	65 (17.1)	654 (18.3)	1,196 (26.3)
Fondaparinux	63 (69.2)	788 (75.4)	869 (67.8)	140 (76.9)	1,355 (74.7)	1,473 (65.6)	181 (78.4)	1,524 (73.8)	1,720 (68.4)	321 (77.7)	2,879 (74.2)	3,193 (67.1)
Oral anticoagulant (eg. Warfarin)	1 (1.1)	25 (2.6)	33 (2.7)	5 (3.0)	39 (2.4)	67 (3.2)	4 (2.0)	42 (2.3)	77 (3.3)	9 (2.4)	81 (2.3)	144 (3.2)
Beta blocker	160 (61.6)	1,944 (69.4)	2,291 (66.2)	128 (68.8)	1,130 (62.2)	1,403 (62.4)	149 (64.5)	1,378 (66.5)	1,612 (64.0)	277 (66.4)	2,508 (64.5)	3,015 (63.3)
ACE inhibitor	140 (54.2)	1,698 (61.8)	1,940 (57.0)	91 (50.3)	964 (53.9)	1,018 (46.2)	133 (57.8)	1,183 (57.7)	1,224 (49.1)	224 (54.5)	2,147 (55.9)	2,242 (47.8)
Angiotensin II receptor blocker	13 (5.2)	247 (9.6)	374 (11.4)	9 (5.4)	152 (9.0)	215 (10.1)	9 (4.4)	149 (7.9)	229 (9.6)	18 (4.8)	301 (8.4)	444 (9.8)
Statin	248 (89.6)	2,700 (92.4)	3,274 (91.6)	187 (95.9)	1,731 (91.8)	2,113 (91.0)	219 (92.4)	1,988 (93.8)	2,414 (93.2)	406 (94.0)	3,719 (92.9)	4,527 (92.1)
Other lipid lowering agent	15 (6.0)	167 (6.4)	153 (4.8)	10 (6.1)	57 (3.5)	67 (3.2)	6 (2.9)	56 (3.0)	71 (3.0)	16 (4.3)	113 (3.2)	138 (3.1)
Diuretics	30 (12.0)	687 (26.0)	1,316 (39.0)	24 (13.6)	453 (26.6)	891 (41.0)	30 (14.7)	481 (25.2)	913 (37.8)	54 (14.2)	934 (25.9)	1,804 (39.3)
Calcium antagonist	31 (12.6)	411 (15.8)	878 (26.8)	24 (14.0)	304 (18.0)	539 (25.1)	23 (11.5)	325 (17.1)	602 (25.0)	47 (12.7)	629 (17.5)	1,141 (25.1)
Oral hypoglycaemic agent	50 (20.0)	840 (31.6)	1,075 (32.2)	35 (20.0)	556 (32.3)	677 (31.6)	36 (17.5)	618 (31.8)	757 (31.2)	71 (18.6)	1,174 (32.1)	1,434 (31.4)
Insulin	30 (12.0)	608 (23.0)	816 (24.4)	17 (10.1)	408 (24.0)	562 (26.1)	24 (11.9)	510 (26.7)	632 (26.3)	41 (11.1)	918 (25.5)	1,194 (26.2)
Anti-arrhythmic agent	13 (5.2)	133 (5.2)	232 (7.2)	4 (2.4)	104 (6.4)	140 (6.7)	9 (4.6)	77 (4.2)	113 (4.8)	13 (3.6)	181 (5.2)	253 (5.7)

Year	2011 – 2013			2014			2015			2014 – 2015		
	Young	Middle-aged	Elderly	Young	Middle-aged	Elderly	Young	Middle-aged	Elderly	Young	Middle-aged	Elderly
Total	303	3,165	3,793	205	1,962	2,405	239	2,150	2,620	444	4,112	5,025
Pharmacological therapy given at discharge, No. (%)												
Aspirin	262 (93.2)	2,720 (95.7)	3,071 (92.7)	171 (94.0)	1,695 (93.2)	2,003 (92.2)	204 (92.3)	1,849 (92.7)	2,166 (91.2)	375 (93.1)	3,544 (92.9)	4,169 (91.7)
*ADP antagonist	203 (79.9)	2,192 (83.2)	2,585 (82.5)	150 (85.2)	1,588 (88.8)	1,876 (88.0)	190 (89.6)	1,750 (89.1)	2,107 (89.6)	340 (87.6)	3,338 (89.0)	3,983 (88.8)
Fondaparinux	7 (7.9)	59 (6.1)	59 (5.0)	8 (5.1)	43 (2.7)	52 (2.7)	11 (5.4)	64 (3.5)	51 (2.3)	19 (5.3)	107 (3.1)	103 (2.5)
Oral anticoagulant (eg. Warfarin)	1 (1.1)	25 (2.7)	38 (3.4)	5 (3.2)	48 (3.1)	65 (3.4)	6 (3.2)	56 (3.2)	100 (4.7)	11 (3.2)	104 (3.2)	165 (4.0)
Beta blocker	158 (62.0)	1,868 (70.4)	2,170 (68.3)	120 (69.0)	1,155 (66.6)	1,338 (64.2)	146 (66.4)	1,376 (70.2)	1,555 (67.1)	266 (67.5)	2,531 (68.5)	2,893 (65.7)
ACE inhibitor	129 (51.6)	1,634 (62.2)	1,823 (58.2)	87 (51.8)	913 (53.7)	980 (47.8)	124 (57.4)	1,147 (59.2)	1,160 (50.4)	211 (54.9)	2,060 (56.6)	2,140 (49.2)
Angiotensin II receptor blocker	11 (4.5)	234 (9.4)	324 (10.8)	9 (5.7)	160 (10.0)	215 (10.9)	6 (3.2)	163 (9.2)	255 (11.7)	15 (4.3)	323 (9.6)	470 (11.3)
Statin	247 (91.5)	2,543 (91.7)	2,980 (91.6)	169 (94.9)	1,645 (91.0)	1,937 (90.2)	196 (88.3)	1,857 (93.2)	2,182 (92.0)	365 (91.3)	3,502 (92.2)	4,119 (91.1)
Other lipid lowering agent	14 (5.8)	140 (5.7)	129 (4.3)	8 (5.2)	59 (3.8)	59 (3.0)	6 (3.2)	61 (3.5)	82 (3.8)	14 (4.1)	120 (3.6)	141 (3.4)
Diuretics	25 (10.3)	564 (22.4)	1,011 (32.9)	19 (11.7)	366 (22.7)	693 (34.6)	23 (11.9)	397 (22.2)	719 (32.7)	42 (11.8)	763 (22.4)	1,412 (33.6)
Calcium antagonist	31 (12.8)	353 (14.2)	780 (25.8)	23 (14.5)	287 (17.9)	490 (24.7)	20 (10.5)	311 (17.4)	528 (23.9)	43 (12.3)	598 (17.6)	1,018 (24.3)
Oral hypoglycaemic agent	57 (23.1)	855 (33.5)	1,068 (34.7)	35 (21.3)	569 (34.8)	669 (33.5)	34 (17.4)	635 (34.5)	761 (34.0)	69 (19.2)	1,204 (34.6)	1,430 (33.8)
Insulin	21 (8.6)	417 (16.6)	540 (17.7)	14 (8.8)	304 (19.0)	371 (18.7)	14 (7.3)	376 (20.9)	440 (20.0)	28 (8.0)	680 (20.0)	811 (19.4)
Anti-arrhythmic agent	10 (4.1)	115 (4.7)	166 (5.5)	3 (1.9)	99 (6.3)	100 (5.1)	6 (3.2)	61 (3.5)	68 (3.2)	9 (2.6)	160 (4.8)	168 (4.1)

