

NHES I

FILE

4

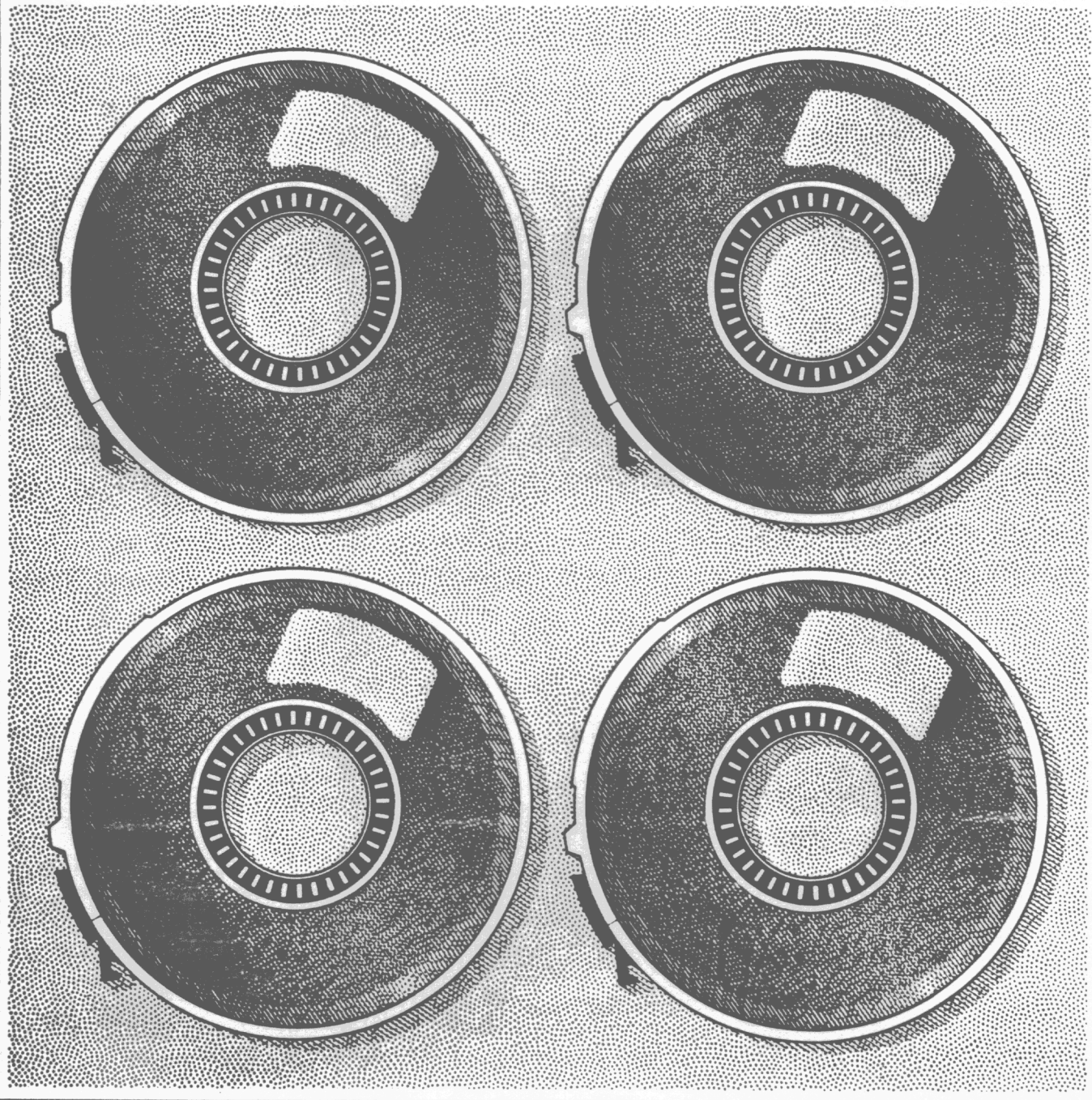
# Public Use Data Tape Documentation



Cardiovascular Data  
I Tape Number 1004

National Health Examination Survey, 1959-62

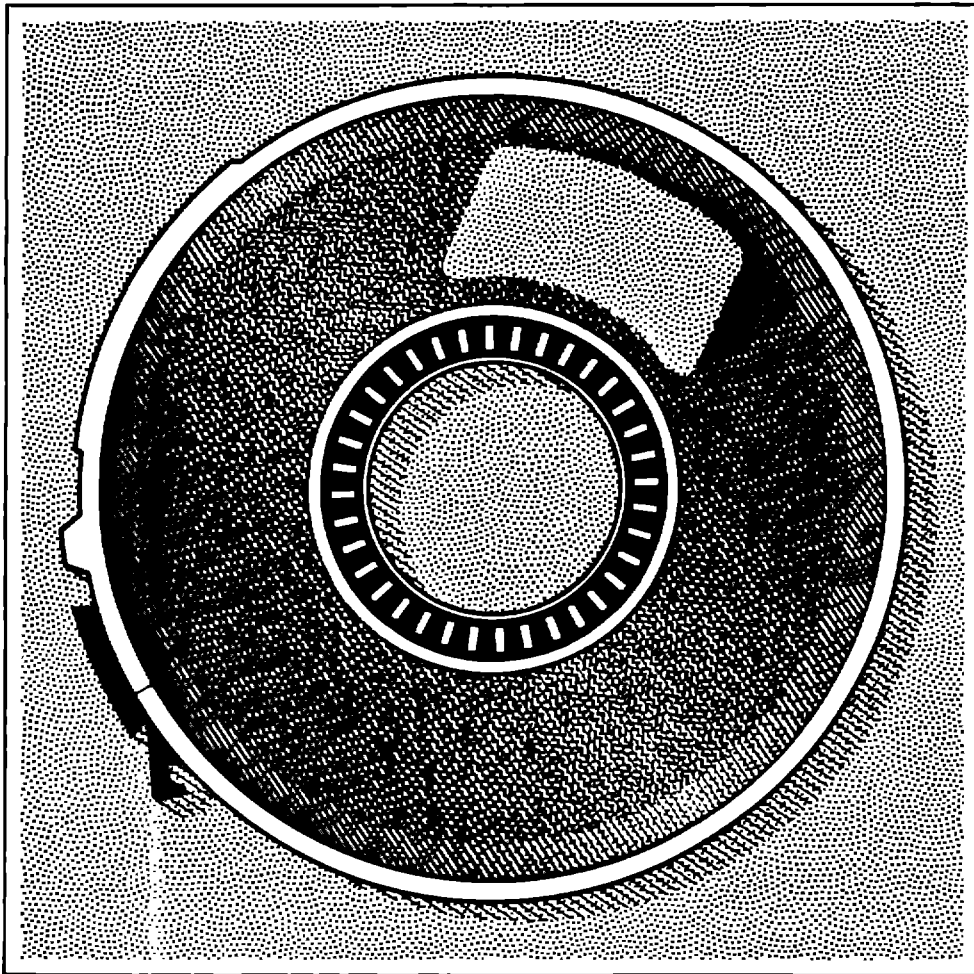
U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES • Public Health Service • Office of Health Research, Statistics, and Technology • National Center for Health Statistics



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I Tape Number 1004

National Health Examination Survey, 1959-62



U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES  
Public Health Service  
Office of Health Research, Statistics, and Technology  
National Center for Health Statistics

Hyattsville, Maryland  
May 1981

## Introduction

The overall plan of the Health Examination Survey (HES) was to conduct successive, separate cycles of examinations in specific segments of the national population. The data in this report refers to the survey for cycle 1.

