CHAPTER 3 :
CLINICAL PRESENTATIONS & INVESTIGATIONS

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Summary

1. Cardiac presentation of patients with ACS for period 2006-2008 and 2009-2010 were almost similar for STEMI (47% in 2006-2008 and 50% in 2009-2010) and NSTEMI (29% in both periods).

2. Majority of patients with ACS presented with low TIMI score.

3. Patients who represented with STEMI had higher levels of LDL-C compared to those with NSTEMI/UA.

4. Patients of younger age group (age 20 to 40 years) had higher level of lipids.

5. Median door-to-needle time is 50mins for 2006-2010. However, there was an encouraging downtrend in DNT over the five-year period. Longer DNT was observed amongst elderly, diabetic and females.

This chapter presents the results of clinical presentation and investigations of patients who were notified and registered in the ACS registry in year 2006 to 2010.
The outlines of the discussion are:
1. Epidemiology
2. Clinical presentation
3. Diagnosis
4. Risk factors: diabetes, dyslipidemia, hypertension
5. Timeliness to treatment
6. Discussion

Epidemiology & Clinical Presentation

Referring to NCVD-ACS registry from 2006 to 2010, majority of patients presented with STEMI (48%), followed by NSTEMI (30%) and unstable angina (22%). [Table 3.1] Patients with ACS had a male preponderance over female (76% male, 24% female). More male patients have STEMI relative to female patients. However, for NSTEMI and unstable angina, females have relatively higher percentage compared to males. The similar trend was observed over five years (2006-2010). [Table 3.3]

Elderly or female patients tend to have higher systolic blood pressure on presentation. Young ACS patients have higher total cholesterol, LDL, TG and lower HDL as compared to their counterparts. Unhealthy lifestyles, poor unbalanced diet may contribute to these findings. Whereas, less severe clinical presentation (NSTEMI/UA) in the middle and elderly aged groups may be explained by possible presence of collaterals.

The majority of patients with STEMI present with Killip class I (54%), II (19%), III (4%) and IV (6%). For NSTEMI, majority of patients presented with Killip class I (43%), II (18%), III (6%) and IV (3%). Similar trend was observed for unstable angina patients. If respective Killip class was assessed individually, Killip II/III was more common in STEMI/NSTEMI than in unstable angina group; Killip IV was common in STEMI than NSTEMI/UA.

With regards to TIMI risk score, the majority of patients with ACS presented with low TIMI score. Approximately 55% of ACS patients presented with low TIMI score (<2); 37.5% with intermediate score (3-4); and minority of 7.6% with high score (5-7). There was a subtle up trending in intermediate TIMI score over five-year period.

There was a trend towards patients presenting early (at 0-2 episodes of angina), with median pain to needle time was about four hours (240mins). This may be due to increasing public awareness due to media education and MY health portal (a portal to educate the public on coronary artery disease).

Diagnosis

ECG patterns for STEMI revealed that anterior territory was the commonest affected (57%), followed by inferior (46%), lateral involvement in 23%, true posterior and right ventricular in 8%, respectively. Similar trends observed across gender and age groups.

More than 90% of patients had biomarkers: CKMB, CK, Troponin T or I assayed at presentation. CK was the most widely used biomarker, followed by CKMB and Troponin T or I. Interestingly, we observed higher peak CK in male as compared to female patients (50% vs. 30%).

Echocardiography: Left ventricular ejection fraction (EF) averaged at 46% in STEMI, 47% in NSTEMI, and 51% in unstable angina. No obvious difference amongst gender and age groups. However, diabetics had lower EF on presentation (45% in diabetic vs. 48% in non diabetic).

Risk Factors

1. Dyslipidaemia:
A trend of higher mean total cholesterol was seen in STEMI (5.45mmol/L); NSTEMI (5.19mmol/L); and unstable angina (5.06mmol/L), respectively. A similar trend was recorded with highest LDL-cholesterol in the STEMI group (3.51mmol/L) as compared to NSTEMI and unstable angina groups (3.2 and 3.1mmol/L), respectively. [Table 3.1]

In term of age group, the LDL cholesterols were notably highest amongst young ACS with 3.66mmol/L as compared to 3.48mmol/L (middle aged group) and 3.14mmol/L (elderly aged group). However, the mean HDL-C (1.1mmol/L) and mean triglyceride (2.0mmol/L) were similar for the three aged groups; and no difference in lipid profile between males and females. [Table 3.2 and Table 3.3]

2. Diabetics:
Overall, 41% of the STEMI cases were diabetic and the other 59% diabetic ACS presented as NSTEMI/UA. Systolic blood pressure and mean triglyceride level were higher in diabetics as compared to non-diabetics. Similar in term of diastolic blood pressure, Killip classes, mean total cholesterol and LDL. [Table 3.4]

3. Hypertension:
Mean systolic blood pressure was lower in STEMI (134mmHg), as compared to NSTEMI/UA (142-144mmHg). The diastolic blood pressure, heart rate, and pulse pressure were similar in all three clinical presentations. Females and the elderly tend to present with higher systolic blood pressure. However, diastolic blood pressure, pulse pressure, and heart rate were similar across age and gender groups.

Timeliness to Treatment

Overall, amongst the 4,000 or so STEMI patients, between years 2006-2010, the median pain-to-needle time was 240 mins (4hours), whereas the median door-to-needle (DNT) was 50mins. The difference of pre-hospital pain-to-door time was approximately 190 mins (three hours).

There was an encouraging downward trend in median DNT over five-year period: 60mins (2006), 53mins (2007), 50mins (2008), and 45mins in both 2009 and 2010. Continuous efforts in education, organizational change, triage-diagnosis-decision teamwork are needed to ensure continual improvement in timely diagnosis and reperfusion, in order to achieve the DNT benchmark of within 30mins.

Discussion

The findings may not reflect the level of practice of ACS in Malaysia, as majority of the notifications were from tertiary centers/ hospitals, with cardiac care units.

NSTEMI-ACS may be under-diagnosed in settings where newer biomarkers (Troponins) were not consistently available.

The median DNT was longer in female, elderly, diabetic patients due to pre-hospital delay, atypical presentations and lack of awareness, ECG-delay, or decision delay due to perceived risk/benefit of thrombolytic therapy (especially in elderly).

Table 3.1 Cardiac presentation of patients with ACS by ACS stratum, NCVD-ACS Registry, 2006-2010

Year	2006-2008			2009			2010			2006-2010		
ACS Stratum	STEMI	NSTEMI	UA	STEMI	NSTEMI	UA	STEMI	NSTEMI	UA	STEMI	NSTEMI	UA
Total	**4647**	**2904**	**2320**	**1681**	**1046**	**867**	**1802**	**1008**	**591**	**8130**	**4958**	**3778**
Systolic blood pressure, mmHg												
N	4559	2840	2289	1654	1025	853	1771	987	586	7984	4852	3728
Mean (SD)	135 (29)	143 (30)	145 (27)	135 (28)	140 (29)	143 (26)	133 (28)	142 (28)	145 (26)	134 (28)	142 (30)	144 (27)
Median (min, max)	132 (60, 230)	140 (64, 230)	142 (60, 230)	132 (60, 228)	139 (63, 226)	142 (67, 228)	131 (60, 229)	140 (65, 230)	141 (82, 221)	132 (60, 230)	140 (63, 230)	142 (60, 230)
IQR	38	41	36	37	38	32	35	36	35	37	39	35
Diastolic blood pressure, mmHg												
N	4423	2786	2262	1609	1016	837	1725	962	574	7757	4764	3673
Mean (SD)	80 (17)	82 (17)	82 (14)	81 (17)	81 (16)	81 (14)	80 (17)	81 (16)	82 (14)	80 (17)	81 (16)	82 (14)
Median (min, max)	80 (22, 120)	81 (19, 120)	81 (32, 120)	80 (24, 120)	80 (34, 120)	81 (36, 119)	80 (29, 120)	81 (22, 120)	81 (26, 120)	80 (22, 120)	80 (19, 120)	81 (26, 120)
IQR	23	23	20	23	23	18	22	21	19	23	22	19
Pulse pressure, mmHg												
N	4399	2757	2250	1598	1008	836	1722	953	574	7719	4718	3660
Mean (SD)	53 (18)	60 (22)	62 (21)	52 (18)	58 (21)	61 (21)	52 (17)	60 (21)	62 (20)	52 (18)	60 (21)	62 (21)
Median (min, max)	50 (2, 133)	58 (2, 154)	60 (10, 144)	50 (6, 130)	55 (11, 146)	60 (3, 137)	50 (5, 128)	57 (7, 159)	60 (20, 140)	50 (2, 133)	57 (2, 159)	60 (3, 144)
IQR	22	29	27	22	26	27	21	26	27	22	28	27
Heart rate at presentation, beats/min												
N	4542	2854	2291	1653	1033	859	1772	991	583	7967	4878	3733
Mean (SD)	83 (22)	86 (22)	81 (19)	83 (21)	85 (21)	83 (20)	83 (22)	88 (22)	80 (18)	83 (22)	86 (22)	82 (19)
Median (min, max)	80 (30, 200)	84 (29, 191)	80 (30, 176)	81 (25, 180)	83 (30, 189)	81 (38, 183)	80 (28, 180)	86 (25, 181)	78 (42, 157)	80 (25, 200)	84 (25, 191)	80 (30, 183)
IQR	28	30	24	27	28	24	29	28	23	28	30	24

Year	2006-2008			2009			2010			2006-2010		
ACS Stratum	**STEMI**	**NSTEMI**	**UA**	**STEMI**	**NSTEMI**	**UA**	**STEMI**	**NSTEMI**	**UA**	**STEMI**	**NSTEMI**	**UA**
Total	**4647**	**2904**	**2320**	**1681**	**1046**	**867**	**1802**	**1008**	**591**	**8130**	**4958**	**3778**
Episodes of angina in past 24 hours, No. (%)												
0-2	2590 (56)	1295 (45)	974 (42)	817 (49)	409 (39)	352 (41)	768 (43)	387 (38)	246 (42)	4175 (51)	2091 (42)	1572 (42)
>2	139 (3)	124 (4)	174 (8)	19 (1)	28 (3)	18 (2)	41 (2)	28 (3)	27 (5)	199 (2)	180 (4)	219 (6)
Missing	1918 (41)	1485 (51)	1172 (51)	845 (50)	609 (58)	497 (57)	993 (55)	593 (59)	318 (54)	3756 (46)	2687 (54)	1987 (53)
Killip classification code, No. (%)												
I	2481 (53)	1125 (39)	1115 (48)	944 (56)	584 (56)	639 (74)	995 (55)	445 (44)	365 (62)	4420 (54)	2154 (43)	2119 (56)
II	912 (20)	515 (18)	275 (12)	334 (20)	175 (17)	65 (7)	307 (17)	215 (21)	68 (12)	1553 (19)	905 (18)	408 (11)
III	182 (4)	175 (6)	31 (1)	53 (3)	58 (6)	10 (1)	62 (3)	42 (4)	15 (3)	297 (4)	275 (6)	56 (1)
IV	251 (5)	77 (3)	13 (1)	99 (6)	24 (2)	7 (1)	143 (8)	29 (3)	1 (0)	493 (6)	130 (3)	21 (1)
Not stated/ inadequately described	821 (18)	1012 (35)	886 (38)	251 (15)	205 (20)	146 (17)	295 (16)	277 (27)	142 (24)	1367 (17)	1494 (30)	1174 (31)
Patients with any cardiac marker measurement done, No. (%)	4308 (93)	2770 (95)	2047 (88)	1582 (94)	1003 (96)	830 (96)	1649 (92)	980 (97)	552 (93)	7539 (93)	4753 (96)	3429 (91)
Peak CK-MB, Unit/L, No. (%)												
N	2282	2098	996	850	723	460	870	710	336	4002	3531	1792
>25 reference upper limits	1502 (66)	1176 (56)	0 (0)	511 (60)	386 (53)	0 (0)	463 (53)	403 (57)	0 (0)	2476 (62)	1965 (56)	0 (0)
Peak CK, Unit/L, No. (%)												
N	4051	2382	1859	1489	923	789	1546	877	486	7086	4182	3134
>2x reference upper limits	2936 (72)	914 (38)	0 (0)	1034 (69)	303 (33)	0 (0)	1118 (72)	275 (31)	0 (0)	5088 (72)	1492 (36)	0 (0)