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

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

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

** Young is defined as age 20 to less than 40 years, middle-aged is defined as age 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, 2014 – 2015

Year	2011 – 2013		2014		2015		2014 – 2015	
	Male	Female	Male	Female	Male	Female	Male	Female
Gender								
Total	5,241	2,020	3,321	1,251	3,651	1,358	6,972	2,609
#*Total admission days								
N	5,167	1,992	3,299	1,244	3,632	1,344	6,931	2,588
Mean (SD)	6.1 (7.0)	6.5 (7.7)	5.8 (6.6)	6.0 (6.7)	5.7 (6.6)	5.7 (5.6)	5.7 (6.6)	5.9 (6.2)
Median (min, max)	4.0 (1.0, 100.0)	4.0 (1.0, 100.0)	4.0 (1.0, 97.0)	4.0 (1.0, 76.0)	4.0 (1.0, 95.0)	4.0 (1.0, 76.0)	4.0 (1.0, 97.0)	4.0 (1.0, 76.0)
IQR	3.0	4.0	3.0	3.0	3.0	3.0	3.0	3.0
Missing	74 (1.4)	29 (1.4)	22 (0.7)	7 (0.6)	19 (0.5)	14 (1.0)	41 (0.6)	21 (0.8)
Number of days in CCU								
N	980	329	483	159	565	181	1,048	340
Mean (SD)	3.6 (3.3)	3.7 (3.5)	3.9 (3.6)	4.3 (4.2)	3.3 (2.9)	3.8 (3.1)	3.6 (3.3)	4.0 (3.7)
Median (min, max)	3.0 (1.0, 30.0)	3.0 (1.0, 25.0)	3.0 (1.0, 30.0)	3.0 (1.0, 23.0)	3.0 (1.0, 22.0)	3.0 (1.0, 28.0)	3.0 (1.0, 30.0)	3.0 (1.0, 28.0)
IQR	2.0	2.0	3.0	3.0	2.0	3.0	2.0	3.0
No admission to CCU	4,258 (81.3)	1,688 (83.7)	2,835 (85.4)	1,091 (87.3)	3,084 (84.5)	1,176 (86.7)	5,919 (85.0)	2,267 (87.0)
Missing	3 (0.1)	3 (0.1)	3 (0.1)	1 (0.1)	2 (0.1)	1 (0.1)	5 (0.1)	2 (0.1)
Number of days in ICU/CICU								
N	48	13	69	33	28	5	97	38
Mean (SD)	5.4 (5.0)	6.2 (5.4)	3.6 (2.2)	4.2 (2.6)	4.3 (3.0)	6.0 (3.9)	3.8 (2.4)	4.4 (2.8)
Median (min, max)	4.0 (1.0, 26.0)	4.0 (1.0, 21.0)	3.0 (1.0, 12.0)	4.0 (1.0, 12.0)	3.0 (1.0, 15.0)	6.0 (2.0, 12.0)	3.0 (1.0, 15.0)	4.0 (1.0, 12.0)
IQR	4.5	4.0	2.0	3.0	3.0	4.0	2.0	4.0
No admission to ICU/CICU	5,193 (99.1)	2,007 (99.5)	3,252 (98.0)	1,218 (97.4)	3,623 (99.3)	1,353 (99.7)	6,875 (98.7)	2,571 (98.6)
Missing	5,193 (99.1)	2,007 (99.4)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)

Year	2011 – 2013		2014		2015		2014 – 2015	
	Male	Female	Male	Female	Male	Female	Male	Female
Gender								
Total	5,241	2,020	3,321	1,251	3,651	1,358	6,972	2,609
Cardiac catheterisation, No. (%)								
Yes	1,393 (30.5)	408 (23.3)	871 (27.3)	242 (20.2)	1,158 (32.4)	321 (24.3)	2,029 (30.0)	563 (22.3)
No	3,062 (67.0)	1,296 (73.9)	2,305 (72.3)	955 (79.6)	2,411 (67.4)	1,000 (75.6)	4,716 (69.7)	1,955 (77.5)
Number transferred to another centre	116 (2.5)	49 (2.8)	11 (0.3)	2(0.2)	8 (0.2)	2 (0.2)	19 (0.3)	4 (0.2)
Missing	670	267	134	52	74	35	208	87
Percutaneous coronary intervention, No. (%)								
Yes	788 (18.1)	193 (11.8)	456 (14.6)	138 (11.7)	639 (18.4)	181 (14.1)	1,095 (16.6)	319 (12.9)
No	3,565 (81.8)	1,444 (88.1)	2,656 (85.2)	1,043 (88.2)	2,822 (81.3)	1,100 (85.7)	5,478 (83.2)	2,143 (86.9)
Not applicable	6 (0.1)	2 (0.1)	6 (0.2)	1 (0.1)	8 (0.2)	3 (0.2)	14 (0.2)	4 (0.2)
Missing	882	381	203	69	182	74	385	143
CABG, No. (%)								
Yes	102 (2.4)	30 (1.9)	63 (2.0)	20 (1.7)	59 (1.7)	9 (0.7)	122 (1.8)	29 (1.2)
No	4,136 (97.3)	1,543 (97.7)	3,037 (97.5)	1,158 (97.9)	3,411 (97.9)	1,280 (98.8)	6,448 (97.7)	2,438 (98.4)
Not applicable	11 (0.3)	6 (0.4)	16 (0.5)	5 (0.4)	13 (0.4)	6 (0.5)	29 (0.4)	11 (0.4)
Missing	992	441	205	68	168	63	373	131
Pre-admission aspirin use, No. (%)								
Yes	2,579 (52.4)	965 (51.4)	1,847 (57.7)	667 (55.2)	1,935 (54.8)	732 (55.1)	3,782 (56.1)	1,399 (55.2)
No	2,347 (47.6)	911 (48.6)	1,356 (42.3)	541 (44.8)	1,599 (45.2)	596 (44.9)	2,955 (43.9)	1,137 (44.8)
Missing	315	144	118	43	117	30	235	73