The first cycle of the HES was the examination of a sample of adults. It was directed toward the collection of statistics on the medically defined prevalence of certain chronic diseases and of a particular set of dental findings and physical and physiological measurements. The probability sample consisted of 7,710 of all non-institutional civilian adults in the age range 18-79 years in the United States. Altogether, 6,672 persons were examined during the period from October 1959 to December 1962.

The tape contains data from the cycle 1 survey containing cardiovascular-related data items. There are 6,672 records of 250 characters each. The first 221 characters are coded numeric and represent 189 separate data items. The remaining 29 characters are filled with blanks.

FILE CHARACTERISTICS

TITLE: User Data Set #4 - Cardiovascular  
CONTENT: Cardiovascular Data by File Sequence Number  
CASE COUNT: 6672  
RECORD COUNT: 6672  
RECORDING MODE: FB  
RECORD LENGTH: 250 Characters  
RECS/BLOCK: 10 Records  
DENSITY: 1600-BPI  
CHANNEL: 9-trk  
LOCATION: North Carolina DP Facility  
CREATED BY: DHES/NCHS/HSKHA  
DATA SET NAME: HED1SSGM.HESUM003  
REEL NUMBER(S): 003120  
  
COMMENTS: Copy of tape with same Dsname on Reel #007140

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Electrocardiographic Criteria
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ITEM	TAPE POSITION		NUMBER OF POSITIONS	ITEM DESCRIPTION & CODES	CONTROL CCURTS	SOURCE	SP T. 2 POSITION
	FROM	TO					
1	1	5	5	File Sequence Number (codes 30001-36672)			
2	6	11	6	Final Estimation Weight			26-31
				DATA ITEMS BASED ON THE SELF ADMINISTERED MEDICAL HISTORY QUESTIONS			
3	12		1	Headaches Code 1 = Yes, every few days, quite a bit 2 = Yes, every few days, just a little 3 = Yes, less often, quite a bit 4 = Yes, less often, just a little 5 = No or ? 9 = Other	561 294 644 3319 1854 0	IIES-204 #1	968
4	13		1	Nosebleeds Code 1 2 3 (Same as above) 4 5 9	22 25 47 654 5919 5	IIES-204 #2	67
5	14		1	Tinnitus Code 1 2 3 (Same as above) 4 5 9	257 234 115 1565 4501 0	IIES-204 #3	1028
6	15		1	Dizziness Code 1 2 3 (Same as above) 4 5 9	242 127 277 2250 3776 0	IIES-204 #4	1029

ITEM	TAPE POSITION		NUMBER OF POSITIONS	ITEM DESCRIPTION & CODES	CONTROL COUNTS	SOURCE	SPT TAPE POSITION
	FROM	TO					
7	16		1	Fainting Code 1 = Yes 2 = No 3 = ? 9 = Other	1570 5096 9 7	HES-204 #5	70
8	17		1	Stroke Code 1 = Yes, past 12 months, saw doctor 2 = Yes, past 12 months, no doctor or ? 3 = Yes, not in past 12 months or ?, saw doctor 4 = Yes, not in past 12 months or ?, no doctor or ? 5 = No, or ? 9 = Other	19 5 73 5 6570 0	HES-204 #6	1030
9	18		1	Stroke-Review Summary Code 1 = History and Physical Findings 2 = History only 3 = Negative	25 37 6610		865
10	19		1	Paralyzed Code 1 = Yes 2 = No 3 = ? 9 = Other	234 6419 16 3	HES-204 #7	73
11	20		1	Sore throats Code 1 = Yes 2 = No 3 = ? 9 = Other	2125 4533 14 0	HES-204 #9	75

ITEM	TAPE POSITION		NUMBER OF POSITIONS	ITEM DESCRIPTION & CODES	CONTROL COUNTS	SOURCE	SRT TAPE POSITION
	FROM	TO					
12	21		1	Shortness of breath when climbing stairs Code 1 2 3 Same as item 3 4 5 9	506 404 81 1441 4144 16	HES-204 #16	88
13	22		1	Shortness of breath when doing physical work or exercising Code 1 2 3 Same as #3 4 5 9	458 400 87 1535 4172 20	HES-204 #17	89
14	23		1	Shortness of breath when idle Code 1 2 3 Same as #3 4 5 9	146 55 70 348 6035 10	HES-204 #18	90
15	24		1	Shortness of breath when excited or upset Code 1 2 3 Same as #3 4 5 9	368 247 73 906 5065 13	HES-204 #19	91
16	25		1	Wake up at night because of Shortness of breath Code 1 2 3 4 Same as #3 5 9	95 29 114 304 6124 6	HES-204 #20	92



ITEM	TAPE POSITION		NUMBER OF POSITIONS	ITEM DESCRIPTION & CODES	CONTROL COUNTS	SOURCE	SRT ( ) POSITION
	FROM	TO					
17	26		1	Chest Pain - In past few years Code 1 2 3 Same as Item 3 4 5 9	254 141 295 1382 4574 26	HES-204 #21 a,b,c	93
18	27		1	Chest Pain - Where does it bother you? Code 1 = front 2 = back 3 = right side 4 = middle 5 = left side 6 = somewhere else 7 = more than one place 9 = other 0 = no chest pain	292 37 80 331 359 23 962 14 4574	HES-204 #21 d	94
19	28		1	Chest pain - does it move around? Code 1 = stays in one place 2 = moves around 3 = ? 9 = other 0 = no chest pain	1650 360 58 30 4574	HES-204 #21 e	95
20	29		1	Chest pain - duration? Code 1 = Just a few minutes 2 = five minutes to an hour 3 = more than one hour 9 = other no 0 = no chest pain	983 501 575 39 4574	HES-204 #21 f	96

