ARIC Data Book Page 1 of 12

Cohort, Exam 4

ECG data

Composite, with adjudications

ECGMD01		ECG tech code
N	Value	Description
11594	Present	Text suppressed
35		Missing

E	CGMD04	Filter setting - not used - blank
N	Value	Description
11629		Missing

E	CGMD05	Cart code
N	Value	Description
2	00	
2836	01	
3248	05	
1	06	
3184	07	
2325	08	
33		Missing

EC	CGMD06	Recording date
N	Value	Description
11596	Range	02/01/1996 - 01/30/1999
33		Missing

ECGMD07		Recording time
N	Value	Description
11596	Range	4:47 - 14:22
33		Missing

EC	GMD07H	Recording time - hour
N	Value	Description
11596	Range	4 - 14 (median=8 mean=8.5 std=1.3)
33		Missing

EC	GMD07M	Recording time - minute
N	Value	Description
11596	Range	0 - 59 (median=30 mean=30.3 std=17.7)
33		Missing

E	CGMD08	Quality Grade (Noise/mm, Overall drift/mm, Beat to beat drift/mm)
N	Value	Description
8522	1	
2194	2	
538	3	
148	4	
194	5	
33		Missing

ECGMD09		Minnesota Code L1 (Q-Q.S. Pattern I, aVL, V6)
Ν	Value	Description
11482	0	No Minnesota Code Equivalent
3	11	Q/R amplitude ratio = 1/3, plus Q duration = 0.03 sec in lead I or V6
3	13	Q duration = 0.04 sec, plus R amplitude = 3 mm in lead a VL
2	21	Q/R amplitude ratio = 1/3, plus Q duration = 0.02 and < 0.03 sec in lead I or V6
3	22	Q duration = 0.03 sec and < 0.04 sec lead I or V6
2	28	Initial R amplitude decreasing to 2 mm or less in every beat (and absence of codes 3-2, 7-1-1, 7-2-1, or 7-3 between V5 and V6. (All beats in lead V5 must have an initial R > 2 mm.)
31	31	Q/R amplitude ratio = 1/5 and < 1/3, plus Q duration = 0.02 sec and < 0.03 sec in lead I or V6.
19	33	Q duration = 0.03 sec and < 0.04 sec, plus R amplitude = 3 mm in lead aVL.
84		Missing

ECGMD10		Minnesota Code F1 (Q-Q.S. Pattern II, III, aVF)
N	Value	Description
11553	Range	0 - 36 (median=0 mean=0.9 std=5.0)
76		Missing

E	CGMD11	Minnesota Code V1 (Q-Q.S. Pattern V1-V5)
N	Value	Description
11554	Range	0 - 32 (median=0 mean=0.3 std=2.9)
75		Missing

ARIC Data Book Page 3 of 12

ECGMD12		Minnesota Code L4 (ST Junction & Segment Depression I, aVL, V6)
N	Value	Description
11242	0	No Minnesota Code Equivalent
94	2	STJ depression = 0.5 mm and < 1.0 mm and ST segment horizontal or downward sloping in any of leads I, aVL, or V6.
192	3	No STJ depression as much as 0.5 mm but ST segment downward sloping and segment or T-wave nadir = 0.5 mm below P-R baseline, in any of leads I, aVL, or V6.
2	4	STJ depression = 1.0 mm and ST segment upward sloping or U-shaped, in any of leads I, aVL, or V6.
1	11	
14	12	STJ depression = 1.0 mm but < 2.0 mm, and ST segment horizontal or downward sloping in any of leads I, aVL, or V6.
84		Missing

ECGMD13		Minnesota Code F4 (ST Junction & Segment Depression II, III, aVF)
N	Value	Description
11486	0	No Minnesota Code Equivalent
22	2	STJ depression = 0.5 mm and < 1.0 mm and ST segment horizontal or downward sloping in any of leads I, aVL, or V6
42	3	No STJ depression as much as 0.5 mm but ST segment downward sloping and segment or T-wave nadir = 0.5 mm below P-R baseline, in any of leads I, aVL, or V6
1	4	STJ depression = 1.0 mm and ST segment upward sloping or U-shaped, in any of leads I, aVL, or V6
2	12	STJ depression = 1.0 mm but < 2.0 mm, and ST segment horizontal or downward sloping in any of leads I, aVL, or V6
76		Missing

ECGMD14		Minnesota Code V4 (ST Junction & Segment Depression V1-V5)
N	Value	Description
11339	0	No Minnesota Code Equivalent
80	2	STJ depression = 0.5 mm and < 1.0 mm and ST segment horizontal or downward sloping in any of leads V1 - V5
89	3	No STJ depression as much as 0.5 mm, but ST segment downward sloping and segment or T-wave nadir = 0.5 mm below P-R baseline in any of leads V2 - V5
5	4	STJ depression = 1.0 mm and ST segment upward sloping or U-shaped in any of leads V1 - V5
4	11	STJ depression = 2.0 and ST segment horizontal or downward sloping in any of leads V1-V5
34	12	STJ depression = 2.0 and ST segment horizontal or downward sloping in any of leads V1 - V5
78		Missing