Year	2011 – 2013		2014		2015		2014 – 2015	
	Male	Female	Male	Female	Male	Female	Male	Female
Gender								
Total	5,241	2,020	3,321	1,251	3,651	1,358	6,972	2,609
Pharmacological therapy given during admission, No. (%)								
Aspirin	4,855 (96.4)	1,848 (96.0)	3,169 (97.4)	1,184 (96.3)	3,478 (96.2)	1,272 (95.3)	6,647 (96.7)	2,456 (95.8)
*ADP antagonist	4,132 (87.6)	1,553 (85.6)	3,059 (95.4)	1,152 (94.8)	3,449 (95.9)	1,269 (95.4)	6,508 (95.6)	2,421 (95.1)
GP receptor inhibitor	86 (2.0)	26 (1.6)	10 (0.4)	2 (0.2)	12 (0.4)	1 (0.1)	22 (0.4)	3 (0.1)
Unfractionated heparin	434 (10.0)	146 (8.6)	159 (5.6)	50 (4.5)	208 (6.4)	54 (4.5)	367 (6.1)	104 (4.5)
LMWH	2400 (52.6)	937 (53.2)	635 (22.1)	271 (24.2)	713 (21.6)	296 (24.2)	1,348 (21.9)	567 (24.2)
Fondaparinux	1,284 (72.4)	436 (67.6)	2,170 (71.0)	798 (67.4)	2,517 (71.5)	908 (70.1)	4,687 (71.3)	1,706 (68.8)
Oral anticoagulant (eg. Warfarin)	45 (2.7)	14 (2.3)	81 (2.9)	30 (2.7)	83 (2.6)	40 (3.4)	164 (2.7)	70 (3.1)
Beta blocker	3,198 (67.8)	1,197 (66.4)	1,939 (63.3)	722 (60.9)	2,332 (66.3)	807 (61.9)	4,271 (64.9)	1,529 (61.4)
ACE inhibitor	2,754 (59.4)	1,024 (57.8)	1,535 (50.9)	538 (46.5)	1,889 (54.2)	651 (50.7)	3,424 (52.7)	1,189 (48.7)
Angiotensin II receptor blocker	447 (10.2)	187 (11.2)	250 (8.7)	126 (11.2)	267 (8.2)	120 (10.1)	517 (8.4)	246 (10.6)
Statin	4,518 (92.0)	1,704 (91.2)	2,934 (92.0)	1,097 (90.4)	3,368 (93.4)	1,253 (93.5)	6,302 (92.7)	2,350 (92.0)
Other lipid lowering agent	253 (5.8)	82 (4.8)	101 (3.6)	33 (3.0)	98 (3.0)	35 (2.9)	199 (3.3)	68 (3.0)
Diuretics	1,383 (30.6)	650 (37.2)	932 (32.0)	436 (38.3)	995 (30.0)	429 (35.3)	1,927 (30.9)	865 (36.8)
Calcium antagonist	850 (19.2)	470 (27.6)	570 (19.8)	297 (26.1)	638 (19.4)	312 (25.6)	1,208 (19.6)	609 (25.9)
Oral hypoglycaemic agent	1,324 (29.4)	641 (36.8)	872 (30.1)	396 (34.7)	976 (29.2)	435 (35.1)	1,848 (29.6)	831 (34.9)
Insulin	920 (20.6)	534 (30.6)	627 (21.8)	360 (31.7)	769 (23.3)	397 (32.6)	1,396 (22.6)	757 (32.2)
Anti-arrhythmic agent	264 (6.0)	114 (6.8)	194 (6.9)	54 (4.9)	144 (4.5)	55 (4.7)	338 (5.6)	109 (4.8)

Year	2011 – 2013		2014		2015		2014 – 2015	
	Male	Female	Male	Female	Male	Female	Male	Female
Gender								
Total	5,241	2,020	3,321	1,251	3,651	1,358	6,972	2,609
Pharmacological therapy given at discharge, No. (%)								
Aspirin	4,411 (94.4)	1,642 (93.0)	2,834 (93.1)	1,035 (91.8)	3,090 (92.3)	1,129 (90.9)	5,924 (92.7)	2,164 (91.3)
*ADP antagonist	3,651 (83.6)	1,329 (80.4)	2,675 (89.4)	939 (85.0)	2,969 (89.7)	1,078 (88.7)	5,644 (89.5)	2,017 (86.9)
Fondaparinux	92 (5.6)	33 (5.6)	80 (3.0)	23 (2.2)	99 (3.2)	27 (2.3)	179 (3.1)	50 (2.3)
Oral anticoagulant (eg. Warfarin)	48 (3.1)	16 (2.8)	95 (3.6)	23 (2.3)	123 (4.1)	39 (3.5)	218 (3.9)	62 (2.9)
Beta blocker	3,043 (69.0)	1,153 (68.7)	1,934 (66.9)	679 (61.8)	2,283 (69.6)	794 (65.0)	4,217 (68.4)	1,473 (63.5)
ACE inhibitor	2,626 (60.2)	960 (58.2)	1,485 (52.2)	495 (46.2)	1,818 (55.8)	613 (51.2)	3,303 (54.1)	1,108 (48.9)
Angiotensin II receptor blocker	397 (9.6)	172 (10.9)	260 (9.7)	124 (12.0)	297 (9.8)	127 (11.4)	557 (9.8)	251 (11.7)
Statin	4,216 (92.2)	1,554 (90.3)	2,742 (91.2)	1,009 (89.6)	3,096 (92.4)	1,139 (92.1)	5,838 (91.8)	2,148 (90.9)
Other lipid lowering agent	215 (5.2)	68 (4.3)	100 (3.8)	26 (2.6)	106 (3.5)	43 (3.9)	206 (3.7)	69 (3.3)
Diuretics	1,099 (26.0)	501 (31.1)	729 (26.7)	349 (33.2)	795 (26.0)	344 (30.7)	1,524 (26.3)	693 (31.9)
Calcium antagonist	763 (18.4)	401 (25.1)	523 (19.4)	277 (26.4)	575 (18.8)	284 (25.0)	1,098 (19.1)	561 (25.7)
Oral hypoglycaemic agent	1,343 (31.7)	637 (38.9)	880 (32.1)	393 (37.2)	971 (31.2)	459 (39.6)	1,851 (31.6)	852 (38.5)
Insulin	605 (14.4)	373 (23.0)	433 (16.0)	256 (24.5)	533 (17.4)	297 (26.3)	966 (16.8)	553 (25.4)
Anti-arrhythmic agent	205 (5.0)	86 (5.4)	162 (6.1)	40 (3.9)	99 (3.3)	36 (3.3)	261 (4.6)	76 (3.6)

