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ECG data: FORM CODE=ETL VERSION=B

Coded - visual, Minnesota

The ECGMB22 data set is the final study ECG data set for Visit 2. There is 1 ECG Machine coded data set ECGC. The Visual Coded record from the ECG Reading Center in Minnesota is the ETLB record. Roughly 1 in every 5 ECG records were sent to be visually coded at Minnesota in Visit 2. About half of the visual coded records were sent for quality control purposes and the remainder sent because an algorithm determined these records needed visual coding. Of these roughly 3500 visual coded (ETLB) records, about one third were found to have some significant differences between the visual and machine coding. The ECG Visual Reading Center was requested to re-code the portions of the records where differences occurred. These are the adjudicated ECAB records.

The ECGMB22 data set utilizes all of the different ECG data sets to some extent. First, if there is only an ECGC record for a particular ID, the ECGC record for that ID is duplicated in the ECGMB22 data set. Second, if there is a Visual Coded record for an ID but there was no need for adjudication, the ECGC record for that ID is duplicated in the ECGMB22 data set. Lastly, when there is an ECAB adjudicated record, the ECGC record is written to the ECGMB22 data set with the exception that the adjudicated values overwrite the original ECGC values when machine coded value is not in substantial agreement with the visual coded value. Details of the criteria for agreement can be found in Section 2.1.2 of ARIC Manual #5. Thus, records with ECAB adjudicated values are the only records that are potentially different from the original ECGC records in the ECGMB22 data set.

Attached is a listing of variables contained in the ECGMB22 data set. Unless specifically requested otherwise, these variables should be used in official ARIC analyses, although the ECGC (Machine Coding) and ETLB (Visual Coding) records are also distributed.

The ECGMB22 data set was compared with the baseline ECG composite file (ECGMA03). Potential cases with ECG serial changes were selected by computer algorithm at CSCC. The ECG machine coding center also compared ECGC data with baseline ECG (ECGX02) to select potential cases with ECG serial changes by NOVA codes. The two serial changes listing were sent to the ECG Visual Reading Center for determination of serial changes using their algorithm. The result file is ESMA.

ETLB02		*ECG Technician Code Q02*
N	*Value*	*Description*
3454	Present	Text suppressed

ETLB03		*Date ECG Recorded Q03*
N	*Value*	*Description*
3454	Range	02/03/1910 - 03/11/1993

ETLB04		*Date ECG Sent Q04*
N	*Value*	*Description*
3453	Range	01/28/1920 - 10/18/1993
1		Missing

ETLB05		*Date ECG Coded Q05*
N	*Value*	*Description*
3454	Range	04/28/1991 - 11/09/1993

ETLB06		*Reading Center Coder ID Q06*
N	*Value*	*Description*
3454	Present	Text suppressed

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ETLB07		*Q-QS 1l Q07*
N	*Value*	*Description*
5	11	Q/R amplitude ratio = 1/3, plus Q duration = 0.03 sec in lead I or V6.
2	21	Q/R amplitude ratio = 1/3, plus Q duration = 0.02 sec and < 0.03 sec in lead I or V6.
3	22	Q duration = 0.03 sec and < 0.04 sec in lead I or V6.
1	23	QS pattern in lead I. Do not code in the presence of 7-1-1.
1	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.)
29	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.
11	33	Q duration = 0.03 sec and < 0.04 sec, plus R amplitude = 3 mm in lead aVL.
3402		Missing