Year	2006-2008			2009			2010			2006-2010		
ACS Stratum	STEMI	NSTEMI	UA	STEMI	NSTEMI	UA	STEMI	NSTEMI	UA	STEMI	NSTEMI	UA
Total	**4647**	**2904**	**2320**	**1681**	**1046**	**867**	**1802**	**1008**	**591**	**8130**	**4958**	**3778**
Peak TnT, No. (%)												
N	558	1058	54	347	505	20	343	519	186	1248	2082	260
Positive or > reference upper limits	535 (96)	959 (91)	0 (0)	334 (96)	478 (95)	0 (0)	312 (91)	419 (81)	0 (0)	1181 (95)	1856 (89)	0 (0)
Peak TnI, No. (%)												
N	147	308	164	27	57	16	83	269	184	257	634	364
Positive or > reference upper limits	135 (92)	252 (82)	0 (0)	26 (96)	49 (86)	0 (0)	71 (86)	240 (89)	0 (0)	232 (90)	541 (85)	0 (0)
Total cholesterol, mmol/L												
N	3666	1936	1454	1320	661	657	1327	641	376	6313	3238	2487
Mean (SD)	5.44 (1.32)	5.17 (1.33)	5.08 (1.30)	5.49 (1.33)	5.28 (1.44)	5.11 (1.24)	5.45 (1.33)	5.16 (1.41)	4.88 (1.18)	5.45 (1.33)	5.19 (1.37)	5.06 (1.27)
Median (min, max)	5.30 (3.00, 14.70)	5.00 (3.00, 12.92)	4.90 (3.00, 16.10)	5.49 (3.00, 19.90)	5.10 (3.00, 13.50)	5.00 (3.00, 12.10)	5.40 (3.00, 16.23)	4.90 (3.00, 13.70)	4.70 (3.00, 10.00)	5.35 (3.00, 19.90)	5.00 (3.00, 13.70)	4.90 (3.00, 16.10)
IQR	1.70	1.83	1.78	1.72	1.60	1.60	1.70	1.90	1.60	1.70	1.75	1.70
HDL-C, mmol/L												
N	3561	1993	1483	1320	679	671	1311	668	386	6192	3340	2540
Mean (SD)	1.12 (.36)	1.12 (.37)	1.09 (.36)	1.09 (.33)	1.11 (.38)	1.08 (.33)	1.09 (.3)	1.09 (.31)	1.10 (.29)	1.11 (.34)	1.11 (.36)	1.09 (.34)
Median (min, max)	1.10 (.50, 4.94)	1.07 (.50, 4.40)	1.03 (.50, 4.50)	1.04 (.50, 4.60)	1.04 (.50, 4.30)	1.04 (.50, 4.32)	1.10 (.50, 3.68)	1.04 (.50, 2.40)	1.07 (.50, 2.32)	1.09 (.50, 4.94)	1.06 (.50, 4.40)	1.04 (.50, 4.50)
IQR	0.40	0.40	0.36	0.36	0.35	0.34	0.36	0.38	0.37	0.39	0.39	0.36

Year	2006-2008			2009			2010			2006-2010		
ACS Stratum	STEMI	NSTEMI	UA	STEMI	NSTEMI	UA	STEMI	NSTEMI	UA	STEMI	NSTEMI	UA
Total	4647	2904	2320	1681	1046	867	1802	1008	591	8130	4958	3778
LDL-C, mmol/L												
N	3511	1964	1436	1324	682	676	1308	661	382	6143	3307	2494
Mean (SD)	3.47 (1.25)	3.16 (1.21)	3.08 (1.13)	3.56 (1.17)	3.32 (1.30)	3.23 (1.18)	3.53 (1.20)	3.22 (1.31)	2.94 (1.09)	3.51 (1.22)	3.20 (1.25)	3.10 (1.14)
Median (min, max)	3.40 (1.00, 14.60)	3.03 (1.00, 10.08)	2.98 (1.00, 8.90)	3.50 (1.00, 13.00)	3.19 (1.10, 10.84)	3.10 (1.13, 9.66)	3.43 (1.00, 11.50)	3.00 (1.00, 10.58)	2.73 (1.01, 8.30)	3.40 (1.00, 14.60)	3.08 (1.00, 10.84)	2.96 (1.00, 9.66)
IQR	1.6	1.66	1.54	1.55	1.62	1.67	1.57	1.72	1.5	1.55	1.65	1.57
Triglycerides, mmol/L												
N	3146	1671	1269	1133	583	599	1146	555	313	5425	2809	2181
Mean (SD)	2.05 (1.25)	2.06 (1.22)	2.20 (1.40)	1.91 (1.00)	1.91 (1.07)	1.86 (.92)	2.00 (1.24)	1.90 (1.17)	1.97 (1.07)	2.01 (1.20)	2.00 (1.18)	2.07 (1.25)
Median (min, max)	1.70 (1.00, 15.00)	1.70 (1.00, 12.90)	1.80 (1.00, 14.00)	1.62 (1.00, 12.20)	1.60 (1.00, 14.00)	1.60 (1.00, 9.01)	1.69 (1.00, 15.00)	1.57 (1.00, 12.92)	1.62 (1.00, 9.93)	1.70 (1.00, 15.00)	1.70 (1.00, 14.00)	1.70 (1.00, 14.00)
IQR	1.00	1.00	1.16	0.90	0.76	0.75	0.90	0.90	0.98	1.00	0.90	0.99
Left ventricular ejection fraction, %												
N	3010	1523	571	1166	593	342	1147	478	152	5323	2594	1065
Mean (SD)	46 (11)	47 (14)	50 (15)	46 (11)	47 (14)	53 (11)	45 (12)	46 (15)	52 (17)	46 (12)	47 (14)	51 (14)
Median (min, max)	45 (5, 80)	48 (9, 79)	52 (8, 80)	46 (5, 80)	49 (10, 79)	55 (10, 74)	45 (5, 80)	48 (5, 80)	55 (10, 79)	45 (5, 80)	48 (5, 80)	55 (8, 80)
IQR	13	21	20	15	18	10	14	22	25	13	21	19

Year	2006-2008			2009			2010			2006-2010		
ACS Stratum	**STEMI**	**NSTEMI**	**UA**	**STEMI**	**NSTEMI**	**UA**	**STEMI**	**NSTEMI**	**UA**	**STEMI**	**NSTEMI**	**UA**
Total	**4647**	**2904**	**2320**	**1681**	**1046**	**867**	**1802**	**1008**	**591**	**8130**	**4958**	**3778**
ECG, No. (%)												
Inferior leads	2116 (46)			808 (48)			829 (46)			3753 (46)		
Anterior leads	2688 (58)			932 (55)			1017 (56)			4637 (57)		
Lateral leads	1084 (23)			408 (24)			376 (21)			1868 (23)		
True posterior	439 (9)			114 (7)			133 (7)			686 (8)		
Right ventricle	387 (8)			120 (7)			117 (6)			624 (8)		
None	24 (1)			18 (1)			12 (1)			54 (1)		
Not stated/ inadequately described	31 (1)			7 (0)			30 (2)			68 (1)		
Pain to needle time, min												
N	2340			738			883			3961		
Mean (SD)	744.6 (4549.0)			8689.1 (176441.0)			1631.6 (20665.0)			2422.5 (76879.0)		
Median (min, max)	251.2 (15.3, 88000.0)			231.6 (2.2, 4732800.0)			229.4 (15.3, 528100.0)			240.3 (2.2, 4732800.0)		
IQR	290.5			255.6			286.2			281.8		

**Cardiac marker is defined as any of the following baseline investigations: 1) Peak CK-MB, 2) Peak CK, 3) Peak TnT, 4) Peak TnI whereby status Not Done="False" for all investigations
Note: Not all participating centre performed Troponin T or Troponin I tests
Note: Percentage is to the nearest decimal point

Table 3.2 Cardiac presentation of patients with ACS by age group (years), NCVD-ACS Registry, 2006-2010

Year	2008			2009			2010			Overall		
ACS Stratum	Young	Middle-age	Elderly	Young	Middle-age	Elderly	Young	Middle-age	Elderly	Young	Middle-age	Elderly
Total	**516**	**4793**	**4562**	**203**	**1707**	**1684**	**212**	**1691**	**1498**	**931**	**8193**	**7742**
ACS stratum, No. (%)												
STEMI	344 (67)	2556 (53)	1747 (38)	145 (71)	909 (53)	627 (37)	146 (69)	1007 (60)	649 (43)	635 (68)	4474 (55)	3021 (39)
NSTEMI	87 (17)	1200 (25)	1617 (35)	31 (15)	420 (25)	595 (35)	43 (20)	394 (23)	571 (38)	161 (17)	2014 (25)	2783 (36)
UA	85 (16)	1037 (22)	1198 (26)	27 (13)	378 (22)	462 (27)	23 (11)	290 (17)	278 (19)	135 (15)	1705 (21)	1938 (25)
Systolic blood pressure, mmHg												
N	506	4711	4471	201	1675	1656	208	1659	1477	915	8047	7602
Mean (SD)	134 (27)	138 (28)	142 (30)	130 (25)	138 (27)	140 (29)	132 (22)	136 (27)	140 (30)	133 (25)	137 (28)	141 (30)
Median (min, max)	130 (71, 225)	135 (60, 230)	140 (60, 230)	125 (80, 220)	135 (60, 226)	139 (60, 228)	132 (85, 220)	134 (60, 230)	140 (60, 230)	129 (71, 225)	135 (60, 230)	140 (60, 230)
IQR	35	37	41	32	35	39	29	33	40	32	35	40
Diastolic blood pressure, mmHg												
N	480	4585	4406	196	1632	1634	204	1609	1448	880	7828	7486
Mean (SD)	81 (17)	83 (16)	79 (17)	81 (16)	82 (16)	79 (16)	81 (15)	82 (16)	79 (17)	81 (16)	82 (16)	79 (16)
Median (min, max)	80 (38, 120)	82 (20, 120)	80 (19, 120)	81 (44, 117)	82 (24, 120)	78 (25, 120)	82 (22, 119)	82 (26, 120)	78 (29, 120)	80 (22, 120)	82 (20, 120)	79 (19, 120)
IQR	23	23	21	21	22	22	19	22	22	21	23	22
Pulse pressure, mmHg												
N	478	4558	4370	196	1621	1625	204	1604	1441	878	7785	7434
Mean (SD)	49 (15)	54 (18)	62 (22)	48 (15)	53 (18)	60 (21)	50 (16)	52 (17)	61 (21)	49 (15)	53 (18)	61 (21)
Median (min, max)	48 (2, 119)	50 (6, 144)	60 (2, 154)	46 (19, 119)	50 (6, 128)	58 (3, 146)	48 (20, 159)	50 (10, 116)	58 (5, 158)	47 (2, 159)	50 (6, 144)	59 (2, 158)
IQR	19	23	29	16	23	28	18	21	28	18	22	28

Year	2008			2009			2010			Overall		
ACS Stratum	Young	Middle-age	Elderly	Young	Middle-age	Elderly	Young	Middle-age	Elderly	Young	Middle-age	Elderly
Total	**516**	**4793**	**4562**	**203**	**1707**	**1684**	**212**	**1691**	**1498**	**931**	**8193**	**7742**
Heart rate at presentation, beats/min												
N	506	4715	4466	201	1685	1659	209	1661	1476	916	8063	7599
Mean (SD)	83 (19)	83 (21)	85 (22)	83 (20)	83 (20)	84 (22)	85 (19)	82 (20)	86 (23)	83 (19)	83 (20)	85 (22)
Median (min, max)	81 (34, 161)	80 (30, 200)	82 (29, 184)	81 (46, 183)	81 (25, 189)	82 (30, 187)	83 (48, 136)	80 (25, 181)	83 (30, 180)	81 (34, 183)	80 (25, 200)	82 (29, 187)
IQR	23	26	30	26	25	28	26	26	31	25	27	29
Episodes of angina in past 24 hours, No. (%)												
0–2	296 (57)	2488 (52)	2075 (45)	86 (42)	799 (47)	693 (41)	86 (41)	728 (43)	587 (39)	468 (50)	4015 (49)	3355 (43)
>2	17 (3)	214 (4)	206 (5)	2 (1)	31 (2)	32 (2)	8 (4)	46 (3)	42 (3)	27 (3)	293 (4)	278 (4)
Missing	203 (39)	2091 (44)	2281 (50)	115 (57)	877 (51)	959 (57)	118 (56)	917 (54)	869 (58)	436 (47)	3885 (47)	4109 (53)
Killip classification code, No. (%)												
I	321 (62)	2531 (53)	1869 (41)	128 (63)	1086 (64)	953 (57)	130 (61)	946 (56)	729 (49)	579 (62)	4563 (56)	3551 (46)
II	53 (10)	703 (15)	946 (21)	24 (12)	246 (14)	304 (18)	23 (11)	251 (15)	316 (21)	100 (11)	1201 (15)	1565 (20)
III	5 (1)	149 (3)	234 (5)	0 (0)	44 (3)	77 (5)	4 (2)	55 (3)	60 (4)	9 (1)	248 (3)	371 (5)
IV	9 (2)	158 (3)	174 (4)	9 (4)	55 (3)	66 (4)	11 (5)	84 (5)	78 (5)	29 (3)	297 (4)	318 (4)
Not stated/ inadequately described	128 (25)	1252 (26)	1339 (29)	42 (21)	276 (16)	284 (17)	44 (21)	355 (21)	315 (21)	214 (23)	1884 (23)	1937 (25)
Patients with any cardiac marker measurement done, No. (%)	464 (90)	4469 (93)	4192 (92)	194 (96)	1621 (95)	1600 (95)	199 (94)	1575 (93)	1407 (94)	857 (92)	7667 (94)	7197 (93)
Peak CK-MB, Unit/L, No. (%)												
N	255	2594	2527	110	932	991	121	897	898	486	4425	4414
>25 reference upper limits	141 (55)	1265 (49)	1272 (50)	62 (56)	390 (42)	445 (45)	55 (45)	379 (42)	432 (48)	258 (53)	2036 (46)	2147 (49)