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

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

* For CRF version 2013, details of the breakdown are available for ticlopidine, clopidogrel, prasugrel and ticagrelor. These drugs 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, 2014 – 2015

Year	2011 – 2013				2014				2015				2014 – 2015			
	Malay	Chinese	Indian	##Others	Malay	Chinese	Indian	##Others	Malay	Chinese	Indian	##Others	Malay	Chinese	Indian	##Others
ACS stratum																
Total	3,141	1,912	1,759	449	2,062	1,133	951	426	2,224	1,186	1,056	543	4,286	2,319	2,007	969
# Total admission days																
N	3,091	1,894	1,733	440	2,042	1,131	947	423	2,207	1,177	1,055	537	4,249	2,308	2,002	960
Mean (SD)	6.2 (6.8)	6.2 (7.6)	6.3 (7.7)	5.5 (6.5)	6.0 (6.7)	6.1 (7.8)	5.6 (5.6)	4.9 (4.7)	5.9 (6.6)	5.8 (6.8)	5.5 (5.1)	5.0 (6.7)	5.9 (6.6)	5.9 (7.3)	5.5 (5.3)	4.9 (5.9)
Median (min, max)	4.0 (1.0, 100.0)	4.0 (1.0, 100.0)	4.0 (1.0, 96.0)	4.0 (1.0, 64.0)	4.0 (1.0, 97.0)	4.0 (1.0, 96.0)	4.0 (1.0, 65.0)	4.0 (1.0, 56.0)	4.0 (1.0, 95.0)	4.0 (1.0, 95.0)	4.0 (1.0, 53.0)	3.0 (1.0, 75.0)	4.0 (1.0, 97.0)	4.0 (1.0, 96.0)	4.0 (1.0, 65.0)	4.0 (1.0, 75.0)
IQR	3.0	3.0	3.0	2.0	3.0	3.0	3.0	2.0	3.0	3.0	3.0	2.0	3.0	3.0	3.0	2.0
Missing	50 (1.6)	18 (0.9)	26 (1.5)	9 (2.0)	20 (1.0)	2 (0.2)	4 (0.4)	3 (0.7)	17 (0.8)	9 (0.8)	1 (0.1)	6 (1.1)	37 (0.9)	11 (0.5)	5 (0.2)	9 (0.9)
Number of days in CCU																
N	656	288	214	151	346	140	86	70	373	141	120	112	719	281	206	182
Mean (SD)	3.7 (3.5)	3.5 (3.4)	3.3 (2.9)	3.9 (3.6)	4.0 (3.9)	3.7 (3.3)	4.7 (4.6)	4.0 (3.2)	3.4 (2.9)	3.8 (3.8)	3.6 (2.8)	3.0 (2.0)	3.7 (3.4)	3.8 (3.5)	4.0 (3.7)	3.4 (2.5)
Median (min, max)	3.0 (1.0, 26.0)	2.0 (1.0, 23.0)	3.0 (1.0, 20.0)	3.0 (1.0, 30.0)	3.0 (1.0, 30.0)	3.0 (1.0, 22.0)	3.0 (1.0, 23.0)	3.0 (1.0, 21.0)	3.0 (1.0, 21.0)	3.0 (1.0, 28.0)	3.0 (1.0, 16.0)	3.0 (1.0, 15.0)	3.0 (1.0, 30.0)	3.0 (1.0, 28.0)	3.0 (1.0, 23.0)	3.0 (1.0, 21.0)
IQR	2.0	2.0	3.0	3.0	3.0	3.0	4.0	3.0	2.0	2.0	2.5	2.0	2.0	3.0	3.0	2.0
No admission to CCU	2,484 (79.1)	1,622 (84.9)	1,543 (87.8)	297 (66.3)	1,714 (83.2)	992 (87.6)	865 (91.1)	355 (83.3)	1,849 (83.2)	1,044 (88.1)	936 (88.6)	431 (79.4)	3,563 (83.2)	2,036 (87.9)	1,801 (89.8)	786 (81.1)
Missing	1 (0.0)	2 (0.1)	2 (0.1)	1 (0.2)	2 (0.1)	1 (0.1)	1 (0.1)	0 (0.0)	2 (0.1)	1 (0.1)	0 (0.0)	0 (0.0)	4 (0.1)	2 (0.1)	1 (0.0)	0 (0.0)

Year	2011 – 2013				2014				2015				2014 – 2015			
	Malay	Chinese	Indian	##Others	Malay	Chinese	Indian	##Others	Malay	Chinese	Indian	##Others	Malay	Chinese	Indian	##Others
ACS stratum																
Total	3,141	1,912	1,759	449	2,062	1,133	951	426	2,224	1,186	1,056	543	4,286	2,319	2,007	969
Number of days in ICU/CICU																
N	37	8	11	5	50	26	19	7	14	11	4	4	64	37	23	11
Mean (SD)	5.5 (5.0)	4.4 (2.0)	5.1 (3.4)	8.8 (10.0)	3.3 (1.7)	5.1 (3.1)	3.1 (1.4)	4.1 (3.0)	4.3 (3.2)	4.2 (2.2)	4.3 (1.7)	6.5 (5.9)	3.5 (2.1)	4.8 (2.9)	3.3 (1.5)	5.0 (4.2)
Median (min, max)	4.0 (1.0, 22.0)	4.5 (1.0, 7.0)	4.0 (2.0, 12.0)	4.0 (1.0, 26.0)	3.0 (1.0, 9.0)	4.0 (1.0, 12.0)	2.0 (1.0, 6.0)	3.0 (2.0, 9.0)	3.0 (1.0, 12.0)	3.0 (2.0, 9.0)	4.5 (2.0, 6.0)	4.5 (2.0, 15.0)	3.0 (1.0, 12.0)	4.0 (1.0, 12.0)	3.0 (1.0, 6.0)	3.0 (2.0, 15.0)
IQR	4.0	3.0	5.0	5.0	2.0	4.0	2.0	6.0	4.0	3.0	2.5	8.0	2.0	3.0	3.0	6.0
No admission to ICU/CICU	3,104 (98.9)	1,904 (99.7)	1,748 (99.5)	444 (99.1)	2,012 (97.7)	1,107 (97.8)	932 (98.1)	419 (98.4)	2,210 (99.5)	1,175 (99.2)	1,052 (99.6)	539 (99.3)	4,222 (98.6)	2,282 (98.5)	1,984 (98.9)	958 (98.9)
Missing	3,104 (98.8)	1,904 (99.6)	1,748 (99.4)	444 (98.9)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
Cardiac catheterisation, No. (%)																
Yes	751 (27.5)	465 (27.2)	447 (30.2)	138 (34.4)	457 (23.4)	270 (24.5)	214 (23.3)	172 (41.6)	588 (27.1)	348 (30.0)	307 (29.3)	236 (44.9)	1,045 (25.4)	618 (27.3)	521 (26.5)	408 (43.5)
No	1,904 (69.6)	1,205 (70.5)	994 (67.2)	255 (63.6)	1,488 (76.3)	830 (75.2)	702 (76.4)	240 (58.1)	1,572 (72.5)	810 (69.9)	740 (70.6)	289 (54.9)	3,060 (74.3)	1,640 (72.5)	1,442 (73.3)	529 (56.3)
Number transferred to another centre	79 (2.9)	39 (2.3)	39 (2.6)	8 (2.0)	6 (0.3)	3 (0.3)	3 (0.3)	1 (0.2)	7 (0.3)	1 (0.1)	1 (0.1)	1 (0.2)	13 (0.3)	4 (0.2)	4 (0.2)	2 (0.2)
Missing	407	203	279	48	111	30	32	13	57	27	8	17	168	57	40	30