ITEM	TAPE POSITION		NUMBER OF POSITIONS	ITEM DESCRIPTION & CODES	CONTROL COUNTS	SOURCE	SRT TAPE POSITION
	FROM	TO					
21	30		1	Chest pain - When does it usually come? Code 1 = When exercising 2 = When quiet 3 = makes no difference 9 = other 0 = no chest pain	510 207 1348 33 4574	HES-204 #21 B	97
22	31		1	Chest Pain - when does it usually come? Code 1 = When upset 2 = Makes no difference 9 = other 0 = no chest pain	554 1504 40 4574	HES-204 #21 h	98
23	32		1	Chest Pain - Take medication for it? Code 1 = Yes 2 = no 3 = ? 9 = other 0 = No chest pain	582 1473 24 19 4574	HES-204 #21 J	99
24	33		1	Heart pain - In past few years? Code 1 2 3 Same as Item #3 4 5 9	148 93 198 976 5243 14	HES-204 #22 a,b,c	100

ITEM	TAPE POSITION		NUMBER OF POSITIONS	ITEM DESCRIPTION & CODES	CNTRL COURTS	SOURCE	SRT TAPE POSITION
	EPCH	J0					
25	34		1	Heart pain - where does it bother you? Code 1 2 3 4 5 6 7 9 0 Same as item #18	127 8 46 136 623 17 464 8 5243	HES-204 #22 d	101
26	35		1	Heart pain - does it move around? Code 1 2 3 9 0 Same as item #19	1111 247 50 21 5243	HES-204 #22 e	102
27	36		1	Heart pain - duration? Code 1 2 3 9 0 Same as #20	844 352 214 19 5243	HES-204 #22 f	103
28	37		1	Heart pain - when does it usually come? Code 1 2 3 9 0 Same as #21	346 158 911 14 5243	HES-204 #22 g	104
29	38		1	Heart pain - when does it usually come? Code 1 2 9 0	443 966 20 5243	HES-204 #22 h	105

ITEM	TYPE POSITION		NUMBER OF POSITIONS	ITEM DESCRIPTION & CODES	CONTROL COUNTS	SOURCE	SRT TAPE POSITION
	FROM	TO					
30	39		1	Heart pain - take medication for it? Code 1 2 3 Same as item 23 9 0	321 1031 18 9 5243	HES-204 #22 J	106
31	40		1	Heart beat - acting funny? Code 1 2 3 Same as item #3 4 5 9	147 155 146 2030 4172 21	HES-204 #23	107
32	41		1	Heart beat - beating hard? Code 1 2 3 Same as item #3 4 5 9	115 101 112 1430 4898 16	HES-204 #24	108
33	42		1	Swollen ankles at bedtime? Code 1 = Yes, gone by morning 2 = Yes, not gone by morning 3 = Yes, ? gone by morning 4 = No 5 = ? 9 = Other	1172 193 26 5257 13 6	HES-204 #25	109

ITEM	TAPE POSITION		NUMBER OF POSITIONS	ITEM DESCRIPTION & CODES	CONTROL COUNTS	SOURCE	SRT TAPE POSITION
	FROM	TO					
34	43		1	Leg cramps ? Code 1 2 3 Same as #3 4 6 9	389 116 171 635 5347 14	HES-204 #26	110
35	44		1	Varicose Veins? Code 1 2 3 Same as Item #8 4 5 9	313 230 272 309 5539 9	HES-204 #42	132-133
36	45		1	Rheumatic Fever diagnosis? Code 1 = Yes, in past 12 months, taking medication 2 = Yes, in past 12 months, not or ? taking medication 3 = Yes, not in past 12 months, taking medication 4 = Yes, not in past 12 months, not taking medication 5 = No or ?	7 14 11 164 6476	HES-204 #62	1142-1143
37	46		1	Chorea or St. Vitus Dance diagnosis? Code 1 = Yes 2 = No 3 = Other	34 6636 2	HES-204 #63	174

ITEM	TAPE POSITION		NUMBER OF POSITIONS	ITEM DESCRIPTION & CODES	CONTROL COUNTS	SOURCE	SAT TAPE POSITION
	FROM	TO					
30	47		1	Hardening of the arteries diagnosis? Code 1 = Yes within past 12 months 2 = Yes, not within past 12 months 3 = Yes, ? within past 12 months 4 = No 5 = ? 9 = Other	131 29 13 6495 1 3	HES-204 #65	176
19	48		1	High blood pressure - think you have it? Code 1 = Yes, confirmed by doctor 2 = Yes, not confirmed by doctor 3 = No 4 = ? 9 = Other	953 187 5493 35 4	HES-204 #66 a,b	177
40	49		1	High blood pressure - how long ago did it start? Code 1 = 1 year 2 = 1-5 years 3 = over 5 years 9 = other 0 = no high blood pressure	233 420 463 54 5497	HES-204 #66 c	178
41	50		1	High blood pressure - had it within past 12 months Code 1 = Yes 2 = No 3 = ? 9 = Other 0 = no high blood pressure	704 349 85 36 5497	HES-204 #66 d	179

ITEM	TAPE POSITION		NUMBER OF POSITIONS	ITEM DESCRIPTION & CODES	CONTROL COUNTS	SOURCE	SERIAL TYPE POSITION
	FROM	TO					
42	51		1	High blood pressure - take medication? Code 1 = Yes 2 = No 3 = ? 9 = Other 0 = No high blood pressure	434 700 4 37 5497	HES-204 #66 e	180
43	52		1	Heart trouble - think you have it? Code 1 = Yes, confirmed by doctor 2 = Yes, not confirmed by doctor 3 = No 4 = ? 9 = Other	510 286 5833 38 5	HES-204 #67 a,b	182
44	53		1	Heart trouble - how long did it start? Code 1 = 1 year 2 = 1-5 years 3 = over 5 years 9 = other 0 = no heart trouble	125 267 397 50 5833	HES-204 #67 c	184
45	54		1	Heart trouble - had it within past 12 months Code 1 = Yes 2 = no 3 = ? 9 = other 0 = no heart trouble	538 235 26 40 5833	HES-204 #67 d	185
46	55		1	Heart trouble - take medication? Code 1 = Yes 2 = No 3 = ? 9 = Other 0 = no heart trouble	246 543 12 38 5833	HES-204 #66 e	186