ARIC Data Book Page 4 of 12

ECGMD15		Minnesota Code L5 (T Wave I, aVL, V6)
N	Value	Description
10169	0	No Minnesota Code Equivalent
12	1	T amplitude negative 5.0 mm or more in either of leads I, V6, or in lead aVL when R amplitude is = 5.0 mm
356	2	T amplitude negative or diphasic (positive-negative or negative-positive type) with negative phase at least 1.0 mm but not as deep as 5.0 mm in lead I or V6, or in lead aVL when R amplitude is = 5.0 mm
679	3	T amplitude zero (flat), or negative, or diphasic (negative-positive type only) with less than 1.0 mm negative phase in lead I or V6, or in lead aVL when R amplitude is = 5.0 mm
331	4	T amplitude positive and T/R amplitude ratio < 1/20 in any of leads I, aVL, V6; R wave amplitude must be = 10.0 mm.
82		Missing

ECGMD16		Minnesota Code F5 (T Wave II, III, aVF)
N	Value	Description
11216	0	No Minnesota Code Equivalent
2	1	
82	2	T amplitude negative or diphasic with negative phase (negative-positive or positive-negative type) at least 1.0 mm but not as deep as 5.0 mm in lead II, or in lead aVF when QRS is mainly upright
193	3	T amplitude zero (flat), or negative, or diphasic (negative-positive type only) with less than 1.0 mm negative phase in lead II; not Coded in lead aVF
60	4	T amplitude positive and T/R amplitude ratio < 1/20 in lead II; R wave amplitude must be = 10.0 mm.
76		Missing

ECGMD17		Minnesota Code V5 (T Wave V1-V5)
N	Value	Description
10496	0	No Minnesota Code Equivalent
43	1	T amplitude negative 5.0 mm or more in any of leads V2 - V5
405	2	T amplitude negative (flat), or diphasic (negative-positive or positive-negative type) with negative phase at least 1.0 mm but not as deep as 5.0 mm, in any of leads V2 - V5
286	3	T amplitude zero (flat), or negative, or diphasic (negative-positive type only) with less than 1.0 mm negative phase, in any of leads V3 - V5
323	4	T amplitude positive and T/R amplitude ratio < 1/20 in any of leads V3, V4, V5; R wave amplitude must be = 10.0 mm
76		Missing

ECGMD18		Minnesota Code L92 (ST Segment Elevation Anterolateral Site (Leads I, aVL, V6))
N	Value	Description
11545	0	No Minnesota Code Equivalent
84		Missing

ARIC Data Book Page 5 of 12

EC	CGMD19	Minnesota Code F92 (ST Segment Elevation Posterior (Inferior) Site (Leads II, III, aVF))
N	Value	Description
11548	0	No Minnesota Code Equivalent
5	2	ST segment elevation = 1.0 mm in any of leads II, III, aVF
76		Missing

ECGMD20		Minnesota Code V92
N	Value	Description
11456	0	No Minnesota Code Equivalent
94	2	ST segment elevation = 1.0 mm in lead V5 or ST segment elevation = 2.0 mm in any of leads V1 - V4
79		Missing

ECGMD21		Minnesota Code C2 (QRS Axis Deviation Codes)
N	Value	Description
9328	0	No Minnesota Code Equivalent
13	3	Right (optional code when 2-2 is not present). QRS axis from +90° through +119° in leads I, II, III. (The algebraic sum of major positive and major negative QRS waves must be zero or negative in I and positive in II and III.)
1594	11	
362	12	
230	21	Left. QRS axis from -30° through -90° in leads I, II, III. (The algebraic sum of major positive and major negative QRS waves must be zero or positive in I, negative in III, and zero or negative in II.)
19	22	Right. QRS axis from +120° through -150° in leads I, II, III. (The algebraic sum of major positive and major negative QRS waves must be negative in I, and zero or positive in III, and in I must be one-half or more of that in III.)
83		Missing

E	CGMD22	Minnesota Code C3 (High Amplitude R Wave Codes)
N	Value	Description
10513	0	No Minnesota Code Equivalent
9	2	Right: R amplitude = 5.0 mm and R amplitude = S amplitude in the majority of beats in lead V1, when S amplitude is > R amplitude somewhere to the left on the chest of V1
257	12	
20	13	
377	14	
102	31	Left: R amplitude > 26 mm in either V5 or V6, or R amplitude > 20.0 mm in any of leads I, II, III, aVF, or R amplitude > 12.0 mm in lead aVL. (All criteria measured only on second to last complete normal beat.)
264	32	Right: R amplitude = 5.0 mm and R amplitude = S amplitude in the majority of beats in lead V1, when S amplitude is > R amplitude somewhere to the left on the chest of V1 (codes 7-3 and 3-2, if criteria for both are present).
87		Missing