Year	2011 – 2013				2014				2015				2014 – 2015			
	Malay	Chinese	Indian	#Others	Malay	Chinese	Indian	#Others	Malay	Chinese	Indian	#Others	Malay	Chinese	Indian	#Others
ACS stratum																
Total	3,141	1,912	1,759	449	2,062	1,133	951	426	2,224	1,186	1,056	543	4,286	2,319	2,007	969
Percutaneous coronary intervention, No. (%)																
Yes	420 (16.1)	243 (14.8)	242 (17.5)	76 (20.3)	247 (12.9)	136 (12.5)	122 (13.4)	89 (23.1)	323 (15.4)	189 (16.7)	182 (17.7)	126 (25.8)	570 (14.2)	325 (14.7)	304 (15.7)	215 (24.6)
No	2,178 (83.7)	1,393 (85.0)	1,140 (82.4)	298 (79.7)	1,670 (86.9)	948 (87.4)	787 (86.6)	294 (76.4)	1,708 (84.2)	944 (83.3)	848 (82.3)	362 (74.0)	3,438 (85.5)	1,892 (85.3)	1,635 (84.3)	656 (75.1)
Not applicable	5 (0.2)	2 (0.1)	1 (0.1)	0 (0.0)	4 (0.2)	1 (0.1)	0 (0.0)	2 (0.5)	9 (0.4)	0 (0.0)	1 (0.1)	1 (0.2)	13 (0.3)	1 (0.0)	1 (0.1)	3 (0.3)
Missing	538	274	376	75	141	48	42	41	124	53	25	54	265	101	67	95
CABG, No. (%)																
Yes	53 (2.1)	36 (2.2)	34 (2.5)	9 (2.7)	29 (1.5)	20 (1.9)	19 (2.1)	15 (4.1)	20 (0.9)	26 (2.3)	16 (1.6)	6 (1.2)	49 (1.2)	46 (2.1)	35 (1.8)	21 (2.4)
No	2,468 (97.7)	1,566 (97.6)	1,320 (96.9)	325 (97.0)	1,893 (97.7)	1,057 (97.8)	893 (97.9)	352 (95.4)	2,095 (98.5)	1,111 (97.5)	1,002 (98.4)	483 (97.6)	3,988 (98.2)	2,168 (97.7)	1,895 (98.2)	835 (96.6)
Not applicable	6 (0.2)	2 (0.1)	8 (0.6)	1 (0.3)	15 (0.8)	4 (0.4)	0 (0.0)	2 (0.5)	11 (0.5)	2 (0.2)	0 (0.0)	6 (1.2)	26 (0.6)	6 (0.3)	0 (0.0)	8 (0.9)
Missing	614	308	397	114	125	52	39	57	98	47	38	48	223	99	77	105
Pre-admission aspirin use, No. (%)																
Yes	1,478 (50.4)	932 (51.4)	949 (58.1)	185 (43.4)	1,116 (56.0)	600 (55.0)	578 (62.7)	220 (54.3)	1,147 (53.3)	625 (54.0)	622 (60.8)	273 (51.6)	2,263 (54.6)	1,225 (54.5)	1,200 (61.7)	493 (52.8)
No	1,452 (49.6)	880 (48.6)	685 (41.9)	241 (56.6)	877 (44.0)	491 (45.0)	344 (37.3)	185 (45.7)	1,006 (46.7)	532 (46.0)	401 (39.2)	256 (48.4)	1,883 (45.4)	1,023 (45.5)	745 (38.3)	441 (47.2)
Missing	211	100	125	23	69	42	29	21	71	29	33	14	140	71	62	35