ITEM	TAPE POSITION		NUMBER OF POSITIONS	ITEM DESCRIPTION & CODES	CONTROL COUNTS	SOURCE	TAPE POSITIONS
	FROM	TO					
				DATA ITEMS BASED ON THE RESULTS OF THE PHYSICAL EXAMINATION			
47	56	57	2	Time of Examination (01-24)			565-567
48	58	60	3	Average Systolic Blood Pressure		HES-205	859-861
49	61	63	3	Average Diastolic Blood Pressure		1-3 HES-205	862-864
50	64	65	2	Average Systolic Blood Pressure Recode Code 01 = less than 90 02 = 90-99 03 = 100-109 04 = 110-119 05 = 120-129 06 = 130-139 07 = 140-149 08 = 150-159 09 = 160-169 10 = 170-179 11 = 180-189 12 = 190-199 13 = 200-209 14 = 210-219 15 = 220-229 16 = 230-239 17 = 240-249 18 = 250-259 19 = greater than 260	18 203 700 1457 1393 1046 639 404 265 173 110 77 44 23 10 9 1 3 4	#1-3 HES-205 #1-3 HES-205 #1-3	1253-1255



ITEM	TAPE POSITION		NUMBER OF POSITIONS	ITEM DESCRIPTION & CODES	CONTROL COUNTS	SOURCE	SRT TAPE POSITION
	FROM	TO					
51	66	67	2	Average Diastolic Blood Pressure Recode Code 01 = less than 50 02 = 50-54 03 = 55-59 04 = 60-64 05 = 65-69 06 = 70-74 07 = 75-79 08 = 80-84 09 = 85-89 10 = 90-94 11 = 95-99 12 = 100-104 13 = 105-109 14 = 110-114 15 = 115-119 16 = 120-124 17 = 125-129 18 = 130-134 19 = greater than 135	57 73 150 393 778 996 1264 1029 742 471 301 161 111 46 43 19 9 6 10	HES-235 #1-3	1250-1252
52	68		1	When venipuncture was done in relation to when blood pressures were taken Code 1 = before first blood pressure 2 = between first and second blood pressure 3 = between second and third blood pressure 4 = after all blood pressures were taken 0 = other	1805 1840 2016 939 72		563

ITEM	TAPE POSITION		NUMBER OF POSITIONS	ITEM DESCRIPTION & CODES	CONTROL COUNTS	SOURCE	SRT TAPE POSITION
	FROM	TO					
53	69		1	Ocular Fundl - Right Eye Code 1 = Normal 2 = Fundus not visualized 3 = globe absent 4 = None of the above	4483 270 4 1915	HES-205 # 4-6	973
54	70		1	Ocular Fundl - Left Eye Code 1 = Normal 2 = Fundus not visualized 3 = globe absent 4 = none of the above	4488 276 5 1903	HES-205 #4-6	974

ITEM	TAPE POSITION		NUMBER OF POSITIONS	ITEM DESCRIPTION & CODES	CONTROL COUNTS	SOURCE	SERIAL TAPE POSITION
	FROM	TO					
55	71		1	Ocular Fundi Condition - Right Eye Code 1 = Papilledema 2 = Hemorrhage and/or exudate 3 = other positive findings 4 = negative 5 = none or unknown	5 41 1698 4928 0	HES - 205 #7-12,14	975
56	72		1	Ocular Fundi Condition - Left Eye Code 1 2 3 Same as above item #55 4 5	4 34 1700 4934 0	HES-205 #7-12,14	976
57	73		1	Venous Engorgement - Right Eye Code 1 - Present 2 - Not present	59 6613	HES-205 #13	977
58	74		1	Venous Engorgement - Left Eye Code 1 - Present 2 - Not present	59 6613	HES-205 #13	978
59	75		1	Disc. Abnormality - Right Eye Code 1 = Present 2 = Not present	32 6640	HES-205 #15	979
60	76		1	Disc. Abnormality - Left Eye Code 1 = present 2 = Not present	20 6644	HES-205 #15	980

ITEM	TAPE POSITION		NUMBER OF POSITIONS	ITEM DESCRIPTION & CODES	CONTROL COUNTS	SOURCE	SRT TAPE POSITION
	1500	70					
61	77		1	Lens Opacities - Right Eye Code 1 - Present 2 - Not present	267 6405	HES-205 #16	981
62	78		1	Lens Opacities - Left Eye Code 1 - Present 2 - Not present	279 6393	HES-205 #16	982
63	79		1	Ocular Fundi - other - Right Eye Code 1 - Present 2 - Not present	287 6385	HES-205 #18	985
64	80		1	Ocular Fundi - other - Left Eye Code 1 = Present 2 = Not present	294 6378	HES-205 #18	986
65	81		1	Neck - Venous engorgement Code 1 - Yes 2 - No 3 - other 0 - no entry	51 6528 1 92	HES-205 #26	277
66	82		1	Peripheral Arteries - all normal Code 1 - Yes 2 - No 0 - No entry	5931 737 4	HES-205 #27	278

ITEM	TAPE POSITION		NUMBER OF POSITIONS	ITEM DESCRIPTION & CODES	CONTROL COUNTS	SOURCE	SERIAL TAPE POSITION
	FROM	TO					
67	83		1	Peripheral Arteries - Right side - Superficial temporal Code 1 - normal 2 - sclerotic only 3 - tortuous only 4 - both 5 - not done 9 - other 0 - all peripheral arteries normal	384 163 88 65 5 27 5935	HES - 205 #28	279
68	84		1	Peripheral Arteries - Right side - Brachial Code 1 2 3 4 Same as item 67 5 9 0	133 222 140 222 6 6 5935	HES-205 #29	280
69	85		1	Peripheral Arteries - Right side - Radial Code 1 2 3 Same as item 67 4 5 9 0	396 233 24 60 1 23 5935	HES-205 #30	281

ITEM	TAPE POSITION		NUMBER OF POSITIONS	ITEM DESCRIPTION & CODES	CONTROL COUNTS	SOURCE	SRT TAPE POSITION
	FROM	TO					
70	86		1	Peripheral Arteries - Left side Superficial temporal Code 1 2 3 4 Same as item 67 5 9 0	388 166 86 68 2 27 5935	HES-205 #31	282
71	87		1	Peripheral Arteries - Left side - Brachial Code 1 2 3 4 Same as item 67 5 9 0	137 215 146 223 10 6 5935	HES-205 #32	283
72	88		1	Peripheral Arteries - Left side - Radial Code 1 2 3 4 Same as item 67 5 9 0	393 234 25 58 6 21 5935	HES-205 #33	284