ETLB08		*Q-QS 23 Q08*
N	*Value*	*Description*
5	11	Q/R amplitude ratio = 1/3, plus Q duration ≥ 0.03 sec in lead II.
1	12	Q duration = 0.04 sec in lead II.
10	14	Q duration = 0.05 sec in lead III, plus a Q-wave amplitude = 1.0 mm in the majority of beats in lead aVF.
1	15	Q duration = 0.05 sec in lead aVF.
30	21	Q/R amplitude ratio = 1/3, plus Q duration = 0.02 sec and < 0.03 sec in lead II.
2	22	Q duration = 0.03 sec and < 0.04 sec in lead II.
10	23	QS pattern in lead II. Do not code in the presence of 7-1-1.
34	24	Q duration = 0.04 sec and < 0.05 sec in lead III, plus a Q-wave = 1.0 mm amplitude in the majority of beats in aVF.
4	25	Q duration = 0.04 sec and < 0.05 sec in lead aVF.
56	26	Q amplitude = 5.0 mm in leads III or aVF.
15	31	Q/R amplitude ratio = 1/5 and < 1/3, plus Q duration = 0.02 sec and < 0.03 sec in lead II.
62	34	Q duration = 0.03 sec and < 0.04 sec in lead III, plus a Q-wave = 1.0 mm amplitude in the majority of beats in lead aVF.
8	35	Q duration = 0.03 sec and < 0.04 sec in lead aVF.
26	36	QS pattern in each of leads III and aVF. (Do not code in the presence of 7-1-1.)
3190		Missing

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ETLB09		*Q-QS V1 Q09*
N	*Value*	*Description*
17	11	Q/R amplitude ratio = 1/3 plus Q duration = 0.03 sec in any of leads V2-V5.
5	12	Q duration = 0.04 sec in any of leads V1-V5
16	16	QS pattern when initial R-wave is present in adjacent lead to the right on the chest, in any of leads V2-V6
3	17	QS pattern in all of leads V1-V4 or V1-V5. 1-2-1 Q/R amplitude ratio ≥ 1/3, plus Q duration = 0.02
2	21	Q/R amplitude ratio = 1/3, plus Q duration = 0.02 sec and < 0.03 sec, in any of leads V2-V5.
1	22	Q duration = 0.03 sec and < 0.04 sec in any of leads V2-V5.
8	27	QS pattern in all of leads V1, V2, and V3. (Do not code in the presence of 7-1-1).
11	28	Initial R amplitude decreasing to 2.0 mm or less in every beat (and absence of codes 3-2, 7-1-1, 7-2-1, or 7-3) between any of leads V2 and V3, V3 and V4, or V4 and V5. (All beats in the lead immediately to the right on the chest must have an initial R >
2	31	Q/R amplitude ratio = 1/5 and < 1/3 plus Q duration = 0.02 and < 0.03 sec in any of leads V2-V5.
60	32	QS pattern in lead V1 and V2. (Do not code in the presence of 3-1 or 7-1-1.)
3329		Missing

ETLB10		*S-T Junction and Segment 1l Q10*
N	*Value*	*Description*
64	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.
164	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.
10	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.
3215		Missing

ETLB11		*S-T Junction and Segment 23 Q11*
N	*Value*	*Description*
18	2	STJ depression = 0.5 mm and < 1.0 mm and ST segment horizontal or downward sloping in lead II or aVF.
63	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 lead II.
1	4	STJ depression = 1.0 mm and ST segment upward sloping, or U-shaped, in lead II.
3	12	STJ depression = 1.0 mm but < 2.0 mm and ST segment horizontal or downward sloping in lead II or aVF.
3369		Missing

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ETLB12		*S-T Junction and Segment V1 Q12*
N	*Value*	*Description*
57	2	STJ depression = 0.5 mm and < 1.0 mm and ST segment horizontal or downward sloping in any of leads V1 - V5
107	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
2	4	STJ depression = 1.0 mm and ST segment upward sloping or U-shaped in any of leads V1 - V5
2	11	STJ depression = 2.0 and ST segment horizontal or downward sloping in any of leads V1-V5
20	12	STJ depression = 1.0 mm but < 2.0 mm and ST segment horizontal or downward sloping in any of leads V1, V2, V3, V4, V5
3266		Missing

ETLB13		*T Wave Items 1l Q13*
N	*Value*	*Description*
11	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.
360	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
405	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
18	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.
2660		Missing

ETLB14		*T Wave Items 23 Q14*
N	*Value*	*Description*
117	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.
282	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.
8	4	T amplitude positive and T/R amplitude ratio < 1/20 in lead II; R wave amplitude must be = 10.0 mm.
3047		Missing