Year	2011 – 2013				2014				2015				2014 – 2015			
	Malay	Chinese	Indian	#Others	Malay	Chinese	Indian	#Others	Malay	Chinese	Indian	#Others	Malay	Chinese	Indian	#Others
Total	3,141	1,912	1,759	449	2,062	1,133	951	426	2,224	1,186	1,056	543	4,286	2,319	2,007	969
Pharmacological therapy given during admission, No. (%)																
Aspirin	2,887 (96.3)	1,778 (96.0)	1,610 (95.8)	428 (97.9)	1,949 (97.1)	1,078 (96.3)	913 (97.5)	413 (98.3)	2,123 (96.7)	1,119 (95.2)	1,007 (96.1)	501 (94.2)	4,072 (96.9)	2,197 (95.7)	1,920 (96.8)	914 (96.0)
*ADP antagonist	2,423 (87.1)	1,536 (87.8)	1,392 (87.2)	334 (83.9)	1,905 (96.2)	1,042 (94.4)	901 (97.4)	363 (87.9)	2,094 (95.7)	1,118 (95.6)	1,011 (97.3)	495 (93.0)	3,999 (96.0)	2,160 (95.0)	1,912 (97.4)	858 (90.8)
GP receptor inhibitor	47 (1.8)	28 (1.7)	28 (1.9)	9 (2.4)	8 (0.5)	1 (0.1)	2 (0.3)	1 (0.3)	6 (0.3)	1 (0.1)	4 (0.4)	2 (0.4)	14 (0.4)	2 (0.1)	6 (0.4)	3 (0.3)
Unfractionated heparin	284 (11.1)	111 (6.8)	160 (10.7)	25 (6.7)	116 (6.6)	32 (3.2)	48 (6.0)	13 (3.4)	138 (7.1)	37 (3.4)	71 (7.8)	16 (3.2)	254 (6.9)	69 (3.3)	119 (7.0)	29 (3.3)
LMWH	1,325 (49.7)	939 (55.1)	830 (53.6)	243 (59.9)	275 (15.5)	317 (31.0)	189 (23.4)	125 (32.6)	359 (18.1)	300 (27.4)	208 (22.3)	142 (27.8)	634 (29.2)	617 (29.2)	397 (22.8)	267 (29.9)
Fondaparinux	771 (74.0)	464 (69.7)	403 (73.7)	82 (50.3)	1,444 (76.7)	662 (61.9)	687 (76.8)	175 (44.4)	1,627 (76.8)	758 (65.7)	783 (77.1)	257 (49.0)	3,071 (76.8)	1,420 (63.8)	1,470 (77.0)	432 (47.0)
Oral anticoagulant (eg. Warfarin)	22 (2.3)	18 (2.9)	12 (2.4)	7 (4.4)	52 (3.0)	37 (3.7)	13 (1.6)	9 (2.4)	54 (2.8)	41 (3.8)	11 (1.2)	17 (3.4)	106 (2.9)	78 (3.7)	24 (1.4)	26 (2.9)
Beta blocker	1,854 (67.1)	1,208 (69.2)	1,075 (67.3)	258 (62.6)	1,195 (63.2)	672 (62.7)	555 (62.6)	239 (59.8)	1,350 (63.7)	740 (64.2)	672 (65.9)	377 (71.1)	2,545 (63.4)	1,412 (63.5)	1,227 (64.4)	616 (66.2)
ACE inhibitor	1,636 (60.1)	960 (56.1)	974 (61.8)	208 (51.2)	945 (50.9)	497 (47.1)	449 (52.0)	182 (46.0)	1,120 (53.2)	574 (50.1)	537 (53.8)	309 (58.9)	2,065 (52.1)	1,071 (48.7)	986 (53.0)	491 (53.3)
Angiotensin II receptor blocker	258 (10.1)	169 (10.3)	170 (11.3)	37 (9.6)	161 (9.1)	100 (9.8)	84 (10.3)	31 (8.1)	158 (8.1)	87 (8.0)	89 (9.7)	53 (10.4)	319 (8.6)	187 (8.9)	173 (10.0)	84 (9.4)
Statin	2,659 (92.0)	1,638 (90.5)	1,528 (92.5)	397 (93.2)	1,829 (92.6)	997 (90.4)	847 (92.5)	358 (87.3)	2,052 (93.4)	1,097 (93.4)	987 (94.5)	485 (91.2)	3,881 (93.0)	2,094 (92.0)	1,834 (93.6)	843 (89.5)
Other lipid lowering agent	155 (6.1)	83 (5.1)	80 (5.3)	17 (4.4)	70 (4.0)	25 (2.5)	31 (3.9)	8 (2.1)	69 (3.6)	24 (2.2)	33 (3.7)	7 (1.4)	139 (3.8)	49 (2.4)	64 (3.8)	15 (1.7)
Diuretics	877 (33.1)	548 (32.4)	508 (33.1)	100 (25.6)	616 (34.0)	350 (33.9)	311 (37.7)	91 (23.7)	649 (32.5)	334 (30.5)	316 (34.0)	125 (24.6)	1,265 (33.2)	684 (32.2)	627 (35.7)	216 (24.2)
Calcium antagonist	562 (21.8)	369 (22.3)	313 (20.8)	76 (19.8)	363 (20.5)	249 (24.3)	188 (22.7)	67 (17.3)	438 (22.2)	239 (21.7)	190 (20.6)	83 (16.3)	801 (21.4)	488 (23.0)	378 (21.6)	150 (16.8)
Oral hypoglycaemic agent	783 (29.7)	460 (27.6)	632 (40.6)	90 (23.2)	546 (30.5)	290 (28.2)	347 (41.4)	85 (22.1)	577 (29.0)	298 (26.9)	439 (45.4)	97 (18.9)	1,123 (27.5)	588 (27.5)	786 (43.5)	182 (20.3)
Insulin	610 (23.3)	295 (17.7)	495 (31.9)	54 (14.0)	451 (25.3)	185 (18.2)	298 (35.8)	53 (13.9)	526 (26.7)	197 (18.0)	386 (41.0)	57 (11.2)	977 (26.0)	382 (18.1)	684 (38.6)	110 (12.4)
Anti-arrhythmic agent	179 (7.0)	107 (6.5)	62 (4.2)	30 (7.8)	95 (5.5)	69 (6.9)	38 (4.8)	46 (12.2)	93 (4.9)	50 (4.7)	30 (3.4)	26 (5.1)	188 (5.2)	119 (5.7)	68 (4.1)	72 (8.2)