ITEM	TAPE POSITION		NUMBER OF POSITIONS	ITEM DESCRIPTION & CODES	CONTROL COUNTS	SOURCE	SRT TAPE POSITION
	FROM	TO					
73	89		1	Quality of Arterial Pulsations - all normal Code 1 - Yes 2 - No	5119 1553	HES-205 #34	235
74	90		1	Quality of Arterial Pulsations - Right side-Radial Code 1 - normal 2 - bounding 3 - diminished 4 - not palpable 5 - not done 9 - other 0 - quality of arterial pulsations specified as all normal	1264 173 67 0 0 49 5119	HES-205 #35	286
75	91		1	Quality of Arterial Pulsations - Right side Dorsalis Pedis Code 1 2 3 4 Same as item #74 5 9 0	645 93 474 308 11 22 5119	HES-205 #36	287
76	92		1	Quality of Arterial Pulsations - Right side - Post-tibial Code 1 2 3 4 Same as item #74 5 9 0	570 16 456 439 13 29 5119	HES-205 #37	288

ITEM	TAPE POSITION		NUMBER OF POSITIONS	ITEM DESCRIPTION & CODES	CONTROL COUNTS	SOURCE	SITE TAPE POSITION
	FROM	TO					
77	93		1	Quality of Arterial Pulsations - Left side-Radial Code 1 2 3 4 Same as #74 5 9 0	1254 166 73 4 3 53 5119	HES-205 #38	289
78	94		1	Quality of Arterial Pulsations - Left side - Dorsalis Pedis Code 1 2 3 4 Same as #74 5 9 0	643 94 472 302 15 27 5119	HES-205 #39	290
79	95		1	Quality of Arterial Pulsations - Left side - Post-Tibial Code 1 2 3 4 Same as #74 5 9 0	537 46 457 469 13 31 5119	HES-205 #40	291
80	96		1	Lower Extremities - Right Code 1 - Normal 2 - Not done 3 - Neither	5427 8 1237	HES-205 #41-42	292
81	97		1	Lower Extremities - Left Code 1 - Normal 2 - Not done 3 - neither	5396 12 1264	HES-205 #41-42	293



ITEM	TAPE POSITION		NUMBER OF POSITIONS	ITEM DESCRIPTION & CODES	CONTROL COUNTS	SOURCE	SRT TAPE POSITION
	FROM	TO					
82	98		1	Lower Extremities - Right - Varicosities Code 1 - checked 2 - not checked 0 - all normal	850 379 5435	HES-205 #43	294
83	99		1	Lower Extremities - Right - Dependent Edema Code 1 - checked 2 - not checked 0 - all normal	584 653 5435	HES-205 #44	295
84	100		1	Lower Extremities - Right - Ulcers Code 1 - checked 2 - not checked 0 - all normal	29 1200 5435	HES-205 #45	296
85	101		1	Lower Extremities - Left - Varicosities Code 1 - checked 2 - not checked 0 - all normal	864 400 5400	HES-205 #43	297
86	102		1	Lower Extremities - Left - Dependent Edema Code 1 - checked 2 - not checked 0 - all normal	598 666 5400	HES-205, #44	298
87	103		1	Lower Extremities - Left - Ulcers Code 1 - checked 2 - not checked 3 - all normal	31 1233 5400	HES-205 #45	299
88	104		1	Thrills Code 1 - Aortic Systolic 2 - Apical Systolic 3 - Apical Diastolic 4 - Pulmonic Systolic 5 - Other 6 - None 0 - No entry	5 30 16 1 33 6570 17	HES-205 #46	300

EN	POSITION		NUMBER OF POSITIONS	ITEM DESCRIPTION & CODES	CONTROL COUNTS	SOURCE	CRY TAPE POSITION
	FROM	TO					
89	105		1	Apical Impulse Code 1 - Not felt 2 - ECL at or inside 3 - ECL outside 0 - no entry	1971 4347 319 35	HES-205 #47	301
90	106		1	Apical Impulse - Interspace (as given) Code 1 - 3 2 - 4 3 - 6 4 - 6 5 - 7 0 - no entry	13 947 3506 179 6 2021	HES-205 #48	302
91	107		1	Heart Sounds - normal checked Code 1 - Yes, and no other entries are checked 2 - No, and no other entries are checked 3 - No, and other entries are checked	5115 3 1554	HES-205 #48	303
92	108		1	Heart Sounds - A 2 Code 1 - Accentuated 2 - Diminished 3 - no check 0 - all normal	382 191 981 5118	HES-205 #48	303
93	109		1	Heart Sounds - P 2 Code 1 - Accentuated 2 - Diminished 3 - no check 0 - All normal	240 142 1172 5118	HES-205 #48	304
94	110		1	Heart Sounds - H 1 Code 1 - Accentuated 2 - Diminished 3 - no check 0 - All normal	219 184 1151 5110	HES 205 #43	305

ITEM	TAPE POSITION		NUMBER OF POSITIONS	ITEM DESCRIPTION & CODES	CONTROL COUNTS	SOURCE	SRT TAPE POSITION:
	FROM	TO					
95	111		1	Heart Sounds - Third Heart Sound Code 1 - Present 2 - Absent 0 - all normal,	213 1311 5118	HES-205 #48	306
96	112		1	Heart Sounds - Splitting of Second Sound (abnormal) Code 1 - Present 2 - Absent 0 - All normal	90 1464 5118	HES-205 #48	307
97	113		1	Heart Sounds - Other Code 1 - Entry 2 - No entry 0 - All normal	621 933 5118	HES-205 #48	308
98	114		1	Significant murmurs - type of systolic murmur Code 1 - Grade 3 2 - Grade 4 3 - Murmur with thrill at base (takes priority over codes 1,2) 4 - All others 0 - no significant systolic murmur	99 17 10 48 6498		568
99	115		1	Significant murmurs - Physician's Impression of Heart disease Code 1 - Rheumatic 2 - Congenital 3 - Aortic Stenosis 4 - Other 5 - no heart disease 0 - if codes 4,0 in item 98	46 14 11 49 7 6546		569

ITEM	TAPE POSITION		NUMBER OF POSITIONS	ITEM DESCRIPTION & CODES	CONTROL COUNTS	SOURCE	SERIAL TAPE POSITION
	FROM	TO					
100	116		1	Examining Physician's Impression - Hypertension Code 1 - Positive 2 - Negative 3 - Suspect 0 - No entry	767 5270 633 2	HES-206	317
101	117		1	Examining Physician's Impression - Peripheral arteriosclerosis Code 1 - Positive 2 - Negative 3 - Suspect 0 - No entry	582 5644 444 2	HES-205	318
102	118		1	Examining Physician's Impression - Organic heart disease Code 1 - Positive 2 - Negative 3 - Suspect 0 - No entry	456 5665 542 9	HES-205	319
103	119		1	Examining Physician's Impression - Angina pectoris Code 1 - Positive 2 - Negative 3 - Suspect 0 - No entry	119 6348 197 0	HES-205	320