Year	2008			2009			2010			Overall		
ACS Stratum	Young	Middle-age	Elderly	Young	Middle-age	Elderly	Young	Middle-age	Elderly	Young	Middle-age	Elderly
Total	**516**	**4793**	**4562**	**203**	**1707**	**1684**	**212**	**1691**	**1498**	**931**	**8193**	**7742**
Peak CK, Unit/L, No. (%)												
N	418	4097	3777	185	1528	1488	184	1439	1286	787	7066	6549
>2x reference upper limits	257 (61)	2110 (52)	1483 (39)	116 (63)	699 (46)	522 (35)	115 (63)	753 (52)	525 (41)	488 (62)	3563 (50)	2529 (39)
Peak TnT, No. (%)												
N	61	770	839	42	379	451	64	452	532	167	1601	1822
Positive or > reference upper limits	57 (93)	686 (89)	751 (90)	39 (93)	353 (93)	420 (93)	48 (75)	311 (69)	372 (70)	144 (86)	1350 (84)	1543 (85)
Peak TnI, No. (%)												
N	38	253	328	9	42	49	29	240	267	76	535	644
Positive or > reference upper limits	23 (61)	153 (60)	211 (64)	7 (78)	28 (67)	40 (82)	18 (62)	125 (52)	168 (63)	48 (63)	306 (57)	419 (65)
Total cholesterol, mmol/L												
N	410	3598	3048	162	1299	1177	152	1205	987	724	6103	5211
Mean (SD)	5.6 (1.6)	5.5 (1.3)	5.0 (1.2)	5.7 (1.4)	5.5 (1.4)	5.1 (1.2)	5.7 (1.6)	5.4 (1.3)	5 (1.3)	5.7 (1.6)	5.5 (1.3)	5.1 (1.3)
Median (min, max)	5.4 (3.0, 14.7)	5.4 (3.0, 16.1)	4.9 (3.0, 12.9)	5.7 (3.0, 10.9)	5.4 (3.0, 19.9)	5.0 (3.0, 12.6)	5.5 (3.0, 16.2)	5.3 (3.0, 15.0)	4.8 (3.0, 10.4)	5.5 (3.0, 16.2)	5.4 (3.0, 19.9)	4.9 (3, 12.9)
IQR	1.9	1.8	1.7	1.6	1.7	1.6	1.7	1.7	1.7	1.7	1.7	1.7
HDL-C, mmol/L												
N	403	3592	3042	153	1303	1214	150	1220	995	706	6116	5250
Mean (SD)	1.03 (.32)	1.08 (.35)	1.17 (.38)	1.02 (.26)	1.06 (.32)	1.14 (.37)	1.01 (.25)	1.06 (.28)	1.14 (.32)	1.03 (.3)	1.07 (.33)	1.16 (.37)
Median (min, max)	1.0 (.5, 3.50)	1.0 (.5, 4.94)	1.1 (.5, 4.50)	1.0 (.5, 2.16)	1.0 (.5, 4.30)	1.1 (.5, 4.60)	1.0 (.6, 1.90)	1.0 (.5, 3.68)	1.1 (.5, 3.04)	1.0 (.5, 3.50)	1.0 (.5, 4.94)	1.1 (.5, 4.60)
IQR	0.39	0.32	0.44	0.36	0.31	0.40	0.35	0.30	0.40	0.39	0.31	0.41

**Cardiac marker is defined as any of the following baseline investigations: 1) Peak CK-MB, 2) Peak CK, 3) Peak TnT, 4) Peak TnI whereby status Not Done="False" for all investigations
Note: Not all participating centre performed Troponin T or Troponin I tests

Year	2008			2009			2010			Overall		
ACS Stratum	Young	Middle-age	Elderly	Young	Middle-age	Elderly	Young	Middle-age	Elderly	Young	Middle-age	Elderly
Total	**516**	**4793**	**4562**	**203**	**1707**	**1684**	**212**	**1691**	**1498**	**931**	**8193**	**7742**
LDL-C, mmol/L												
N	399	3485	3027	155	1310	1217	151	1205	995	705	6001	5238
Mean (SD)	3.60 (1.41)	3.45 (1.24)	3.10 (1.15)	3.76 (1.25)	3.55 (1.26)	3.23 (1.13)	3.69 (1.33)	3.48 (1.23)	3.14 (1.19)	3.66 (1.36)	3.48 (1.24)	3.14 (1.16)
Median (min, max)	3.40 (1.00, 10.10)	3.40 (1.00, 14.60)	2.98 (1.00, 10.08)	3.60 (1.50, 9.10)	3.50 (1.00, 13.00)	3.12 (1.00, 10.00)	3.60 (1.00, 9.10)	3.40 (1.00, 11.50)	2.91 (1.00, 8.40)	3.50 (1.00, 10.10)	3.40 (1.00, 14.60)	3.00 (1.00, 10.10)
IQR	1.7	1.64	1.56	1.55	1.64	1.5	1.71	1.6	1.6	1.7	1.6	1.52
Triglycerides, mmol/L												
N	376	3260	2450	143	1177	995	124	1085	805	643	5523	4249
Mean (SD)	2.44 (1.48)	2.22 (1.39)	1.84 (1.02)	2.39 (1.49)	1.99 (1.08)	1.72 (0.74)	2.34 (1.88)	2.06 (1.24)	1.79 (0.95)	2.41 (1.56)	2.14 (1.30)	1.80 (0.95)
Median (min, max)	2.10 (1.00, 13.50)	1.80 (1.00, 15.00)	1.59 (1.00, 14.00)	1.90 (1.00, 9.67)	1.70 (1.00, 14.00)	1.50 (1.00, 8.53)	1.90 (1.00, 15.00)	1.70 (1.00, 14.20)	1.50 (1.00, 9.93)	2.00 (1.00, 15.00)	1.80 (1.00, 15.00)	1.53 (1.00, 14.00)
IQR	1.38	1.13	0.85	1.40	0.85	0.66	1.14	0.99	0.80	1.38	1.01	0.78
Left ventricular ejection fraction, %												
N	302	2579	2223	136	1013	952	128	882	767	566	4475	3941
Mean (SD)	48 (11)	47 (12)	46 (13)	49 (12)	48 (12)	47 (13)	47 (13)	46 (13)	45 (15)	48 (12)	47 (12)	46 (13)
Median (min, max)	49 (12, 75)	47 (5, 80)	45 (9, 80)	50 (15, 77)	50 (5, 80)	48 (10, 80)	47 (6, 79)	46 (5, 80)	45 (5, 80)	49 (6, 79)	48 (5, 80)	45 (5, 80)
IQR	15	15	18	14	15	17	16	15	21	16	15	19

Year	2008			2009			2010			Overall		
ACS Stratum	Young	Middle-age	Elderly	Young	Middle-age	Elderly	Young	Middle-age	Elderly	Young	Middle-age	Elderly
Total	**516**	**4793**	**4562**	**203**	**1707**	**1684**	**212**	**1691**	**1498**	**931**	**8193**	**7742**
ECG, No. (%)												
Inferior leads	137 (27)	1174 (24)	805 (18)	72 (35)	424 (25)	312 (19)	69 (33)	474 (28)	286 (19)	278 (30)	2073 (25)	1402 (18)
Anterior leads	201 (39)	1495 (31)	992 (22)	80 (39)	506 (30)	346 (21)	82 (39)	558 (33)	377 (25)	363 (39)	2560 (31)	1714 (22)
Lateral leads	87 (17)	589 (12)	408 (9)	34 (17)	221 (13)	153 (9)	26 (12)	202 (12)	148 (10)	147 (16)	1012 (12)	709 (9)
True posterior	29 (6)	238 (5)	172 (4)	10 (5)	64 (4)	40 (2)	9 (4)	75 (4)	49 (3)	48 (5)	377 (5)	261 (3)
Right ventricle	22 (4)	225 (5)	140 (3)	7 (3)	77 (5)	36 (2)	10 (5)	68 (4)	39 (3)	39 (4)	370 (5)	215 (3)
None	1 (0)	11 (0)	12 (0)	3 (1)	9 (1)	6 (0)	3 (1)	4 (0)	5 (0)	7 (1)	24 (0)	23 (0)
Not stated/ inadequately described	2 (0)	14 (0)	15 (0)	0 (0)	3 (0)	4 (0)	2 (1)	14 (1)	14 (1)	4 (0)	31 (0)	33 (0)
Pain to needle time, min												
N	191	1358	791	66	432	240	73	511	299	330	2303	1328
Mean (SD)	841.2 (6160.0)	775.8 (4841.0)	667.7 (3447.0)	492.3 (628.0)	12661.2 (229050.0)	3793.4 (36296.0)	2901.2 (20605.0)	1988.4 (25947.0)	711.8 (2782.0)	1227.1 (10758.0)	3274.5 (100032.0)	1242 (15733.0)
Median (min, max)	244.7 (46.0, 85247.0)	237.0 (15.0, 88000.0)	275.3 (15.0, 87991.0)	250.1 (31.0, 2910.0)	214.1 (2.0, 4732800.0)	270.9 (9.0, 526110.0)	207.5 (44.0, 176161.0)	225 (15.0, 528100.0)	249 (15.0, 45229.0)	239.2 (31.0, 176161.0)	229.4 (2.0, 4732800.0)	270.9 (9.0, 526110.0)
IQR	262.1	286.2	299.3	312.4	228.3	274.2	240.3	275.3	338.6	275.3	266.5	305.8
Door to needle time, min												
N	191	1365	810	73	473	286	77	527	317	341	2366	1412
Mean (SD)	87.9 (144.6)	98.5 (154.0)	110.4 (169.5)	101.1 (207.4)	94.3 (175.7)	108.4 (196.4)	111.5 (220.2)	110.5 (210.7)	134.8 (226.5)	96.1 (178.1)	100.5 (172.6)	115.3 (189.3)
Median (min, max)	52 (1, 1365)	50 (1, 1435)	60 (3, 1440)	40 (5, 1440)	40 (2, 1420)	50 (4, 1420)	30 (4, 1285)	44 (3, 1440)	55 (5, 1410)	45 (1, 1440)	48 (1, 1440)	58 (3, 1440)
IQR	60	76	85	62	68	75	62	66	90	65	72	82

*Young is defined as age from 20 to less than 40 years, middle-age is defined as age between 40 to less than 60 years and elderly is defined as 60 years and above
Note: Percentage is to the nearest decimal point

Table 3.3 Cardiac presentation of patients with ACS by gender, NCVD-ACS Registry, 2006-2010

Year	2006-2008		2009		2010		2006-2010	
Gender	Male	Female	Male	Female	Male	Female	Male	Female
Total	**7476**	**2395**	**2726**	**868**	**2621**	**780**	**12823**	**4043**
ACS stratum, No. (%)								
STEMI	3943 (53)	704 (29)	1452 (53)	229 (26)	1546 (59)	256 (33)	6941 (54)	1189 (29)
NSTEMI	2011 (27)	893 (37)	740 (27)	306 (35)	700 (27)	308 (39)	3451 (27)	1507 (37)
UA	1522 (20)	798 (33)	534 (20)	333 (38)	375 (14)	216 (28)	2431 (19)	1347 (33)
Systolic blood pressure, mmHg								
N	7330	2358	2681	851	2580	764	12591	3973
Mean (SD)	138 (28)	146 (31)	136 (27)	145 (29)	136 (27)	145 (31)	137 (28)	145 (30)
Median (min, max)	135 (60, 230)	143 (60, 230)	134 (60, 228)	143 (63, 228)	134 (60, 230)	143 (60, 229)	135 (60, 230)	143 (60, 230)
IQR	38	41	35	40	34	40	36	41
Diastolic blood pressure, mmHg								
N	7147	2324	2627	835	2512	749	12286	3908
Mean (SD)	81 (16)	80 (16)	81 (16)	80 (16)	81 (16)	79 (17)	81 (16)	80 (16)
Median (min, max)	81 (22, 120)	80 (19, 120)	80 (24, 120)	80 (40, 120)	81 (22, 120)	79 (26, 120)	80 (22, 120)	80 (19, 120)
IQR	23	20	22	21	21	22	22	21
Pulse pressure, mmHg								
N	7104	2302	2611	831	2507	742	12222	3875
Mean (SD)	55 (18)	65 (23)	54 (18)	64 (22)	53 (18)	64 (22)	54 (18)	65 (22)
Median (min, max)	52 (2, 154)	62 (10, 145)	51 (3, 146)	61 (11, 137)	51 (5, 159)	62 (7, 158)	51 (2, 159)	62 (7, 158)
IQR	24	31	23	30	22	31	23	31