Year	2011 – 2013				2014				2015				2014 – 2015			
	Malay	Chinese	Indian	##Others	Malay	Chinese	Indian	##Others	Malay	Chinese	Indian	##Others	Malay	Chinese	Indian	##Others
Total	3,141	1,912	1,759	449	2,062	1,133	951	426	2,224	1,186	1,056	543	4,286	2,319	2,007	969
Pharmacological therapy given at discharge, No. (%)																
Aspirin	2,599 (94.3)	1,605 (93.8)	1,483 (93.6)	366 (95.3)	1,736 (93.4)	942 (91.6)	848 (94.9)	343 (87.3)	1,881 (93.0)	969 (90.1)	927 (93.8)	442 (87.9)	3,617 (93.2)	1,911 (90.9)	1,775 (94.3)	785 (87.6)
*ADP antagonist	2,123 (83.1)	1,336 (83.2)	1,250 (82.9)	271 (77.2)	1,639 (89.8)	880 (87.3)	791 (90.0)	304 (79.0)	1,815 (90.9)	918 (86.4)	905 (93.4)	409 (81.8)	3,454 (90.4)	1,798 (86.9)	1,696 (91.8)	713 (80.6)
Fondaparinux	51 (5.4)	27 (4.4)	41 (8.0)	6 (3.9)	59 (3.6)	24 (2.6)	17 (2.2)	3 (0.8)	68 (3.7)	18 (1.8)	25 (2.7)	15 (3.1)	127 (3.6)	42 (2.1)	42 (2.5)	18 (2.1)
Oral anticoagulant (eg. Warfarin)	22 (2.4)	22 (3.7)	12 (2.4)	8 (5.2)	51 (3.2)	41 (4.5)	13 (1.7)	13 (3.7)	66 (3.7)	55 (5.6)	19 (2.2)	22 (4.5)	117 (3.5)	96 (5.0)	32 (2.0)	35 (4.2)
Beta blocker	1,783 (69.3)	1,153 (70.9)	1,026 (67.5)	234 (63.6)	1,176 (66.4)	657 (66.2)	529 (62.5)	251 (65.7)	1,322 (67.2)	716 (67.4)	680 (70.2)	359 (71.4)	2,498 (66.9)	1,373 (66.8)	1,209 (66.6)	610 (68.9)
ACE inhibitor	1,548 (60.7)	917 (57.7)	940 (62.4)	181 (49.5)	891 (51.4)	475 (48.7)	419 (50.5)	195 (51.7)	1,086 (55.8)	542 (51.4)	516 (54.2)	287 (57.4)	1,977 (53.7)	1,017 (50.1)	935 (52.5)	482 (55.0)
Angiotensin II receptor blocker	232 (9.7)	157 (10.3)	148 (10.2)	32 (9.1)	167 (10.1)	100 (10.7)	83 (10.6)	34 (9.4)	161 (9.0)	101 (10.2)	99 (11.4)	63 (13.0)	328 (9.6)	201 (10.4)	182 (11.0)	97 (11.5)
Statin	2,468 (92.0)	1,529 (91.7)	1,431 (91.5)	342 (89.5)	1,683 (91.3)	926 (90.7)	790 (89.8)	352 (90.5)	1,868 (92.7)	992 (91.9)	919 (93.1)	456 (90.3)	3,551 (92.0)	1,918 (91.3)	1,709 (91.5)	808 (90.4)
Other lipid lowering agent	124 (5.2)	78 (5.1)	68 (4.7)	13 (3.7)	66 (4.1)	23 (2.5)	28 (3.7)	9 (2.5)	73 (4.1)	29 (2.9)	36 (4.2)	11 (2.3)	139 (4.1)	52 (2.7)	64 (4.0)	20 (2.4)
Diuretics	688 (28.0)	432 (27.8)	403 (27.5)	77 (21.6)	485 (28.9)	255 (26.9)	257 (32.5)	81 (22.1)	511 (28.1)	271 (27.0)	253 (29.0)	104 (21.4)	996 (28.5)	526 (26.9)	510 (30.7)	185 (21.7)
Calcium antagonist	494 (20.4)	333 (21.7)	270 (18.7)	67 (18.9)	333 (20.2)	228 (24.2)	173 (21.9)	66 (18.1)	383 (21.1)	215 (21.3)	185 (21.0)	76 (15.7)	716 (20.6)	443 (22.7)	358 (21.4)	142 (16.7)
Oral hypoglycaemic agent	800 (32.2)	462 (29.7)	630 (42.4)	88 (24.8)	537 (32.0)	291 (30.8)	352 (43.2)	93 (25.5)	589 (32.0)	297 (29.2)	446 (48.4)	98 (20.0)	1,126 (32.0)	588 (30.0)	798 (46.0)	191 (22.4)
Insulin	410 (16.7)	177 (11.5)	363 (24.6)	28 (7.9)	326 (19.7)	101 (10.8)	227 (28.5)	35 (9.7)	380 (20.9)	130 (12.9)	276 (31.2)	44 (9.1)	706 (20.3)	231 (11.9)	503 (29.9)	79 (9.3)
Anti-arrhythmic agent	140 (5.8)	74 (4.9)	57 (4.0)	20 (5.7)	73 (4.5)	53 (5.8)	33 (4.3)	43 (11.9)	60 (3.4)	33 (3.3)	22 (2.6)	20 (4.2)	133 (3.9)	86 (4.5)	55 (3.4)	63 (7.5)

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

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

* For CRF version 2013, details of the breakdown are available for ticlopidine, clopidogrel, prasugrel and ticagrelor. These drugs 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, NCV-ACS Registry, 2014 – 2015

Year	ACS stratum	2011 – 2013						2014									
		STEMI		NSTEMI		Unstable Angina		STEMI		NSTEMI		Unstable Angina					
		PCI centre	Non-PCI centre	PCI centre	Non-PCI centre	PCI centre	Non-PCI centre	PCI centre	Non-PCI centre	PCI centre	Non-PCI centre	PCI centre	Non-PCI centre				
	No. (%)	No. (%)	No. (%)	No. (%)	No. (%)	No. (%)	No. (%)	No. (%)	No. (%)	No. (%)	No. (%)	No. (%)	No. (%)	No. (%)	No. (%)	No. (%)	No. (%)
Total	5,694	1,808	3,342	500	3,136	283	3,236	650	1,774	275	2,406	117					
Fibrinolytic therapy, No (%)																	
Given at this centre	2,337 (42.1)	1,380 (77.6)					1,309 (40.7)	497 (77.1)									
Given at another centre prior to transfer	1,602 (28.9)	168 (9.4)					920 (28.6)	46 (7.1)									
Not given-Proceeded directly to primary angioplasty	690 (12.4)	1 (0.1)					411 (12.8)	0 (0.0)									
Not given-Missed thrombolysis	678 (12.2)	149 (8.4)					451 (14.0)	80 (12.4)									
Not given-Patient refusal	28 (0.5)	6 (0.3)					9 (0.3)	1 (0.2)									
Not given-Contraindicated	210 (3.8)	75 (4.2)					120 (3.7)	21 (3.3)									
Not applicable	21	3					8	1									
Not available	44	4					8	4									
Missing	84	22					0	0									
Percutaneous coronary intervention, No (%)																	
Yes	2,208 (42.2)	0 (0.0)	685 (23.7)	0 (0.0)	296 (11.4)	0 (0.0)	1,424 (46.6)	0 (0.0)	340 (20.2)	0 (0.0)	254 (11.0)	0 (0.0)					
No	3,016 (57.6)	1,375 (98.6)	2,202 (76.2)	375 (99.5)	2,297 (88.4)	135 (100.0)	1,626 (53.3)	579 (98.1)	1,339 (79.7)	218 (98.2)	2,052 (89.0)	90 (98.9)					
Not applicable	8 (0.2)	19 (1.4)	2 (0.1)	2 (0.5)	4 (0.2)	0 (0.0)	3 (0.1)	11 (1.9)	2 (0.1)	4 (1.8)	0 (0.0)	1 (1.1)					
Missing	462	414	453	123	539	148	183	60	93	53	100	26					
CABG, No (%)																	
Yes	54 (1.1)	0 (0.0)	83 (3.0)	0 (0.0)	49 (1.9)	0 (0.0)	30 (1.0)	0 (0.0)	39 (2.3)	0 (0.0)	44 (1.9)	0 (0.0)					
No	4,934 (98.6)	1,294 (98.2)	2,726 (96.9)	289 (99.3)	2,563 (97.7)	101 (100.0)	2,992 (98.8)	547 (95.5)	1,627 (97.5)	211 (95.5)	2,274 (98.0)	83 (93.3)					
Not applicable	16 (0.3)	24 (1.8)	4 (0.1)	2 (0.7)	11 (0.4)	0 (0.0)	6 (0.2)	26 (4.5)	2 (0.1)	10 (4.5)	3 (0.1)	6 (6.7)					
Missing	690	490	529	209	513	182	208	77	106	54	85	28					