ITEM	TAPE POSITION		NUMBER OF POSITIONS	ITEM DESCRIPTION & CODES	CONTROL COUNTS	SOURCE	ST. T. & POSITION
	FROM	TO					
104	120	121	2	DATA ITEMS BASED ON THE EKG CODE SHEET  EKG - Summary of 3 readings Code 01 - Normal EKG 02 - Unsatisfactory EKG 03 - No myocardial infarction 04 - Anterior myocardial infarction 05 - Posterior myocardial infarction 06 - Anterior myocardial infarction outside criteria 07 - Posterior myocardial infarction outside criteria 08 - Anterior and posterior myocardial infarction 10 - Other Blank	5006 23 1540 39 33 11 13 3 3 1	HES-212 #14,15	639
105	122		1	EKG - Summary of 3 readings Code 1 - No axis deviation 2 - Left axis deviation 3 - Right axis deviation 4 - Left axis deviation outside criteria 5 - Right axis deviation outside criteria 0 - Codes 1, 2, or 10 in data item 104.	1452 188 0 0 0 5032	HES-212 #16,17	640
106	123		1	EKG - Summary of 3 readings Code 1 - No ventricular hypertrophy 2 - Left ventricular hypertrophy 3 - Right ventricular hypertrophy 4 - Left " " outside criteria 5 - Right " " outside criteria 6 - Both left and right ventricular hypertrophy 0 - Codes 1, 2, or 10 in data item 104.	1236 397 5 0 2 0 5032	HES-212 #18,19	641

ITEM	TAPE POSITION		NUMBER OF POSITIONS	ITEM DESCRIPTION & CODES	CONTROL COUNTS	SOURCE	SERIAL TAPE POSITION
	FROM	TO					
107	124		1	EKG - Summary of 3 readings Code 1 - No abnormalities on ST segment or junction 2 - Subendocardial ischemia 3 - " " /digitals 4 - Current of injury 5 - Subendocardial ischemia outside criteria 6 - Subendocardial ischemia/digitals outside criteria 7 - Current of injury outside criteria 8 - Other 0 - Codes 1, 2, or 10 in data item 104	1501  11 70 1 14 40  2 1 5032	HES-212 #20-22	642
108	125		1	EKG - Summary of 3 readings Code 1 - No abnormal T-wave 2 - Non-specific T-wave 3 - Left ventricular ischemia 4 - Non-specific T-wave, outside criteria 5 - Left ventricular ischemia outside criteria 0 - Codes 1, 2, or 10 in data item 104	1350 104 76 103 7 5032	HES-212 #23,24	643
109	126		1	EKG - Summary of 3 readings Code 1 - No AV conduction abnormalities 2 - Complete AV block 3 - Partial AV block 4 - First degree AV block 5 - WPW 6 - WPW outside criteria 7 - other 0 - Codes 1, 2 or 10 in data item 104	1499 1 3 129 6 2 0 5032	HES-212 #25-28	644

ITEM	TAPE POSITION		NUMBER OF POSITIONS	ITEM DESCRIPTION & CODES	CONTROL COUNTS	SOURCE	TAPE POSITION
	FROM	TO					
110	127		1	EKG - Summary of 3 readings Code 1 - No ventricular conduction abnormalities 2 - Left bundle branch block 3 - Right bundle branch block 4 - Increased right bundle branch block 5 - I-V block 6 - Left bundle branch block and I-V block 7 - Increased right bundle branch block outside criteria 8 - Other 0 - Codes 1, 2, or 10 in data item 104	1508 25 30 26 50 0 1 0 5032	HES-212 #29-32	645
111	128		1	EKG - Summary of 3 readings Code 1 - No arrhythmias 2 - Ventricular tachycardia 3 - Auricular fibrillation 4 - Aur., nod., or supra-vent. tachycardia 5 - Abnormal ventricular rhythm 6 - Abnormal nodal rhythm 7 - Other 0 - Codes 1, 2, or 10 in data item 104	1603 0 20 3 0 14 0 5032	HES-212 #33-37	646
112	129		1	EKG - Summary of 3 readings Code 1 - Neither low QRS nor high T-wave 2 - Low QRS 3 - High T-Wave 4 - Both 0 - Codes 1, 2, or 10 in data item 104	1464 87 89 0 5032	HES 212 #38,39	647
113	130		1	EKG - Summary of 3 readings Code 1 - No premature contractions 2 - Rare atrial premature contractions 3 - Rare ventricular premature 4 - Rare nodal " " 5 - Frequent atrial " " 6 - Frequent ventricular " " 7 - Frequent nodal " " 8 - Other 0 - Codes 1, 2, or 10 in data item 104	1187 77 165 12 48 111 8 32 5032	HES-212 #40-42	648

ITEM	TAPE POSITION		NUMBER OF POSITIONS	ITEM DESCRIPTION & CODES	CONTROL COUNTS	SOURCE	SRT TAPE POSITION
	FROM	TO					
114	131		1	EKG - Summary of 3 readings Code 1 - No miscellaneous findings 2 - Miscellaneous findings 0 - Codes 1, 2, or 10 in data item 104	1576 64 5032	HES-212 #43	649
115	132	133	2	EKG - Reading 1 Code 01 02 03 04 05 same as item #104 06 07 08 10 11 - Not examined by this reader	135 2 346 13 16 7 5 0 25 6123	HES-212 #14, 15	650
116	134		1	EKG - Reading 1 Code 1 2 3 4 same as item #105 5 0 - Codes 1, 2, 10, or 11 in data item 115	344 42 1 0 0 6285	HES-212 #16, 17	651
117	135		1	EKG - Reading 1 Code 1 2 3 4 same as item #105 5 6 0 - Codes 1, 2, 10, or 11 in data item 115	318 65 3 0 1 0 6285	HES 212 #18, 19	652



ITEM	TAPE POSITION		NUMBER OF POSITIONS	ITEM DESCRIPTION & CODES	CONTROL COUNTS	SOURCE	SRT TAPE POSITION
	FROM	TO					
118	136		1	EKG - Reading 1 Code 1 2 3 4 5 same as #107 6 7 8 0 - Codes 1, 2, 10, or 11 in data item 116	329 7 24 0 8 17 2 0 6285	HES-212 #20 - 22	653
119	137		1	EKG - Reading 1 Code 1 2 3 4 same as item #100 5 0 - Codes 1, 2, 10 or 11 in data item 116	312 32 17 25 1 6205	HES-212 #23 - 24	654
120	138		1	EKG - Reading 1 Code 1 2 3 4 5 same as item #100 6 7 0 - Codes 1, 2, 10 or 11 in data item 116	351 1 0 34 1 0 0 6285	HES-212 #25 - 28	655