Year	2006-2008		2009		2010		2006-2010	
Gender	Male	Female	Male	Female	Male	Female	Male	Female
Total	**7476**	**2395**	**2726**	**868**	**2621**	**780**	**12823**	**4043**
Heart rate at presentation, beats/min								
N	7334	2353	2694	851	2576	770	12604	3974
Mean (SD)	82 (21)	88 (21)	83 (20)	87 (21)	83 (21)	87 (23)	82 (21)	88 (22)
Median (min, max)	80 (30, 200)	85 (29, 184)	80 (25, 189)	86 (30, 180)	80 (25, 181)	85 (26, 180)	80 (25, 200)	85 (26, 184)
IQR	27	29	27	28	27	29	27	28
Episodes of angina in past 24 hours, No. (%)								
0-2	3823 (51)	1036 (43)	1212 (44)	366 (42)	1092 (42)	309 (40)	6127 (48)	1711 (42)
>2	329 (4)	108 (5)	50 (2)	15 (2)	80 (3)	16 (2)	459 (4)	139 (3)
Missing	3324 (44)	1251 (52)	1464 (54)	487 (56)	1449 (55)	455 (58)	6237 (49)	2193 (54)
Killip classification code, No. (%)								
I	3736 (50)	985 (41)	1646 (60)	521 (60)	1414 (54)	391 (50)	6796 (53)	1897 (47)
II	1248 (17)	454 (19)	446 (16)	128 (15)	450 (17)	140 (18)	2144 (17)	722 (18)
III	271 (4)	117 (5)	81 (3)	40 (5)	83 (3)	36 (5)	435 (3)	193 (5)
IV	263 (4)	78 (3)	112 (4)	18 (2)	136 (5)	37 (5)	511 (4)	133 (3)
Not stated/ inadequately described	1958 (26)	761 (32)	441 (16)	161 (19)	538 (21)	176 (23)	2937 (23)	1098 (27)
Patients with any cardiac marker measurement done, No. (%)	6931 (93)	2194 (92)	2588 (95)	827 (95)	2451 (94)	730 (94)	11970 (93)	3751 (93)
Peak CK-MB, Unit/L, No. (%)								
N	3998	1378	1529	504	1442	474	6969	2356
>25 reference upper limits	2103 (53)	575 (42)	713 (47)	184 (37)	661 (46)	205 (43)	3477 (50)	964 (41)

Year	2006-2008		2009		2010		2006-2010	
Gender	**Male**	**Female**	**Male**	**Female**	**Male**	**Female**	**Male**	**Female**
Total	**7476**	**2395**	**2726**	**868**	**2621**	**780**	**12823**	**4043**
Peak CK, Unit/L, No. (%)								
N	6403	1889	2437	764	2250	659	11090	3312
>2x reference upper limits	3250 (51)	600 (32)	1141 (47)	196 (26)	1186 (53)	207 (31)	5577 (50)	1003 (30)
Peak TnT, No. (%)								
N	1245	425	642	230	786	262	2673	917
Positive or > reference upper limits	1129 (91)	365 (86)	604 (94)	208 (90)	570 (73)	161 (61)	2303 (86)	734 (80)
Peak TnI, No. (%)								
N	378	241	54	46	345	191	777	478
Positive or > reference upper limits	246 (65)	141 (59)	42 (78)	33 (72)	203 (59)	108 (57)	491 (63)	282 (59)
Total cholesterol, mmol/L								
N	5476	1580	2034	604	1853	491	9363	2675
Mean (SD)	5.3 (1.3)	5.3 (1.4)	5.3 (1.4)	5.3 (1.3)	5.3 (1.3)	5.3 (1.4)	5.3 (1.3)	5.3 (1.4)
Median (min, max)	5.2 (3.0, 16.1)	5.2 (3.0, 12.9)	5.2 (3.0, 19.9)	5.2 (3.0, 12.1)	5.2 (3.0, 16.2)	5 (3.0, 15.0)	5.2 (3.0, 19.9)	5.2 (3.0, 15.0)
IQR	1.7	1.8	1.7	1.7	1.7	1.8	1.7	1.8
HDL-C, mmol/L								
N	5449	1588	2062	608	1865	500	9376	2696
Mean (SD)	1.09 (.36)	1.20 (.38)	1.07 (.34)	1.18 (.36)	1.07 (.28)	1.18 (.33)	1.08 (.34)	1.19 (.37)
Median (min, max)	1.02 (.5, 4.94)	1.14 (.5, 4.24)	1.00 (.5, 4.60)	1.18 (.5, 4.20)	1.01 (.5, 3.68)	1.17 (.5, 2.50)	1.01 (.5, 4.94)	1.15 (.5, 4.24)
IQR	0.33	0.44	0.31	0.44	0.30	0.46	0.32	0.45

Year	2006-2008		2009		2010		2006-2010	
Gender	**Male**	**Female**	**Male**	**Female**	**Male**	**Female**	**Male**	**Female**
Total	**7476**	**2395**	**2726**	**868**	**2621**	**780**	**12823**	**4043**
LDL–C, mmol/L								
N	5341	1570	2065	617	1856	495	9262	2682
Mean (SD)	3.31 (1.21)	3.27 (1.28)	3.44 (1.22)	3.36 (1.21)	3.38 (1.21)	3.23 (1.32)	3.35 (1.21)	3.28 (1.27)
Median (min, max)	3.20 (1.00, 14.60)	3.10 (1.00, 10.08)	3.37 (1.00, 13.00)	3.22 (1.10, 9.48)	3.28 (1.00, 10.58)	3.00 (1.10, 11.50)	3.28 (1.00, 14.60)	3.10 (1.00, 11.50)
IQR	1.62	1.63	1.61	1.68	1.55	1.84	1.60	1.67
Triglycerides, mmol/L								
N	4723	1363	1792	523	1595	419	8110	2305
Mean (SD)	2.10 (1.30)	2.02 (1.18)	1.91 (1.04)	1.85 (.85)	1.98 (1.17)	1.92 (1.29)	2.04 (1.23)	1.96 (1.14)
Median (min, max)	1.70 (1.00, 15.00)	1.70 (1.00, 14.00)	1.61 (1.00, 14.00)	1.60 (1.00, 8.00)	1.65 (1.00, 15.00)	1.60 (1.00, 14.20)	1.70 (1.00, 15.00)	1.62 (1.00, 14.20)
IQR	1.10	1.00	0.86	0.70	0.90	0.85	1.00	0.90
Left ventricular ejection fraction, %								
N	4036	1068	1657	444	1418	359	7111	1871
Mean (SD)	46 (12)	48 (13)	47 (12)	49 (12)	45 (13)	48 (15)	46 (13)	48 (14)
Median (min, max)	46 (5, 80)	48 (10, 80)	49 (5, 80)	50 (10, 80)	45 (5, 79)	49 (5, 80)	46 (5, 80)	50 (5, 80)
IQR	16	18	15	16	17	23	16	18
Pain to needle time, min								
N	2020	320	654	84	772	111	3446	515
Mean (SD)	758.1 (4848.0)	659.3 (1719.0)	9442.7 (187299.0)	2821.6 (19871.0)	1724.6 (22034.0)	984.9 (4556.0)	2622.8 (82359.0)	1082.1 (8405.3)
Median (min, max)	240.3 (15.0, 878000.0)	314.6 (15.0, 20487.0)	229.4 (2.0, 4732800.0)	278.5 (20.0, 182520.0)	225.0 (15.0, 528100.0)	260.0 (59.0, 45229.0)	238.1 (2.0, 4732800.0)	294.9 (15.3, 182520.0)
IQR	276.3	339.7	251.2	402.0	288.4	277.4	275.3	345.2

Year	2006-2008		2009		2010		2006-2010	
Gender	Male	Female	Male	Female	Male	Female	Male	Female
Total	7476	2395	2726	868	2621	780	12823	4043
Door to needle time, min								
N	2038	328	728	104	798	123	3564	555
Mean (SD)	98.6 (155.1)	121.0 (179.8)	98.0 (185.9)	112.3 (185.6)	113.9 (210.0)	151.5 (257.0)	101.9 (175.2)	126.2 (200.6)
Median (min, max)	51 (1, 1435)	67.5 (3, 1440)	42 (2, 1440)	58.5 (2, 1420)	45 (3, 1410)	60 (5, 1440)	49 (1, 1440)	60 (2, 1440)
IQR	72.0	92.0	67.0	65.5	69.0	90.0	74.0	88.0

Cardiac marker is defined as any of the following baseline investigations: 1) Peak CK-MB, 2) Peak CK, 3) Peak TnT, 4) Peak TnI whereby status Not Done="False" for all investigations
Note: Not all participating centre performed Troponin T or Troponin I tests

Table 3.4 Cardiac presentation of patients with ACS by pre-morbid diabetes, NCVD-ACS Registry, 2006-2010

Year	2006-2008			2009			2010			2006-2010		
Diabetes status	Diabetic	Non-diabetic	Unknown	Diabetic	Non-diabetic	Unknown	Diabetic	Non-diabetic	Unknown	Diabetic	Non-diabetic	Unknown
Total	**4173**	**3945**	**1753**	**1564**	**1571**	**459**	**1508**	**1434**	**459**	**7245**	**6950**	**2671**
ACS stratum, No. (%)												
STEMI	1646 (39)	1975 (50)	1026 (59)	623 (40)	804 (51)	254 (55)	700 (46)	795 (55)	307 (67)	2969 (41)	3574 (51)	1587 (59)
NSTEMI	1427 (34)	1071 (27)	406 (23)	517 (33)	412 (26)	117 (25)	519 (34)	390 (27)	99 (22)	2463 (34)	1873 (27)	622 (23)
UA	1100 (26)	899 (23)	321 (18)	424 (27)	355 (23)	88 (19)	289 (19)	249 (17)	53 (12)	1813 (25)	1503 (22)	462 (17)
Systolic blood pressure, mmHg												
N	4099	3891	1698	1534	1550	448	1486	1410	448	7119	6851	2594
Mean (SD)	142 (30)	139 (29)	136 (27)	141 (28)	137 (27)	136 (29)	140 (29)	137 (27)	134 (27)	141 (29)	138 (28)	135 (28)
Median (min, max)	140 (60, 230)	136 (60, 230)	133 (64, 228)	140 (60, 228)	134 (60, 228)	130 (69, 228)	139 (60, 230)	135 (60, 229)	132 (65, 220)	140 (60, 230)	135 (60, 230)	132 (64, 228)
IQR	41	38	36	38	34	38	39	35	32	40	36	36
Diastolic blood pressure, mmHg												
N	4033	3775	1663	1507	1518	437	1458	1363	440	6998	6656	2540
Mean (SD)	81 (16)	81 (17)	80 (17)	81 (16)	81 (16)	80 (17)	81 (16)	81 (16)	80 (16)	81 (16)	81 (16)	80 (17)
Median (min, max)	80 (19, 120)	80 (22, 120)	80 (20, 120)	80 (25, 120)	80 (24, 120)	79 (34, 120)	80 (29, 120)	80 (22, 120)	80 (26, 120)	80 (19, 120)	80 (22, 120)	80 (26, 120)
IQR	22	22	22	22	21	22	21	21	21	22	22	21
Pulse pressure, mmHg												
N	3993	3758	1655	1498	1509	435	1450	1360	439	6941	6627	2529
Mean (SD)	60 (21)	56 (19)	54 (18)	59 (21)	55 (19)	54 (20)	58 (21)	54 (18)	54 (18)	59 (21)	55 (19)	54 (18)
Median (min, max)	58 (2, 145)	52 (2, 154)	51 (6, 137)	56 (6, 146)	52 (3, 130)	50 (11, 126)	56 (7, 158)	51 (5, 159)	51 (12, 119)	57 (2, 158)	52 (2, 159)	51 (6, 137)
IQR	29	24	23	26	23	24	26	23	23	28	23	24