ARIC Data Book Page 6 of 12

ECGMD23		Minnesota Code C6 (A-V Conduction Defect Codes)
Ν	Value	Description
10942	0	No Minnesota Code Equivalent
368	3	P-R (P-Q) interval = 0.22 sec in the majority of beats in any of leads I, II, III, aVL, aVF
1	4	
230	5	Short P-R interval. P-R interval < 0.12 sec in all beats of any two of leads I, II, III, aVL, aVF
36	8	Artificial pacemaker.
2	23	
3	41	Wolff-Parkinson-White Pattern (WPW), persistent. Sinus P-wave. P-R interval < 0.12 sec, plus QRS duration = 0.12 sec, plus R peak duration = 0.06 sec, coexisting in the same beat and present in the majority of beats in any of leads I, II, aVL, V4, V5, V6.
47		Missing

E	CGMD24	Minnesota Code C7 (Ventricular Conduction Defect)
N	Value	Description
10149	0	No Minnesota Code Equivalent
103	1	
223	2	
214	3	Incomplete right bundle branch block. QRS duration < 0.12 sec in each of leads I, II, III, aVL, aVF, and R' > R in either of leads V1, V2
49	4	Intraventricular block. QRS duration = 0.12 sec in a majority of beats in any of leads I, II, III, aVL, aVF. (7-4 suppresses all 2, 3, 4, 5, 9-2, 9-4, 9-5 codes.)
251	5	R-R' pattern in either of leads V1, V2 with R' amplitude = R.
456	6	Incomplete left bundle branch block. (Do not code in the presence of any codable Q- or QS-wave.) QRS duration = 0.10 sec and < 0.12 in the majority of beats of each of leads I, aVL, and V5 or V6.
73	11	Complete left bundle branch block (LBBB). (Do not code in presence of 6-1, 6-4-1, 6-8, 8-2-1 or 8-2-2.) QRS duration = 0.12 sec in a majority of beats in any of leads I, II, III, aVL, aVF, plus R peak duration ! 0.06 sec in a majority of beats (of the sam
30	21	Complete right bundle branch block (RBBB). (Do not code in the presence of 6-1, 6-4-1, 6-8, 8-2-1 or 8-2-2.) QRS duration = 0.12 sec in a majority of beats in any of leads I, II, III, aVL, aVF, plus: R' > R in V1 or V2; or QRS mainly upright, with R peak
81		Missing

ECGMD25		Minnesota Code C91 (Low QRS Amplitude)
N	Value	Description
11363	0	No Minnesota Code Equivalent
186	1	Low QRS amplitude. QRS peak-to-peak amplitude < 5 mm in all beats in each of leads I, II, III, or < 10 mm in all beats in each of leads V1 - V6. (Check calibration before coding.)
80		Missing

ARIC Data Book Page 7 of 12

ECGMD26		Minnesota Code C93 (P-Wave Amplitude > 2.5 MM In Any of Leads II, III, aVF in Majority of Beats)
N	Value	Description
11530	0	No Minnesota Code Equivalent
20	3	P-wave amplitude = 2.5 mm in any of leads II, III, aVF, in a majority of beats.
79		Missing

ECGMD27		Minnesota Code C94 (QRS Transition Zone)
N	Value	Description
4236	0	No Minnesota Code Equivalent
6643	1	QRS transition zone at V3 or to the right of V3 on the chest. (Do not code in the presence of 6-4-1, 7-1-1, 7-2-1 or 7-4.)
674	2	QRS transition zone at V4 or to the left of V4 on the chest. (Do not code in the presence of 6-4-1, 7-1-1, 7-2-1 or 7-4.)
76		Missing

ECGMD28		Minnesota Code C95 (T-Wave Amplitude)
N	Value	Description
11470	0	No Minnesota Code Equivalent
72	5	T-wave amplitude > 12 mm in any of leads I, II, III, aVL, aVF, V1, V2, V3, V4, V5, V6. (Do not code in the presence of 6-4-1, 7-1-1, 7-2-1 or 7-4.)
87		Missing

ECGMD29		Minnesota code E7
N	Value	Description
7616	0	No Minnesota Code Equivalent
3937	7	QRS Duration > 90 MS OR Intrinscord Deflection V5 OR V6 > 50 MS
76		Missing

EC	CGMD30	Clls value
N	Value	Description
11541	Range	-20.99 - 51.83 (median=3.64 mean=5.017 std=10.194)
88		Missing