ITEM	TAPE POSITION		NUMBER OF POSITIONS	ITEM DESCRIPTION & CODES	CONTROL COUNTS	SOURCE	ERT TAPE POSITION
	FROM	TO					
121	139		1	EKG - Reading 1 Code 1 2 3 4 5 same as item #110 6 7 8 0 - Codes 1, 2, 10 or 11 in data item 115	344 3 8 12 20 0 0 0 6285	HES-212 #29 - 32	666
122	140		1	EKG - Reading 1 Code 1 2 3 4 5 same as item #111 6 7 0 - Codes 1, 2, 10 or 11 in data item 115	378 0 4 1 0 4 0 6285	HES-212 #33 - 37	657
123	141		1	EKG - Reading 1 Code 1 2 3 same as 112 4 0 - Codes 1, 2, 10 or 11 in data item 115	350 25 12 0 6285	HES-212 # 38, 39	658
124	142		1	EKG - Reading 1 Code 1 2 3 4 5 same as 113 6 7 8 0 - Codes 1, 2, 10, or 11 in data item 115	287 18 34 3 16 18 2 9 6285		659

ITEM	TAPE POSITION		NUMBER OF POSITIONS	ITEM DESCRIPTION & CODES	CONTROL COUNTS	SOURCE	SRT TAPE POSITION
	FROM	TO					
125	143		1	EKG - Reading 1 Code 1 2 same as 104 0 - Codes 1, 2, 10 or 11 in data item 116	358 29 6285	IES-212 # 43	660
126	144	145	2	EKG - Reading 2 Code 01 02 03 04 05 06 07 same as 104 08 10 11 - No examined by this reader	179 2 306 13 13 6 4 1 0 6148	IES-212 #14, 15	661
127	146		1	EKG - Reading 2 Code 1 2 3 same as 106 4 5 0 - Codes 1, 2, 10 or 11 in data item 126	296 47 0 0 0 6329	IES-212 #16, 17	662
128	147		1	EKG - Reading 2 Code 1 2 3 4 same as 106 5 6 0 - Codes 1, 2, 10 or 11 in data item 126	276 63 3 1 0 0 6329	IES-212	663

ITEM	TAPE POSITION		NUMBER OF POSITIONS	ITEM DESCRIPTION & CODES	CONTROL COUNTS	SOURCE	TAPE POSITION
	FROM	TO					
123	140		1	EKG - Reading 2 Code 1 2 3 4 5 same as 107 6 7 8 0 - Codes 1, 2, 10 or 11 in data item 126	297 2 26 2 4 11 0 1 6329	HES-212 #20 - 22	664
120	149		1	EKG - Reading 2 Code 1 2 3 4 same as 100 5 0 - Codes 1, 2, 10 or 11 in data item 126	258 30 33 19 3 6329	HES-212 #23, 24	665
121	150		1	EKG - Reading 2 Code 1 2 3 4 5 same as 109 6 7 0 - Codes 1, 2, 10 or 11 in data item 126	319 0 0 22 1 0 1 6329	HES-212 #25 - 28	666
122	151		1	EKG - Reading 2 Code 1 2 3 4 5 same as 110 6 7 8 0 - Codes 1, 2, 10 or 11 in data item 126	296 2 12 15 17 1 0 6329	HES-212 #29 - 32	667

ITEM	TAPE POSITION		NUMBER OF POSITIONS	ITEM DESCRIPTION & CODES	CONTROL COUNTS	SOURCE	SRT TAPE POSITION
	FROM	TO					
133	152		1	EKG - Reading 2 Code 1 2 3 4 5 same as 111 6 7 8 9 0 - Codes 1, 2, 10 or 11 in data item 126	334 0 4 1 0 4 0 6329	HES-212 #38, 39	668
134	153		1	EKG - Reading 2 Code 1 2 3 same as 112 4 0 - Codes 1, 2, 10 or 11 in data item 126	314 11 18 0 6329	HES-212 #40 - 42	669
135	154		1	EKG - Reading 2 Code 1 2 3 4 5 same as 113 6 7 8 9 0 - Codes 1, 2, 10 or 11 in data item 126	247 13 33 3 13 23 4 7 6329	HES-212 #40 - 42	670
136	155		1	EKG - Reading 2 Code 1 2 same as 114 0 - Codes 1, 2, 10 or 11 in data item 126	327 16 6329	HES-212 #43	671

ITEM	TAPE POSITION		NUMBER OF POSITIONS	ITEM DESCRIPTION & CODES	CONTROL COUNTS	SOURCE	SRT TAPE POSITION
	FROM	TO					
137	156	157	2	EKG - Reading 3 Code 01 02 03 04 05 06 same as 104 07 08  10 11 - Not examined by this reader	131 0 364 8 15 3 3 0  0 6148	HES-212 #14, 15	672
138	158		1	EKG - Reading 3 Code 1 2 3 same as 105 4 5 0 - Codes 1, 2, 10, or 11 in data item 137	356 35 1 1 0 6279	HES-212 #16, 17	673
139	159		1	EKG - Reading 3 Code 1 2 3 4 same as 106 5 6 0 - Codes 1, 2, 10 or 11 in data item 137	318 68 3 3 1 0 6279	HES-212 #18, 19	674
140	160		1	EKG - Reading 3 Code 1 2 3 4 5 same as 107 6 7 8 0 - Codes 1, 2, 10 or 11 in data item	336 11 22 0 17 7 0 0 6279	HES-212 #20 - 22	675

ITEM	TAPE POSITION		NUMBER OF POSITIONS	ITEM DESCRIPTION & CODES	CONTROL COUNTS	SOURCE	SRT TAPE POSITION
	FROM	TO					
141	161		1	EKG - Reading 3 Code 1 2 3 4 same as 108 5 0 - Codes 1, 2, 10 or 11 in data item 137	294 36 23 37 3 6279	HES-212 #23, 24	676
142	162		1	EKG - Reading 3 Code 1 2 3 4 5 same as 109 6 7 0 - Codes 1, 2, 10 or 11 in data item 137	367 0 0 26 0 0 0 6279	HES-212 #25 - 28	677
143	163		1	EKG - Reading 3 Code 1 2 3 4 same as 110 5 6 7 8 0 - Codes 1, 2, 10 or 11 in data item 137	348 2 5 14 20 1 1 2 6279	HES-212 #29 - 32	678
144	164		1	EKG - Reading 3 Code 1 Co 2 3 4 5 same as 111 6 7 0 - Codes 1, 2, 10 or 11 in data item 137	382 0 4 1 0 4 2 6279	HES-212 #33 - 37	