Year	2006-2008			2009			2010			2006-2010		
Diabetes status	Diabetic	Non-diabetic	Unknown	Diabetic	Non-diabetic	Unknown	Diabetic	Non-diabetic	Unknown	Diabetic	Non-diabetic	Unknown
Total	**4173**	**3945**	**1753**	**1564**	**1571**	**459**	**1508**	**1434**	**459**	**7245**	**6950**	**2671**
Heart rate at presentation, beats/min												
N	4105	3894	1688	1543	1553	449	1487	1413	446	7135	6860	2583
Mean (SD)	87 (21)	81 (21)	82 (22)	87 (21)	82 (20)	82 (21)	87 (22)	81 (21)	81 (22)	87 (21)	81 (21)	82 (22)
Median (min, max)	85 (29, 191)	78 (30, 200)	80 (30, 180)	84 (30, 187)	80 (25, 189)	80 (36, 181)	85 (25, 180)	79 (30, 181)	79 (26, 177)	85 (25, 191)	79 (25, 200)	80 (26, 181)
IQR	28	26	27	27	26	26	29	26	30	28	27	28
Episodes of angina in past 24 hours, No. (%)												
0-2	2023 (48)	2015 (51)	821 (47)	617 (39)	762 (49)	199 (43)	568 (38)	678 (47)	155 (34)	3208 (44)	3455 (50)	1175 (44)
>2	199 (5)	165 (4)	73 (4)	33 (2)	27 (2)	5 (1)	40 (3)	51 (4)	5 (1)	272 (4)	243 (3)	83 (3)
Missing	1951 (47)	1765 (45)	859 (49)	914 (58)	782 (50)	255 (56)	900 (60)	705 (49)	299 (65)	3765 (52)	3252 (47)	1413 (53)
Killip classification code, No. (%)												
I	1909 (46)	2037 (52)	775 (44)	909 (58)	989 (63)	269 (59)	726 (48)	839 (59)	240 (52)	3544 (49)	3865 (56)	1284 (48)
II	784 (19)	649 (16)	269 (15)	277 (18)	234 (15)	63 (14)	336 (22)	202 (14)	52 (11)	1397 (19)	1085 (16)	384 (14)
III	215 (5)	112 (3)	61 (3)	74 (5)	31 (2)	16 (3)	65 (4)	38 (3)	16 (3)	354 (5)	181 (3)	93 (3)
IV	158 (4)	107 (3)	76 (4)	63 (4)	46 (3)	21 (5)	75 (5)	71 (5)	27 (6)	296 (4)	224 (3)	124 (5)
Not stated/ inadequately described	1107 (27)	1040 (26)	572 (33)	241 (15)	271 (17)	90 (20)	306 (20)	284 (20)	124 (27)	1654 (23)	1595 (23)	786 (29)
Patients with any cardiac marker measurement done, No. (%)	3948 (95)	3718 (94)	1459 (83)	1477 (94)	1512 (96)	426 (93)	1408 (93)	1352 (94)	421 (92)	6833 (94)	6582 (95)	2306 (86)

Year	2006-2008			2009			2010			2006-2010		
Diabetes status	Diabetic	Non-diabetic	Unknown	Diabetic	Non-diabetic	Unknown	Diabetic	Non-diabetic	Unknown	Diabetic	Non-diabetic	Unknown
Total	**4173**	**3945**	**1753**	**1564**	**1571**	**459**	**1508**	**1434**	**459**	**7245**	**6950**	**2671**
Peak CK-MB, Unit/L, No. (%)												
N	2429	2177	770	873	903	257	888	806	222	4190	3886	1249
>25 reference upper limits	1111 (46)	1115 (51)	452 (59)	368 (42)	411 (46)	118 (46)	383 (43)	381 (47)	102 (46)	1862 (44)	1907 (49)	672 (54)
Peak CK, Unit/L, No. (%)												
N	3605	3359	1328	1397	1407	397	1300	1237	372	6302	6003	2097
>2x reference upper limits	1413 (39)	1658 (49)	779 (59)	491 (35)	658 (47)	188 (47)	549 (42)	628 (51)	216 (58)	2453 (39)	2944 (49)	1183 (56)
Peak TnT, No. (%)												
N	819	641	210	457	327	88	535	444	69	1811	1412	367
Positive or > reference upper limits	721 (88)	580 (90)	193 (92)	412 (90)	314 (96)	86 (98)	365 (68)	308 (69)	58 (84)	1498 (83)	1202 (85)	337 (92)
Peak TnI, No. (%)												
N	291	215	113	37	46	17	281	226	29	609	487	159
Positive or > reference upper limits	190 (65)	118 (55)	79 (70)	22 (59)	38 (83)	15 (88)	165 (59)	127 (56)	19 (66)	377 (62)	283 (58)	113 (71)
Total cholesterol, mmol/L												
N	2958	2937	1161	1098	1200	340	992	1030	322	5048	5167	1823
Mean (SD)	5.2 (1.3)	5.3 (1.3)	5.5 (1.3)	5.2 (1.4)	5.5 (1.3)	5.4 (1.2)	5.2 (1.4)	5.4 (1.3)	5.3 (1.3)	5.2 (1.4)	5.4 (1.3)	5.4 (1.3)
Median (min, max)	5.0 (3.0, 16.1)	5.2 (3.0, 14.3)	5.4 (3.0, 14.7)	5.0 (3.0, 19.9)	5.4 (3.0, 14.9)	5.3 (3.0, 12.6)	4.9 (3.0, 16.2)	5.3 (3.0, 15.0)	5.3 (3.0, 10.3)	5.0 (3.0, 19.9)	5.3 (3.0, 15.0)	5.3 (3.0, 14.7)
IQR	1.8	1.7	1.7	1.7	1.7	1.6	1.8	1.6	1.8	1.8	1.7	1.6

Year	2006-2008			2009			2010			2006-2010		
Diabetes status	Diabetic	Non-diabetic	Unknown	Diabetic	Non-diabetic	Unknown	Diabetic	Non-diabetic	Unknown	Diabetic	Non-diabetic	Unknown
Total	4173	3945	1753	1564	1571	459	1508	1434	459	7245	6950	2671
HDL-C, mmol/L												
N	3005	2877	1155	1128	1205	337	1009	1041	315	5142	5123	1807
Mean (SD)	1.10 (.38)	1.13 (.36)	1.13 (.34)	1.07 (.32)	1.11 (.35)	1.11 (.41)	1.06 (.29)	1.11 (.30)	1.11 (.31)	1.09 (.35)	1.12 (.35)	1.13 (.35)
Median (min, max)	1.0 (.5, 4.90)	1.1 (.5, 4.94)	1.1 (.5, 4.20)	1.0 (.5, 4.20)	1.1 (.5, 4.32)	1.0 (.5, 4.60)	1.0 (.5, 3.04)	1.1 (.5, 3.68)	1.1 (.5, 2.50)	1.0 (.5, 4.90)	1.1 (.5, 4.94)	1.1 (.5, 4.60)
IQR	0.37	0.40	0.40	0.32	0.40	0.35	0.35	0.40	0.40	0.36	0.40	0.40
LDL-C, mmol/L												
N	2914	2847	1150	1128	1219	335	995	1038	318	5037	5104	1803
Mean (SD)	3.14 (1.23)	3.37 (1.21)	3.54 (1.20)	3.20 (1.20)	3.58 (1.23)	3.56 (1.13)	3.20 (1.25)	3.47 (1.23)	3.39 (1.17)	3.17 (1.23)	3.44 (1.22)	3.52 (1.18)
Median (min, max)	3.00 (1.0, 14.6)	3.30 (1.0, 10.1)	3.45 (1.0, 8.2)	3.10 (1.1, 10.8)	3.55 (1.0, 13.0)	3.41 (1.2, 7.4)	3.00 (1.0, 10.6)	3.40 (1.0, 11.5)	3.30 (1.0, 8.3)	3.00 (1.0, 14.6)	3.40 (1.0, 13.0)	3.40 (1.0, 8.3)
IQR	1.66	1.60	1.53	1.55	1.67	1.50	1.65	1.60	1.50	1.60	1.63	1.50
Triglycerides, mmol/L												
N	2645	2476	965	992	1050	273	886	866	262	4523	4392	1500
Mean (SD)	2.21 (1.38)	1.98 (1.13)	2.00 (1.30)	1.98 (1.01)	1.83 (1.01)	1.85 (.90)	2.08 (1.29)	1.85 (1.02)	1.98 (1.37)	2.13 (1.30)	1.92 (1.08)	1.97 (1.25)
Median (min, max)	1.80 (1.0, 14.0)	1.67 (1.0, 15.0)	1.64 (1.0, 13.7)	1.70 (1.0, 8.6)	1.60 (1.0, 14.0)	1.60 (1.0, 8.5)	1.70 (1.0, 12.9)	1.58 (1.0, 14.2)	1.60 (1.0, 15.0)	1.76 (1.0, 14.0)	1.60 (1.0, 15.0)	1.60 (1.0, 15.0)
IQR	1.10	0.92	1.00	0.98	0.70	0.82	0.99	0.90	0.92	1.05	0.87	0.95

Year	2006-2008			2009			2010			2006-2010		
Diabetes status	Diabetic	Non-diabetic	Unknown	Diabetic	Non-diabetic	Unknown	Diabetic	Non-diabetic	Unknown	Diabetic	Non-diabetic	Unknown
Total	**4173**	**3945**	**1753**	**1564**	**1571**	**459**	**1508**	**1434**	**459**	**7245**	**6950**	**2671**
Left ventricular ejection fraction, %												
N	2128	2115	861	895	969	237	805	724	248	3828	3808	1346
Mean (SD)	46 (13)	48 (12)	46 (13)	45 (13)	49 (12)	49 (12)	45 (14)	47 (13)	47 (13)	45 (13)	48 (12)	47 (13)
Median (min, max)	45 (8, 80)	48 (5, 80)	46 (10, 78)	45 (10, 77)	50 (5, 80)	50 (13, 80)	45 (5, 80)	46 (13, 79)	47 (5, 78)	45 (5, 80)	49 (5, 80)	47 (5, 80)
IQR	18	15	16	19	13	16	20	17	15	19	15	15
ECG, No. (%)												
Inferior leads	731 (18)	946 (24)	439 (25)	288 (18)	403 (26)	117 (25)	325 (22)	353 (25)	151 (33)	1344 (19)	1702 (24)	707 (26)
Anterior leads	964 (23)	1143 (29)	581 (33)	349 (22)	439 (28)	144 (31)	389 (26)	470 (33)	158 (34)	1702 (23)	2052 (30)	883 (33)
Lateral leads	368 (9)	471 (12)	245 (14)	158 (10)	214 (14)	36 (8)	141 (9)	188 (13)	47 (10)	667 (9)	873 (13)	328 (12)
True posterior	128 (3)	198 (5)	113 (6)	28 (2)	66 (4)	20 (4)	42 (3)	58 (4)	33 (7)	198 (3)	322 (5)	166 (6)
Right ventricle	116 (3)	181 (5)	90 (5)	36 (2)	61 (4)	23 (5)	39 (3)	55 (4)	23 (5)	191 (3)	297 (4)	136 (5)
None	7 (0)	8 (0)	9 (1)	6 (0)	8 (1)	4 (1)	5 (0)	6 (0)	1 (0)	18 (0)	22 (0)	14 (1)
Not stated / inadequately described	16 (0)	14 (0)	1 (0)	3 (0)	1 (0)	3 (1)	12 (1)	12 (1)	6 (1)	31 (0)	27 (0)	10 (0)
Pain to needle time, min												
N	809	1021	510	247	369	122	313	409	161	1369	1799	793
Mean (SD)	901.0 (5504)	541.6 (3090)	902.7 (5266)	3667.4 (35939)	1990.2 (27467)	39117.3 (428458)	1122.1 (10007)	2517.9 (29067)	370.7 (540)	1450.7 (16555)	1288.0 (18770)	6673.9 (168095)
Median (min, max)	281.8 (15.3, 87995)	240.3 (15.3, 85247)	235.9 (19.7, 88000)	260 (6.6, 528731)	233.7 (2.2, 526110)	205.3 (19.7, 4732800)	249 (15.3, 176161)	214.1 (28.4, 528100)	225 (19.7, 4548)	270.9 (6.6, 528731)	231.6 (2.2, 528100)	225 (19.7, 4732800)
IQR	336.4	270.9	260.0	318.9	242.5	203.2	358.3	266.5	249.0	340.8	260.0	255.6

Year	2006-2008			2009			2010			2006-2010		
Diabetes status	Diabetic	Non-diabetic	Unknown	Diabetic	Non-diabetic	Unknown	Diabetic	Non-diabetic	Unknown	Diabetic	Non-diabetic	Unknown
Total	4173	3945	1753	1564	1571	459	1508	1434	459	7245	6950	2671
Door to needle time, min												
N	804	1034	528	278	417	137	342	408	171	1424	1859	836
Mean (SD)	109.1 (159.6)	91.6 (131.0)	110.4 (201.1)	113.9 (199.8)	95.1 (181.5)	85.2 (168.0)	133.0 (237.1)	101.8 (192.0)	131.8 (229.9)	115.8 (189.0)	94.6 (158.1)	110.7 (202.7)
Median (min, max)	60.0 (4, 1423)	50.0 (1, 1349)	48.5 (1, 1440)	51.5 (2, 1350)	45.0 (3, 1440)	35.0 (3, 1395)	51.5 (4, 1400)	40.5 (4, 1440)	50.0 (3, 1410)	58.0 (2, 1423)	47.0 (1, 1440)	45.0 (1, 1440)
IQR	81.0	70.0	75.5	85.0	60.0	65.0	95.0	54.5	85.0	85.0	65.0	75.0