ECGMD31		Heart rate
N	Value	Description
11553	Range	34 - 132 (median=62 mean=62.9 std=10.2)
76		Missing

ARIC Data Book Page 8 of 12

EC	CGMD32	Q Or QS Amplitude:I
N	Value	Description
11553	Range	0 - 553 (median=30 mean=39.2 std=46.0)
76		Missing

ECGMD33		Q Or QS Amplitude:III
N	Value	Description
11553	Range	0 - 2490 (median=0 mean=92.8 std=185.8)
76		Missing

ECGMD34		Q Or QS Amplitude:V5
N	Value	Description
11553	Range	0 - 903 (median=21 mean=36.5 std=53.1)
76		Missing

ECGMD35		Q Or QS Amplitude:V6
N	Value	Description
11552	Range	0 - 662 (median=34 mean=44.7 std=50.2)
77		Missing

EC	CGMD36	R Amplitude:I
N	Value	Description
11553	Range	0 - 2697 (median=817 mean=845.9 std=334.6)
76		Missing

ECGMD37		R Amplitude:III
N	Value	Description
11553	Range	0 - 1870 (median=141 mean=228.1 std=236.9)
76		Missing

ECGMD38		R Amplitude:aVL
N	Value	Description
11546	Range	0 - 2966 (median=533 mean=569.5 std=343.5)
83		Missing

EC	CGMD39	R Amplitude:V2
N	Value	Description
11551	Range	0 - 3282 (median=431 mean=498.0 std=335.3)
78		Missing

ECGMD40		R Amplitude:V5
N	Value	Description
11553	Range	0 - 4823 (median=1344 mean=1400.8 std=509.5)
76		Missing

ECGMD41		R Amplitude:V6
N	Value	Description
11552	Range	0 - 3560 (median=1046 mean=1095.1 std=402.8)
77		Missing

ECGMD42		S Amplitude:I
N	Value	Description
11553	Range	-1299 - 0 (median=0 mean=-64.3 std=95.2)
76		Missing

ECGMD43		S Amplitude:III
N	Value	Description
11553	Range	-3809 - 0 (median=-183 mean=-321.2 std=385.1)
76		Missing

ECGMD44		S Amplitude:V1
N	Value	Description
11553	Range	-4569 - 0 (median=-726 mean=-754.2 std=463.0)
76		Missing

ECGMD45		S Amplitude: V2
N	Value	Description
11551	Range	-5176 - 0 (median=-994 mean=-1052.5 std=563.4)
78		Missing

EC	CGMD46	S Amplitude: V5
N	Value	Description
11553	Range	-1651 - 0 (median=-168 mean=-212.6 std=207.3)
76		Missing

ECGMD47		S Amplitude: V6
N	Value	Description
11552	Range	-1318 - 0 (median=0 mean=-68.4 std=110.3)
77		Missing

ECGMD48		T negative Amplitude:aVL
N	Value	Description
11546	Range	-546 - 0 (median=0 mean=-11.6 std=40.3)
83		Missing

ECGMD49		T negative Amplitude:aVF
N	Value	Description
11553	Range	-398 - 0 (median=0 mean=-4.0 std=20.7)
76		Missing

ECGMD50		T negative Amplitude:V6
N	Value	Description
11552	Range	-1054 - 0 (median=0 mean=-9.2 std=46.7)
77		Missing

ECGMD51		T positive Amplitude:aVR
N	Value	Description
11553	Range	0 - 521 (median=0 mean=2.8 std=21.4)
76		Missing

ECGMD52		T positive Amplitude:V1
N	Value	Description
11553	Range	0 - 1143 (median=23 mean=97.4 std=129.3)
76		Missing

EC	CGMD53	T positive Amplitude:V6
N	Value	Description
11552	Range	0 - 1099 (median=209 mean=214.9 std=128.6)
77		Missing

ECGMD54		QRS Interval
N	Value	Description
11553	Range	57 - 453 (median=95 mean=97.5 std=15.2)
76		Missing

ECGMD55		OE Measurement
N	Value	Description
11595	Range	7 - 950 (median=130 mean=131.1 std=25.7)
34		Missing

ECGMD56		OV6 Measurement
N	Value	Description
11595	Range	2 - 310 (median=170 mean=172.1 std=25.2)
34		Missing

E	CGMD57	V3 ECG Sent To Minn
N	Value	Description
8606	0	
2990	1	
33		Missing

E	CGMD58	V4 ECG abnormal sent
N	Value	Description
9547	0	
2049	1	
33		Missing

E	CGMD60	V4 - not significant - random sample
N	Value	Description
10655	0	
941	1	
33		Missing

EC	CGMDCY	Contact year
N	Value	Description
11629	10	

ECGMDFLG		ECGMD record present
N	Value	Description
11629	1	

ID		ARIC participant ID
N	Value	Description
11629	Present	Text suppressed