ETLB15		*T Wave Items V1 Q15*
N	*Value*	*Description*
29	1	T amplitude negative 5.0 mm or more in any of leads V2, V3, V4, V5.
522	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
28	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.
2682		Missing

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ETLB16		*ST Segments 1l Q16*
N	*Value*	*Description*
2	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.
3452		Missing

ETLB17		*ST Segments 23 Q17*
N	*Value*	*Description*
3	2	STJ depression = 0.5 mm and < 1.0 mm and ST segment horizontal or downward sloping in lead II or aVF.
3451		Missing

ETLB18		*ST Segments V1 Q18*
N	*Value*	*Description*
104	2	ST segment elevation = 1.0 mm in lead V5 or ST segment elevation ≥ 2.0 mm in any of leads V1-V4.
3350		Missing

ETLB19		*R 3x Q19*
N	*Value*	*Description*
308	1	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
170	3	Left (optional code when 3-1 is not present): R amplitude > 15.0 mm but " 20.0 mm in lead I, or R amplitude in V5 or V6, plus S amplitude in V1 > 35.0 mm. (Measured only on second to last complete normal beat.)
2976		Missing

ETLB20		*A-V Conduction Defect 6x Q20*
N	*Value*	*Description*
202	3	P-R (P-Q) interval = 0.22 sec in the majority of beats in any of leads I, II, III, aVL, aVF
22	5	Short P-R interval. P-R interval < 0.12 sec in all beats of any two of leads I, II, III, aVL, aVF
11	8	Artificial pacemaker
3	21	Mobitz Type II (occurrence of P-wave on time with dropped QRS and T)
1	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 - V6
3215		Missing

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ETLB21		*Ventricular Conduction Defect 7x Q21*
N	*Value*	*Description*
79	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 .(Code as 3-2 in addition if those criteria are met. 7-3 suppresses code 1-2-8.)
9	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.)
77	5	R-R' pattern in either of leads V1, V2 with R' amplitude = R.
7	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.
110	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 same QRS pattern) in any of leads I, II, aVL, V5, V6. (7-1-1 suppresses 1-2-3, 1-2-7, 1- 2-8, 1-3-2, 1-3-6, all 2, 3, 4, 5, 9-2, 9-4, 9-5 codes. If any other codable Q-wave coexists with the LBBB pattern, code the Q and diminish the 7-1-1 code to a 7-4 code.)
160	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 duration ≥ 0.06 sec in V1 or V2; or S duration >R duration in all beats in lead I or II. (7-1 suppresses 1-2-3, 1-2-7, 1-2-8, 1-3-2, 1-3-6, all 2, 3, 4, 5, 9-2, 9-4, 9-5 codes.
3012		Missing

ETLB22		*Miscellaneous Items 91 Q22*
N	*Value*	*Description*
11	1	
3443		Missing

ETLB23		*Miscellaneous Items 93 Q23*
N	*Value*	*Description*
13	3	
3441		Missing

ETLB24		*Miscellaneous Items 95 Q24*
N	*Value*	*Description*
25	5	
3429		Missing

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ETLB25		Miscellaneous Items U Q25
N	Value	Description
1320	1	
36	2	
2088	3	
1	9	
9		Missing

ETLB26		Heart Rate Per Minute Q26
N	Value	Description
3449	Range	36 - 144 (median=65 mean=66.0 std=10.7)
5		Missing

ETLB27		Supp 8 Q27
N	Value	Description
1	0	
3453		Missing

ETLB28		Tech Problem Q28
N	Value	Description
3	1	
3	2	
3448		Missing

ETLB29		Clear 10 Q29
N	Value	Description
1437	0	
2015	1	
2		Missing

ETLBCY		Contact Year
N	Value	Description
3454	4	

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ETLBFLAG		*=1 If Form Is Present*
N	*Value*	*Description*
3454	1	

ID		*ARIC ID (Cir)*
N	*Value*	*Description*
3454	Present	Text suppressed