*Cardiac marker is defined as any of the following baseline investigations: 1) Peak CK-MB, 2) Peak CK, 3) Peak TnT, 4) Peak TnI whereby status Not Done="False" for all investigations

Note: Not all participating centre performed Troponin T or Troponin I tests

Note: Percentage is to the nearest decimal point

Table 3.5 Cardiac presentation of patients with ACS by pre-morbid hypertension, NCVD-ACS Registry, 2006-2010

Year	2006-2008			2009			2010			2006-2010		
Hypertension	Hypertensive	Non-Hypertensive	Unknown	Hypertensive	Non-Hypertensive	Unknown	Hypertensive	Non-Hypertensive	Unknown	Hypertensive	Non-Hypertensive	Unknown
Total	5933	2479	1459	2302	954	338	2081	962	358	10316	4395	2155
ACS stratum, No. (%)												
STEMI	2247 (38)	1504 (61)	896 (61)	854 (37)	606 (64)	221 (65)	881 (42)	659 (69)	262 (73)	3982 (39)	2769 (63)	1379 (64)
NSTEMI	1994 (34)	588 (24)	322 (22)	763 (33)	207 (22)	73 (22)	720 (35)	184 (19)	67 (19)	3505 (34)	988 (22)	465 (22)
UA	1692 (29)	387 (16)	241 (17)	685 (30)	141 (15)	44 (13)	480 (23)	119 (12)	29 (8)	2829 (27)	638 (15)	311 (14)
Systolic blood pressure, mmHg												
N	5826	2449	1413	2259	945	328	2048	946	350	10133	4340	2091
Mean (SD)	145 (30)	132 (26)	132 (26)	142 (28)	131 (25)	131 (28)	143 (29)	130 (25)	130 (26)	144 (29)	131 (26)	132 (26)
Median (min, max)	142 (60, 230)	130 (60, 230)	130 (64, 228)	141 (60, 228)	128 (63, 219)	127 (69, 228)	141 (60, 230)	129 (60, 219)	130 (68, 218)	142 (60, 230)	130 (60, 230)	130 (64, 228)
IQR	40	34	34	37	32	36	37	33	33	39	33	34
Diastolic blood pressure, mmHg												
N	5664	2410	1397	2211	931	320	1985	930	346	9860	4271	2063
Mean (SD)	83 (16)	79 (16)	79 (17)	82 (16)	79 (15)	78 (16)	82 (16)	78 (16)	79 (16)	82 (16)	79 (16)	79 (16)
Median (min, max)	82 (22, 120)	79 (19, 120)	79 (20, 120)	81 (30, 120)	79 (24, 120)	78 (37, 118)	82 (29, 120)	79 (22, 120)	79 (26, 119)	82 (22, 120)	79 (19, 120)	79 (20, 120)
IQR	23	21	22	23	21	21	23	21	20	24	22	22

Year	2006-2008			2009			2010			2006-2010		
Hypertension	Hypertensive	Non-Hypertensive	Unknown	Hypertensive	Non-Hypertensive	Unknown	Hypertensive	Non-Hypertensive	Unknown	Hypertensive	Non-Hypertensive	Unknown
Total	**5933**	**2479**	**1459**	**2302**	**954**	**338**	**2081**	**962**	**358**	**10316**	**4395**	**2155**
Pulse pressure, mmHg												
N	5615	2402	1389	2196	927	319	1976	928	345	9787	4257	2053
Mean (SD)	61 (21)	52 (17)	53 (17)	59 (21)	51 (17)	51 (17)	59 (20)	51 (17)	51 (17)	60 (21)	52 (17)	52 (17)
Median (min, max)	58 (6, 154)	50 (2, 138)	50 (6, 135)	57 (3, 146)	48 (13, 119)	49 (11, 112)	56 (7, 158)	49 (5, 159)	49 (12, 119)	58 (3, 158)	49 (2, 159)	50 (6, 135)
IQR	28	21	22	27	22	22	25	20	20	27	20	21
Heart rate at presentation, beats/min												
N	5834	2446	1407	2277	939	329	2050	946	350	10161	4331	2086
Mean (SD)	85 (21)	82 (21)	82 (22)	85 (21)	83 (21)	81 (20)	85 (22)	82 (21)	82 (23)	85 (21)	82 (21)	82 (22)
Median (min, max)	82 (29, 192)	80 (30, 200)	80 (30, 180)	82 (30, 187)	80 (25, 189)	80 (36, 180)	82 (25, 180)	80 (38, 181)	79 (26, 177)	82 (25, 192)	80 (25, 200)	80 (26, 180)
IQR	28	26	27	27	28	25	29	26	31	28	26	28
Episodes of angina in past 24 hours, No. (%)												
0-2	2891 (49)	1283 (52)	685 (47)	947 (41)	480 (50)	151 (45)	806 (39)	473 (49)	122 (34)	4644 (45)	2236 (51)	958 (44)
>2	304 (5)	79 (3)	54 (4)	47 (2)	14 (1)	4 (1)	55 (3)	37 (4)	4 (1)	406 (4)	130 (3)	62 (3)
Missing	2738 (46)	1117 (45)	720 (49)	1308 (57)	460 (48)	183 (54)	1220 (59)	452 (47)	232 (65)	5266 (51)	2029 (46)	1135 (53)

Year / Hypertension	2006-2008			2009			2010			2006-2010		
	Hypertensive	Non-Hypertensive	Unknown	Hypertensive	Non-Hypertensive	Unknown	Hypertensive	Non-Hypertensive	Unknown	Hypertensive	Non-Hypertensive	Unknown
Total	5933	2479	1459	2302	954	338	2081	962	358	10316	4395	2155
Killip classification code, No. (%)												
I	2740 (46)	1352 (55)	629 (43)	1389 (60)	596 (62)	182 (54)	1045 (50)	574 (60)	186 (52)	5174 (50)	2522 (57)	997 (46)
II	1088 (18)	380 (15)	234 (16)	362 (16)	162 (17)	50 (15)	396 (19)	155 (16)	39 (11)	1846 (18)	697 (16)	323 (15)
III	266 (4)	70 (3)	52 (4)	93 (4)	17 (2)	11 (3)	86 (4)	22 (2)	11 (3)	445 (4)	109 (2)	74 (3)
IV	170 (3)	94 (4)	77 (5)	68 (3)	42 (4)	20 (6)	91 (4)	53 (6)	29 (8)	329 (3)	189 (4)	126 (6)
Not stated/ inadequately described	1669 (28)	583 (24)	467 (32)	390 (17)	137 (14)	75 (22)	463 (22)	158 (16)	93 (26)	2522 (24)	878 (20)	635 (29)
Patients with any cardiac marker measurement done, No. (%)	5574 (94)	2357 (95)	1194 (82)	2193 (95)	915 (96)	307 (91)	1949 (94)	902 (94)	330 (92)	9716 (94)	4174 (95)	1831 (85)
Peak CK-MB, Unit/L, No. (%)												
N	3375	1338	663	1343	524	166	1244	498	174	5962	2360	1003
>25 reference upper limits	1561 (46)	727 (54)	390 (59)	583 (43)	227 (43)	87 (52)	569 (46)	228 (46)	69 (40)	2713 (46)	1182 (50)	546 (54)
Peak CK, Unit/L, No. (%)												
N	5053	2158	1081	2047	870	284	1778	845	286	8878	3873	1651
>2x reference upper limits	1929 (38)	1252 (58)	669 (62)	723 (35)	463 (53)	151 (53)	712 (40)	489 (58)	192 (67)	3364 (38)	2204 (57)	1012 (61)
Peak TnT, No. (%)												
N	1097	394	179	597	211	64	738	258	52	2432	863	295
Positive or > reference upper limits	966 (88)	367 (93)	161 (90)	478 (80)	186 (88)	55 (86)	414 (56)	167 (65)	41 (79)	1670 (69)	661 (77)	190 (64)

Year	2006-2008			2009			2010			2006-2010		
Hypertension	Hypertensive	Non-Hypertensive	Unknown	Hypertensive	Non-Hypertensive	Unknown	Hypertensive	Non-Hypertensive	Unknown	Hypertensive	Non-Hypertensive	Unknown
Total	**5933**	**2479**	**1459**	**2302**	**954**	**338**	**2081**	**962**	**358**	**10316**	**4395**	**2155**
Peak TnI, No. (%)												
N	426	103	90	68	19	13	387	128	21	881	250	124
Positive or > reference upper limits	243 (57)	73 (71)	71 (79)	45 (66)	12 (63)	12 (92)	203 (52)	82 (64)	12 (57)	534 (61)	180 (72)	102 (82)
Total cholesterol, mmol/L												
N	4188	1909	959	1652	737	249	1363	733	248	7203	3379	1456
Mean (SD)	5.2 (1.3)	5.4 (1.3)	5.5 (1.4)	5.2 (1.3)	5.6 (1.4)	5.7 (1.4)	5.1 (1.3)	5.5 (1.4)	5.4 (1.3)	5.2 (1.3)	5.5 (1.4)	5.5 (1.4)
Median (min, max)	5.0 (3.0, 16.1)	5.3 (3.0, 14.3)	5.4 (3.0, 14.7)	5.1 (3.0, 13.5)	5.5 (3.0, 19.9)	5.6 (3.2, 12.6)	4.9 (3.0, 13.7)	5.4 (3.0, 16.2)	5.3 (3.0, 10.3)	5.0 (3.0, 16.1)	5.4 (3.0, 19.9)	5.4 (3.0, 14.7)
IQR	1.7	1.7	1.6	1.6	1.8	1.7	1.7	1.6	1.6	1.7	1.7	1.7
HDL-C, mmol/L												
N	4237	1848	952	1692	727	251	1379	745	241	7308	3320	1444
Mean (SD)	1.12 (.37)	1.1 (.36)	1.13 (.34)	1.1 (.35)	1.09 (.31)	1.09 (.4)	1.1 (.3)	1.08 (.28)	1.1 (.33)	1.11 (.36)	1.09 (.33)	1.12 (.35)
Median (min, max)	1.09 (.5, 4.94)	1.01 (.5, 4.4.)	1.1 (.5, 4.2.)	1.05 (.5, 4.32)	1.03 (.5, 3.75)	1.02 (.6, 4.6.)	1.09 (.5, 3.68)	1.05 (.5, 2.40)	1.02 (.5, 3.04)	1.08 (.5, 4.94)	1.03 (.5, 4.40)	1.07 (.5, 4.60)
IQR	0.4	0.34	0.39	0.33	0.39	0.35	0.38	0.32	0.36	0.39	0.35	0.38
LDL-C, mmol/L												
N	4131	1827	953	1700	733	249	1363	742	246	7194	3302	1448
Mean (SD)	3.17 (1.18)	3.47 (1.28)	3.56 (1.24)	3.28 (1.17)	3.64 (1.25)	3.72 (1.29)	3.2 (1.24)	3.58 (1.19)	3.44 (1.22)	3.2 (1.19)	3.53 (1.26)	3.57 (1.25)
Median (min, max)	3.07 (1.0, 9.8)	3.40 (1.0, 14.6)	3.50 (1.0, 8.2)	3.18 (1.0, 10.8)	3.60 (1.0, 13)	3.60 (1.0, 9.66)	3.00 (1.0, 10.6)	3.54 (1.0, 11.5)	3.31 (1.0, 8.3)	3.10 (1.0, 10.8)	3.49 (1.0, 14.6)	3.49 (1.0, 9.7)
IQR	1.58	1.63	1.55	1.60	1.60	1.60	1.67	1.48	1.48	1.56	1.62	1.57