Year	2015						2014 – 2015					
	STEMI		NSTEMI		Unstable Angina		STEMI		NSTEMI		Unstable Angina	
	PCI centre	Non-PCI centre	PCI centre	Non-PCI centre	PCI centre	Non-PCI centre	PCI centre	Non-PCI centre	PCI centre	Non-PCI centre	PCI centre	Non-PCI centre
ACS stratum	No. (%)	No. (%)	No. (%)	No. (%)	No. (%)	No. (%)	No. (%)	No. (%)	No. (%)	No. (%)	No. (%)	No. (%)
Total	3,603	701	2,081	349	2,442	137	6,839	1,351	3,855	624	4,848	254
Fibrinolytic therapy, No (%)												
Given at this centre	1,345 (37.6)	516 (73.8)					2,654 (39.0)	1,013 (75.4)				
Given at another centre prior to transfer	967 (27.0)	40 (5.7)					1,887 (27.8)	86 (6.4)				
Not given-Proceeded directly to primary angioplasty	703 (19.6)	1 (0.1)					1,114 (16.4)	1 (0.1)				
Not given-Missed thrombolysis	452 (12.6)	105 (15.0)					903 (13.3)	185 (13.8)				
Not given-Patient refusal	13 (0.4)	1 (0.1)					22 (0.3)	2 (0.1)				
Not given-Contraindicated	100 (2.8)	36 (5.2)					220 (3.2)	57 (4.2)				
Not applicable	13	2					21	3				
Not available	10	0					18	4				
Missing	0	0					0	0				
Percutaneous coronary intervention, No (%)												
Yes	1,750 (52.5)	0 (0.0)	543 (27.6)	0 (0.0)	275 (11.8)	0 (0.0)	3,174 (49.7)	0 (0.0)	883 (24.2)	0 (0.0)	529 (11.4)	0 (0.0)
No	1,579 (47.3)	638 (96.4)	1,419 (72.3)	325 (98.2)	2,050 (88.0)	128 (99.2)	3,205 (50.2)	1,217 (97.2)	2,758 (75.7)	543 (98.2)	4,102 (88.5)	218 (99.1)
Not applicable	7 (0.2)	24 (3.6)	2 (0.1)	6 (1.8)	4 (0.2)	1 (0.8)	10 (0.2)	35 (2.8)	4 (0.1)	10 (1.8)	4 (0.1)	2 (0.9)
Missing	267	39	117	18	113	8	450	99	210	71	213	34
CABG, No (%)												
Yes	39 (1.1)	0 (0.0)	31 (1.6)	0 (0.0)	37 (1.6)	0 (0.0)	69 (1.1)	0 (0.0)	70 (1.9)	0 (0.0)	81 (1.7)	0 (0.0)
No	3,362 (98.7)	625 (97.0)	1,928 (98.0)	334 (98.8)	2,301 (98.2)	128 (99.2)	6,354 (98.7)	1,172 (96.3)	3,555 (97.8)	545 (97.5)	4,575 (98.1)	211 (96.8)
Not applicable	7 (0.2)	19 (3.0)	9 (0.5)	4 (1.2)	5 (0.2)	1 (0.8)	13 (0.2)	45 (3.7)	11 (0.3)	14 (2.5)	8 (0.2)	7 (3.2)
Missing	195	57	113	11	99	8	403	134	219	65	184	36

Table 4.10 Cardiac catheterisation for ACS patients by TIMI Risk Score, NCVd-ACS Registry, 2014 – 2015

Year	2011 – 2013				2014				2015				2014 – 2015			
	Cardiac catheterisation				Cardiac catheterisation				Cardiac catheterisation				Cardiac catheterisation			
TIMI risk score	Yes	No	No-transfer	Missing	Yes	No	No-transfer	Missing	Yes	No	No-transfer	Missing	Yes	No	No-transfer	Missing
NSTEMI/UA																
(0 – 1)	520 (28.9)	1,395 (32.0)	55 (33.3)	324 (34.6)	317 (28.5)	796 (24.4)	4 (30.8)	48 (25.8)	459 (31.0)	847 (24.8)	4 (40.0)	27 (24.8)	776 (29.9)	1,643 (24.6)	8 (34.8)	75 (25.4)
(2 – 4)	1,196 (66.4)	2,729 (62.6)	98 (59.4)	574 (61.3)	734 (65.9)	2,155 (66.1)	7 (53.8)	120 (64.5)	921 (62.3)	2,266 (66.4)	6 (60.0)	72 (66.1)	1,655 (63.9)	4,421 (66.3)	13 (56.5)	192 (65.1)
(5 – 7)	85 (4.7)	234 (5.4)	12 (7.3)	39 (4.2)	62 (5.6)	309 (9.5)	2 (15.4)	18 (9.7)	99 (6.7)	298 (8.7)	0 (0.0)	10 (9.2)	161 (6.2)	607 (9.1)	2 (8.7)	28 (9.5)
STEMI																
(0 – 2)	830 (46.1)	1,200 (27.5)	52 (31.5)	159 (17.0)	595 (53.5)	579 (17.8)	6 (46.2)	31 (16.7)	826 (55.8)	607 (17.8)	4 (40.0)	22 (20.2)	1,421 (54.8)	1,186 (17.8)	10 (43.5)	53 (18.0)
(3 – 4)	851 (47.3)	1,221 (28.0)	54 (32.7)	160 (17.1)	534 (48.0)	612 (18.8)	8 (61.5)	40 (21.5)	707 (47.8)	616 (18.1)	9 (90.0)	23 (21.1)	1,241 (47.9)	1,228 (18.4)	17 (73.9)	63 (21.4)
(5 – 7)	762 (42.3)	1,338 (30.7)	79 (47.9)	143 (15.3)	518 (46.5)	615 (18.9)	4 (30.8)	34 (18.3)	516 (34.9)	608 (17.8)	10 (100.0)	28 (25.7)	1,034 (39.9)	1,223 (18.3)	14 (60.9)	62 (21.0)
(> 7)	207 (11.5)	400 (9.2)	21 (12.7)	25 (2.7)	122 (11.0)	181 (5.6)	0 (0.0)	7 (3.8)	112 (7.6)	207 (6.1)	1 (10.0)	8 (7.3)	234 (9.0)	388 (5.8)	1 (4.3)	15 (5.1)