Year	2006-2008			2009			2010			2006-2010		
Hypertension	Hypertensive	Non-Hypertensive	Unknown	Hypertensive	Non-Hypertensive	Unknown	Hypertensive	Non-Hypertensive	Unknown	Hypertensive	Non-Hypertensive	Unknown
Total	**5933**	**2479**	**1459**	**2302**	**954**	**338**	**2081**	**962**	**358**	**10316**	**4395**	**2155**
Triglycerides, mmol/L												
N	3640	1648	798	1483	632	200	1176	629	209	6299	2909	1207
Mean (SD)	2.09 (1.26)	2.09 (1.33)	2.03 (1.24)	1.85 (.96)	1.96 (1.06)	2.02 (1.07)	1.96 (1.12)	1.94 (1.21)	2.08 (1.52)	2.01 (1.17)	2.03 (1.25)	2.03 (1.26)
Median (min, max)	1.70 (1, 14.0)	1.70 (1, 15.0)	1.69 (1, 13.7)	1.60 (1, 14.0)	1.69 (1, 9.7)	1.70 (1, 8.5)	1.65 (1, 10.8)	1.60 (1, 14.2)	1.60 (1, 15.0)	1.70 (1, 14.0)	1.70 (1, 15.0)	1.69 (1, 15.0)
IQR	1.0	1.1	1.0	0.7	0.9	1.0	0.9	0.9	1.0	1.0	1.0	1.0
Left ventricular ejection fraction, %												
N	2996	1414	694	1352	574	175	1056	517	204	5404	2505	1073
Mean (SD)	47 (13)	46 (12)	46 (13)	48 (13)	47 (11)	48 (13)	46 (14)	45 (13)	46 (13)	47 (13)	46 (12)	47 (13)
Median (min, max)	47 (8, 80)	46 (5, 79)	46 (10, 79)	50 (5, 80)	48 (15, 80)	49 (13, 79)	46 (5, 80)	45 (5, 77)	46 (6, 78)	47 (5, 80)	46 (5, 80)	46 (6, 79)
IQR	16	15	15	15	15	16	19	17	15	16	16	15
ECG, No. (%)												
Inferior leads	1046 (18)	677 (27)	393 (27)	437 (19)	268 (28)	103 (30)	401 (19)	297 (31)	131 (37)	1884 (18)	1242 (28)	627 (29)
Anterior leads	1296 (22)	878 (35)	514 (35)	451 (20)	350 (37)	131 (39)	491 (24)	395 (41)	131 (37)	2238 (22)	1623 (37)	776 (36)
Lateral leads	513 (9)	366 (15)	205 (14)	224 (10)	155 (16)	29 (9)	192 (9)	145 (15)	39 (11)	929 (9)	666 (15)	273 (13)
True posterior	194 (3)	154 (6)	91 (6)	48 (2)	47 (5)	19 (6)	56 (3)	45 (5)	32 (9)	298 (3)	246 (6)	142 (7)
Right ventricle	177 (3)	140 (6)	70 (5)	48 (2)	51 (5)	21 (6)	50 (2)	43 (4)	24 (7)	275 (3)	234 (5)	115 (5)
None	12 (0)	5 (0)	7 (0)	6 (0)	8 (1)	4 (1)	6 (0)	4 (0)	2 (1)	24 (0)	17 (0)	13 (1)
Not stated/ inadequately described	18 (0)	12 (0)	1 (0)	3 (0)	2 (0)	2 (1)	21 (1)	6 (1)	3 (1)	42 (0)	20 (0)	6 (0)

Year	2006-2008			2009			2010			2006-2010		
Hypertension	Hypertensive	Non-Hypertensive	Unknown	Hypertensive	Non-Hypertensive	Unknown	Hypertensive	Non-Hypertensive	Unknown	Hypertensive	Non-Hypertensive	Unknown
Total	**5933**	**2479**	**1459**	**2302**	**954**	**338**	**2081**	**962**	**358**	**10316**	**4395**	**2155**
Pain to needle time, min												
N	1085	794	461	344	281	115	396	344	146	1825	1421	722
Mean (SD)	790.7 (4381)	635.0 (4416)	824.7 (5134)	16658.5 (256827)	2295.8 (31523)	320.7 (437)	1058.0 (9175)	2817.8 (31601)	359.1 (491)	3839.7 (111676)	1490.9 (21190)	650.3 (4117)
Median (min, max)	270.9 (15.3, 87995)	240.3 (26.2, 87991)	235.9 (19.7, 88000)	260.0 (0.0, 4732800)	225.0 (6.6, 528731)	205.3 (0.0, 2910)	235.9 (0.0, 176160)	214.1 (0.0, 528100)	233.7 (19.7, 4548)	264.3 (0.0, 4732800)	229.4 (0.0, 528731)	222.8 (0.0, 88000)
IQR	318.9	273.1	251.2	300.4	246.9	194.4	290.5	294.9	238.1	318.9	275.3	244.7
Door to needle time, min												
N	1092	798	476	401	309	122	427	342	152	1920	1449	750
Mean (SD)	107.4 (161.6)	91.2 (135.2)	106.4 (186.3)	112.5 (207.9)	93.1 (173.6)	74.8 (127.5)	131.8 (226.5)	101.2 (204.3)	122.6 (216.8)	113.9 (188.0)	94.0 (162.2)	104.6 (185.2)
Median (min, max)	57 (2, 1431)	50.5 (1, 1349)	49.5 (1, 1440)	45 (2, 1420)	45 (3, 1440)	35 (3, 825)	50 (5, 1400)	35 (4, 1440)	50 (3, 1410)	55 (2, 1431)	46 (1, 1440)	45 (1, 1440)
IQR	84.0	66.0	76.0	82.0	64.0	62.0	88.0	55.0	93.5	82.5	65.0	75.0

*Cardiac marker is defined as any of the following baseline investigations: 1) Peak CK-MB, 2) Peak CK, 3) Peak TnT, 4) Peak TnI whereby status Not Done="False" for all investigations
Note: Not all participating centre performed Troponin T or Troponin I tests
Note: Percentage is to the nearest decimal point

Table 3.6 Cardiac presentation of patients with ACS by pre-morbid dyslipidaemia, NCVD-ACS Registry, 2006-2010

Year	2006-2008			2009			2010			2006-2010		
Dyslipidaemia status	Dyslipidaemia	Non-Dyslipidaemia	Unknown	Dyslipidaemia	Non-Dyslipidaemia	Unknown	Dyslipidaemia	Non-Dyslipidaemia	Unknown	Dyslipidaemia	Non-Dyslipidaemia	Unknown
Total	3279	3078	3514	1248	1586	760	1090	1429	882	5617	6093	5156
ACS stratum, No. (%)												
STEMI	1005 (31)	1630 (53)	2012 (57)	502 (40)	723 (46)	456 (60)	499 (46)	731 (51)	572 (65)	2006 (36)	3084 (51)	3040 (59)
NSTEMI	1189 (36)	844 (27)	871 (25)	398 (32)	469 (30)	179 (24)	356 (33)	446 (31)	206 (23)	1943 (35)	1759 (29)	1256 (24)
UA	1085 (33)	604 (20)	631 (18)	348 (28)	394 (25)	125 (16)	235 (22)	252 (18)	104 (12)	1668 (30)	1250 (21)	860 (17)
Systolic blood pressure, mmHg												
N	3232	3034	3422	1233	1557	742	1076	1404	864	5541	5995	5028
Mean (SD)	142 (29)	140 (29)	138 (29)	141 (27)	138 (27)	135 (29)	139 (27)	138 (29)	135 (29)	141 (28)	139 (29)	137 (29)
Median (min, max)	140 (65, 230)	138 (60, 230)	135 (60, 230)	140 (60, 228)	134 (63, 226)	134 (63, 228)	137 (60, 230)	137 (60, 228)	134 (62, 230)	139 (60, 230)	137 (60, 230)	135 (60, 230)
IQR	40	39	38	37	35	38	34	37	36	39	37	38
Diastolic blood pressure, mmHg												
N	3167	2954	3350	1209	1526	727	1058	1360	843	5434	5840	4920
Mean (SD)	81 (16)	81 (17)	81 (17)	82 (16)	80 (15)	80 (18)	81 (16)	81 (16)	80 (17)	81 (16)	81 (16)	81 (17)
Median (min, max)	80 (19, 120)	80 (22, 120)	80 (20, 120)	82 (30, 120)	80 (25, 120)	80 (24, 120)	80 (26, 120)	81 (22, 120)	80 (33, 120)	80 (19, 120)	80 (22, 120)	80 (20, 120)
IQR	22	22	22	21	21	25	20	22	22	21	22	22

Year	2006-2008			2009			2010			2006-2010		
Dyslipidaemia status	Dyslipidaemia	Non-Dyslipidaemia	Unknown	Dyslipidaemia	Non-Dyslipidaemia	Unknown	Dyslipidaemia	Non-Dyslipidaemia	Unknown	Dyslipidaemia	Non-Dyslipidaemia	Unknown
Total	**3279**	**3078**	**3514**	**1248**	**1586**	**760**	**1090**	**1429**	**882**	**5617**	**6093**	**5156**
Pulse pressure, mmHg												
N	3142	2935	3329	1205	1514	723	1057	1356	836	5404	5805	4888
Mean (SD)	59 (21)	57 (20)	56 (19)	58 (21)	56 (20)	53 (18)	58 (20)	56 (20)	54 (18)	59 (21)	56 (20)	55 (19)
Median (min, max)	56 (2, 144)	54 (2, 154)	52 (6, 145)	56 (3, 146)	53 (6, 129)	51 (11, 123)	55 (7, 158)	53 (5, 159)	51 (12, 135)	56 (2, 158)	53 (2, 159)	52 (6, 145)
IQR	27	27	25	26	25	24	25	25	23	26	26	25
Heart rate at presentation, beats/min												
N	3229	3035	3423	1238	1563	744	1068	1412	866	5535	6010	5033
Mean (SD)	84 (21)	84 (22)	84 (22)	84 (20)	84 (21)	83 (22)	82 (22)	85 (21)	84 (22)	83 (21)	84 (21)	84 (22)
Median (min, max)	80 (32, 192)	81 (30, 200)	81 (29, 191)	81 (30, 180)	82 (35, 187)	80 (25, 189)	80 (28, 180)	82 (25, 181)	82 (26, 177)	80 (28, 192)	82 (25, 200)	81 (25, 191)
IQR	27	27	29	27	27	28	29	28	29	28	27	29
Episodes of angina in past 24 hours, No. (%)												
0-2	1554 (47)	1512 (49)	1793 (51)	574 (46)	651 (41)	353 (46)	455 (42)	596 (42)	350 (40)	2583 (46)	2759 (45)	2496 (48)
>2	212 (6)	78 (3)	147 (4)	35 (3)	16 (1)	14 (2)	44 (4)	41 (3)	11 (1)	291 (5)	135 (2)	172 (3)
Missing	1513 (46)	1488 (48)	1574 (45)	639 (51)	919 (58)	393 (52)	591 (54)	792 (55)	521 (59)	2743 (49)	3199 (53)	2488 (48)

Year	2006-2008			2009			2010			2006-2010		
Dyslipidaemia status	Dyslipidaemia	Non-Dyslipidaemia	Unknown	Dyslipidaemia	Non-Dyslipidaemia	Unknown	Dyslipidaemia	Non-Dyslipidaemia	Unknown	Dyslipidaemia	Non-Dyslipidaemia	Unknown
Total	**3279**	**3078**	**3514**	**1248**	**1586**	**760**	**1090**	**1429**	**882**	**5617**	**6093**	**5156**
Killip classification code, No. (%)												
I	1583 (48)	1454 (47)	1684 (48)	760 (61)	985 (62)	422 (56)	605 (56)	770 (54)	430 (49)	2948 (52)	3209 (53)	2536 (49)
II	606 (18)	483 (16)	613 (17)	209 (17)	241 (15)	124 (16)	182 (17)	277 (19)	131 (15)	997 (18)	1001 (16)	868 (17)
III	129 (4)	122 (4)	137 (4)	51 (4)	48 (3)	22 (3)	33 (3)	52 (4)	34 (4)	213 (4)	222 (4)	193 (4)
IV	88 (3)	92 (3)	161 (5)	34 (3)	48 (3)	48 (6)	43 (4)	57 (4)	73 (8)	165 (3)	197 (3)	282 (5)
Not stated/inadequately described	873 (27)	927 (30)	919 (26)	194 (16)	264 (17)	144 (19)	227 (21)	273 (19)	214 (24)	1294 (23)	1464 (24)	1277 (25)
Patients with any cardiac marker measurement done, No. (%)	3119 (95)	2903 (94)	3103 (88)	1190 (95)	1527 (96)	698 (92)	1020 (94)	1352 (95)	809 (92)	5329 (95)	5782 (95)	4610 (89)
Peak CK-MB, Unit/L, No. (%)												
N	1932	1776	1668	644	1045	344	638	890	388	3214	3711	2400
>25 reference upper limits	898 (46)	926 (52)	854 (51)	306 (48)	435 (42)	156 (45)	294 (46)	415 (47)	157 (40)	1498 (47)	1776 (48)	1167 (49)
Peak CK, Unit/L, No. (%)												
N	2839	2628	2825	1121	1453	627	925	1252	732	4885	5333	4184
>2x reference upper limits	955 (34)	1308 (50)	1587 (56)	439 (39)	570 (39)	328 (52)	395 (43)	583 (47)	415 (57)	1789 (37)	2461 (46)	2330 (56)
Peak TnT, No. (%)												
N	690	496	484	323	419	130	396	492	160	1409	1407	774
Positive or > reference upper limits	612 (89)	454 (92)	428 (88)	294 (91)	391 (93)	127 (98)	281 (71)	318 (65)	132 (83)	1187 (84)	1163 (83)	687 (89)

Year	2006-2008			2009			2010			2006-2010		
Dyslipidaemia status	Dyslipidaemia	Non-Dyslipidaemia	Unknown	Dyslipidaemia	Non-Dyslipidaemia	Unknown	Dyslipidaemia	Non-Dyslipidaemia	Unknown	Dyslipidaemia	Non-Dyslipidaemia	Unknown
Total	**3279**	**3078**	**3514**	**1248**	**1586**	**760**	**1090**	**1429**	**882**	**5617**	**6093**	**5156**
Peak TnI, No. (%)												
N	234	146	239	23	42	35	142	305	89	399	493	363
Positive or > reference upper limits	121 (52)	100 (68)	166 (69)	18 (78)	32 (76)	25 (71)	66 (46)	191 (63)	54 (61)	205 (51)	323 (66)	245 (67)
Total cholesterol, mmol/L												
N	2274	2331	2451	937	1152	549	772	979	593	3983	4462	3593
Mean (SD)	5.2 (1.3)	5.3 (1.3)	5.4 (1.3)	5.4 (1.4)	5.2 (1.2)	5.5 (1.4)	5.3 (1.4)	5.2 (1.3)	5.4 (1.4)	5.3 (1.4)	5.2 (1.3)	5.4 (1.4)
Median (min, max)	5 (3.0, 16.1)	5.1 (3.0, 14.3)	5.3 (3.0, 14.7)	5.3 (3.0, 19.9)	5.1 (3.0, 14.9)	5.4 (3.0, 13.5)	5.2 (3.0, 15)	5 (3.0, 13.7)	5.3 (3.0, 16.2)	5.1 (3.0, 19.9)	5.1 (3.0, 14.9)	5.3 (3.0, 16.2)
IQR	1.8	1.7	1.7	1.8	1.6	1.7	1.8	1.7	1.8	1.7	1.7	1.7
HDL-C, mmol/L												
N	2317	2297	2423	956	1160	554	787	999	579	4060	4456	3556
Mean (SD)	1.12 (.38)	1.11 (.38)	1.11 (.34)	1.09 (.33)	1.1 (.34)	1.1 (.37)	1.11 (.29)	1.09 (.28)	1.08 (.33)	1.11 (.35)	1.1 (.35)	1.11 (.35)
Median (min, max)	1.07 (.5, 4.50)	1.06 (.5, 4.94)	1.1 (.5, 4.24)	1.01 (.5, 4.30)	1.05 (.5, 4.32)	1.06 (.5, 4.60)	1.1 (.5, 2.40)	1.07 (.5, 2.32)	1.01 (.5, 3.68)	1.06 (.5, 4.50)	1.06 (.5, 4.94)	1.08 (.5, 4.60)
IQR	0.39	0.39	0.39	0.32	0.35	0.36	0.4	0.33	0.41	0.38	0.36	0.38
LDL-C, mmol/L												
N	2262	2256	2393	959	1171	552	783	986	582	4004	4413	3527
Mean (SD)	3.14 (1.23)	3.29 (1.21)	3.46 (1.21)	3.45 (1.25)	3.3 (1.13)	3.61 (1.29)	3.33 (1.32)	3.31 (1.18)	3.44 (1.20)	3.25 (1.26)	3.3 (1.18)	3.48 (1.23)
Median (min, max)	3 (1.0, 14.6)	3.19 (1.0, 10.1)	3.4 (1.0, 8.6)	3.3 (1.1, 10.0)	3.23 (1.0, 13.0)	3.45 (1.1, 10.8)	3.2 (1.0, 11.5)	3.17 (1.1, 10.6)	3.33 (1.0, 9.1)	3.1 (1.0, 14.6)	3.2 (1.0, 13.0)	3.4 (1.0, 10.8)
IQR	1.69	1.60	1.60	1.70	1.50	1.64	1.71	1.58	1.60	1.68	1.54	1.60

Year	2006-2008			2009			2010			2006-2010		
Dyslipidaemia status	Dyslipidaemia	Non-Dyslipidaemia	Unknown	Dyslipidaemia	Non-Dyslipidaemia	Unknown	Dyslipidaemia	Non-Dyslipidaemia	Unknown	Dyslipidaemia	Non-Dyslipidaemia	Unknown
Total	**3279**	**3078**	**3514**	**1248**	**1586**	**760**	**1090**	**1429**	**882**	**5617**	**6093**	**5156**
Triglycerides, mmol/L												
N	2008	1993	2085	847	1006	462	676	830	508	3531	3829	3055
Mean (SD)	2.14 (1.32)	2.04 (1.21)	2.07 (1.3)	1.99 (1.06)	1.82 (0.90)	1.90 (1.08)	2.06 (1.29)	1.87 (1.08)	2.00 (1.25)	2.09 (1.25)	1.95 (1.11)	2.03 (1.26)
Median (min, max)	1.78 (1.0, 13.0)	1.70 (1.0, 12.9)	1.70 (1.0, 15.0)	1.70 (1.0, 14.0)	1.60 (1.0, 9.0)	1.60 (1.0, 12.2)	1.70 (1.0, 10.8)	1.60 (1.0, 14.2)	1.61 (1.0, 15.0)	1.70 (1.0, 14.0)	1.61 (1.0, 14.2)	1.70 (1.0, 15.0)
IQR	1.06	1	1.02	0.9	0.7	0.84	1	0.85	0.9	1.05	0.9	1
Left ventricular ejection fraction, %												
N	1657	1669	1778	741	962	398	582	745	450	2980	3376	2626
Mean (SD)	46 (13)	47 (12)	47 (13)	47 (12)	48 (12)	47 (13)	46 (13)	46 (14)	46 (13)	47 (13)	47 (13)	47 (13)
Median (min, max)	46 (5, 80)	46 (7, 80)	47 (7, 80)	49 (10, 80)	50 (5, 80)	47 (10, 80)	47 (10, 78)	45 (10, 80)	45 (5, 79)	47 (5, 80)	47 (5, 80)	46 (5, 80)
IQR	17	15	15	15	15	18	19	18	17	17	15	15
ECG, No. (%)												
Inferior leads	453 (14)	778 (25)	885 (25)	208 (17)	373 (24)	227 (30)	221 (20)	336 (24)	272 (31)	882 (16)	1487 (24)	1384 (27)
Anterior leads	607 (19)	897 (29)	1184 (34)	307 (25)	375 (24)	250 (33)	280 (26)	423 (30)	314 (36)	1194 (21)	1695 (28)	1748 (34)
Lateral leads	228 (7)	324 (11)	532 (15)	134 (11)	178 (11)	96 (13)	106 (10)	163 (11)	107 (12)	468 (8)	665 (11)	735 (14)
True posterior	76 (2)	144 (5)	219 (6)	18 (1)	53 (3)	43 (6)	25 (2)	61 (4)	47 (5)	119 (2)	258 (4)	309 (6)
Right ventricle	65 (2)	146 (5)	176 (5)	25 (2)	54 (3)	41 (5)	23 (2)	54 (4)	40 (5)	113 (2)	254 (4)	257 (5)
None	8 (0)	7 (0)	9 (0)	8 (1)	8 (1)	2 (0)	6 (1)	3 (0)	3 (0)	22 (0)	18 (0)	14 (0)
Not stated/ inadequately described	9 (0)	13 (0)	9 (0)	0 (0)	3 (0)	4 (1)	12 (1)	9 (1)	9 (1)	21 (0)	25 (0)	22 (0)

Year	2006-2008			2009			2010			2006-2010		
Dyslipidaemia status	Dyslipidaemia	Non-Dyslipidaemia	Unknown	Dyslipidaemia	Non-Dyslipidaemia	Unknown	Dyslipidaemia	Non-Dyslipidaemia	Unknown	Dyslipidaemia	Non-Dyslipidaemia	Unknown
Total	**3279**	**3078**	**3514**	**1248**	**1586**	**760**	**1090**	**1429**	**882**	**5617**	**6093**	**5156**
Pain to needle time, min												
N	437	843	1060	206	311	221	233	366	284	876	1520	1565
Mean (SD)	650.4 (2468)	755.2 (5250)	774.9 (4613)	3164.9 (36751)	2439.4 (30372)	22633.1 (318517)	2313.5 (20324)	2024.6 (27606)	565.7 (2768)	1684.1 (20740)	1405.5 (19678)	3823.6 (119770)
Median (min, max)	260 (28.4, 45001)	244.7 (19.7, 87995)	253.4 (15.3, 88000)	234.8 (2.2, 526110)	240.3 (6.6, 528731)	220.6 (15.3, 4732800)	225 (15.3, 256556)	240.3 (15.3, 528100)	223.9 (19.7, 45229)	240.3 (2.2, 526110)	244.7 (6.6, 528731)	240.3 (15.3, 4732800)
IQR	329.9	275.3	290.5	275.3	222.8	270.9	275.3	340.8	289.5	296	270.9	286.2
Door to needle time, min												
N	439	853	1074	225	366	241	237	382	302	901	1601	1617
Mean (SD)	104.9 (160.7)	93.8 (127.0)	106.7 (179.5)	107.1 (194.8)	96.9 (185.0)	97.2 (179.0)	136 (251.3)	105.8 (193.5)	122.1 (216.1)	113.6 (196.9)	97.4 (159.2)	108.2 (186.8)
Median (min, max)	55 (2, 1160)	58 (1, 1349)	50 (1, 1440)	50 (2, 1420)	45 (3, 1440)	40 (2, 1395)	40 (4, 1400)	43.5 (4, 1440)	50 (3, 1410)	50 (2, 1420)	50 (1, 1440)	50 (1, 1440)
IQR	76	79	76	70	68	70	71	67	85	72	75	77

*Cardiac marker is defined as any of the following baseline investigations: 1) Peak CK-MB, 2) Peak CK, 3) Peak TnT, 4) Peak TnI whereby status Not Done="False" for all investigations

Note: Not all participating centre performed Troponin T or Troponin I tests

Note: Percentage is to the nearest decimal point

Table 3.7 TIMI risk score of patients with ACS by ACS Stratum, NCVD-ACS Registry, 2006–2010

Year	2006		2007		2008		2009		2010		2006-2010	
ACS Stratum	STEMI	NSTEMI/ UA	STEMI	NSTEMI/ UA	STEMI	NSTEMI/ UA	STEMI	NSTEMI/ UA	STEMI	NSTEMI/ UA	STEMI	NSTEMI/ UA
TIMI Risk Score, No. (%)												
0	201 (14)	382 (19)	27 (2)	118 (6)	29 (2)	169 (13)	15 (1)	188 (10)	27 (1)	112 (7)	299 (4)	969 (11)
1	153 (11)	291 (15)	172 (10)	378 (19)	150 (10)	300 (23)	153 (9)	343 (18)	205 (11)	290 (18)	833 (10)	1602 (18)
2	280 (20)	459 (23)	335 (20)	547 (28)	296 (19)	320 (25)	352 (21)	468 (24)	355 (20)	429 (27)	1618 (20)	2223 (25)
3	194 (14)	437 (22)	316 (19)	456 (23)	248 (16)	285 (22)	305 (18)	470 (25)	318 (18)	407 (25)	1381 (17)	2055 (24)
4	176 (12)	248 (13)	245 (15)	302 (15)	217 (14)	163 (12)	255 (15)	265 (14)	249 (14)	243 (15)	1142 (14)	1221 (14)
5	162 (11)	118 (6)	232 (14)	126 (6)	224 (15)	61 (5)	238 (14)	138 (7)	256 (14)	96 (6)	1112 (14)	539 (6)
6	83 (6)	25 (1)	123 (7)	23 (1)	118 (8)	8 (1)	128 (8)	40 (2)	139 (8)	19 (1)	591 (7)	115 (1)
7	89 (6)	5 (0)	110 (7)	3 (0)	128 (8)	0 (0)	121 (7)	1 (0)	118 (7)	3 (0)	566 (7)	12 (0)
8	51 (4)		69 (4)		48 (3)		60 (4)		58 (3)		286 (4)	
9	21 (1)		31 (2)		37 (2)		30 (2)		38 (2)		157 (2)	
10	14 (1)		21 (1)		32 (2)		11 (1)		29 (2)		107 (1)	
11	1 (0)		3 (0)		4 (0)		8 (0)		6 (0)		22 (0)	
12	1 (0)		3 (0)		1 (0)		3 (0)		3 (0)		11 (0)	
13	1 (0)		0 (0)		1 (0)		2 (0)		1 (0)		5 (0)	