ITEM	TAPE POSITION		NUMBER OF POSITIONS	ITEM DESCRIPTION & CODES	CONTROL COUNTS	SOURCE	SRT TAPE POSITION
	FROM	TO					
45	165		1	EKG - Reading 3 Code 1 2 3 same as 112 4 0 - Codes 1, 2, 10 or 11 in data item 137	361 22 10 0 6279	HES-212 #38, 39	680
46	166		1	EKG - Reading 3 Code 1 2 3 4 5 same as 113 6 7 8 0 - Codes 1, 2, 10 or 11 in data item 137	290 17 31 7 10 22 5 11 6279	HES-212 #40 - 42	
47	167		1	EKG - Reading 3 Code 1 2 same as 114 0 - Codes 1, 2, 10 or 11 in data item 137	372 21 6279	HES-212 #43	
48	168	170	3	EKG Reading - Average Rate 4 unknown cases coded as 999		HES-212 #7 - 9	683-685
49	171	172	2	EKG Reading - Average PR interval 26 unknown cases coded as 99		HES-212 #10 - 11	686-687
50	173	174	2	EKG Reading - Average QRS interval 5 unknown cases coded as 99		HES-212 #12 - 13	688-689
51	175	177	3	S-wave depth in V1 (SV1) 50 unknown cases coded as 999			690-692
52	178	180	3	R-wave height in V5 (SV5) 50 unknown cases coded as 999			696-698



ITEM	TAPE POSITION		NUMBER OF POSITIONS	ITEM DESCRIPTION & CODES	CONTROL COUNTS	SOURCE	SRT TAPE POSITION
	FROM	TO					
153	101		1	Chest X-Ray - Existence of lesion - Reading 1 Code 1 - None 2 - Indefinite 3 - Definite 0 - Unsatisfactory or missing X-ray	1326 149 4017 280		730
154	102		1	Chest X-Ray - Heart enlargement - Reading 1 Code 1 - None 2 - Definite enlargement 3 - Borderline enlargement 4 - Definite LV 5 - Borderline LV 6 - Definite other chamber 7 - Borderline other chamber 8 - Definite combination of above 9 - Borderline combination of above 0 - Unsatisfactory or missing X-Ray	5790 141 414 6 9 10 20 0 0 282		733
155	103	104	2	Chest X-Ray - Other CV abnormality - Reading 1 Code 01 - None 02 - Definite calcification of aorta 03 - Borderline " " " 04 - Definite shape of aorta 05 - Borderline " " 06 - Definite calcification and shape of aorta 07 - Borderline " " " " 08 - Definite increased pulmonary vascularity 09 - Borderline " " " 10 - Definite IPV and calcification or shape of aorta 11 - Borderline " " " " 00 - Unsatisfactory or missing X-Ray.	5305 124 10 198 320 42 3 81 216 22 9 282		734

ITEM	TAPE POSITION		NUMBER OF POSITIONS	ITEM DESCRIPTION & CODES	CONTROL COUNTS	SOURCE	CRT TAPE POSITION
	FROM	TO					
156	185		1	Chest X-Ray - Existence of lesion - Reading 2 Code 1 2 same as 153 3 0	3762 926 1244 740		735
157	186		1	Chest X-Ray - Heart enlargement - Reading 2 Code 1 2 3 4 5 same as 154 6 7 8 9 0	5459 264 200 1 2 2 4 0 0 740		738
158	187	188	2	Chest X-Ray - Other CV abnormality - Reading 2 01 02 03 04 05 same as 155 06 07 08 09 10 11 00	5738 95 57 14 21 1 1 2 2 0 1 740		739
159	189		1	Chest X-Ray - Existence of lesion - Reading 3 Code 1 2 same as 153 3 0	4502 360 1081 729		740

ITEM	TAPE POSITION		NUMBER OF POSITIONS	ITEM DESCRIPTION & CODES	CONTROL COUNTS	SOURCE	SPT TAPE POSITION
	FROM	TO					
110	190		1	Chest X-Ray - Heart enlargement - Reading 3 Code 1 2 3 4 same as 164 5 6 7 8 9 0	5433 146 176 94 70 2 20 2 -0 729		743
161	191	192	2	Chest X-Ray - Other CV abnormality - Reading 3 Code 01 02 03 04 05 same as 165 06 07 08 09 10 11 00	5448 170 75 55 77 5 2 18 78 9 6 729		744
162	193		1	Chest X-Ray - Final evaluation of heart enlargement Code 0 - Negative 1 2 3 } Definite 4 5 6 } 7 } Borderline 8 - Unsatisfactory or missing X-Ray	4465 272 17 347 60 506 73 661 271		759

ITEM	TAPE POSITION:		NUMBER OF POSITIONS	ITEM DESCRIPTION & CODES	CONTROL COUNTS	SOURCE	SRT TAPE POSITION:
	FROM	TO					
163	194	195	2	Serum Cholesterol Values (mg %) Code 01 - less than 80 02 - 80 - 99 03 - 100 - 119 04 - 120 - 139 05 - 140 - 159 06 - 160 - 179 07 - 180 - 199 08 - 200 - 219 09 - 220 - 239 10 - 240 - 259 11 - 260 - 279 12 - 280 - 299 13 - 300 - 319 14 - 320 - 339 15 - 340 - 359 16 - 360 - 379 17 - 380 - 399 18 - 400 - 419 19 - 420 - 439 20 - 440 - 459 21 - 460 - 479 22 - 480 - 499 23 - 500 - 519 24 - greater than 520 99 - unknown	1 5 48 155 448 727 968 1144 967 753 513 331 183 102 48 21 10 9 4 1 3 0 0 1 170	HES-200 #5	837-839
164	196		1	Stroke diagnosis Code 1 - Yes 2 - No	35 6637		619
165	197		1	Cardiovascular condition diagnosis Code 1 - Yes 2 - No	666 6006		620
66	198		1	Heart condition diagnosis Code 1 - Yes 2 - No	277 6795		621

ITEM	TAPE POSITION:		NUMBER OF POSITIONS	ITEM DESCRIPTION & CODES	CONTROL COUNTS	SOURCE	SRT TAPE POSITION:
	FROM	TO					
167	199		1	High blood pressure diagnosis Code 1 - Yes 2 - No	432 6240		622
168	200		1	Varicose vein diagnosis Code 1 - Yes 2 - No	255 6416		623
169	201		1	Coronary heart disease diagnosis Code 1 - Yes 2 - No	58 6614		636
170	202		1	Rheumatic heart disease diagnosis Code 1 - Yes 2 - No	16 6656		637
171	203		1	Hypertensive heart disease diagnosis Code 1 - Yes 2 - No	67 6603		638

ITEM	TAPE POSITION		NUMBER OF POSITIONS	ITEM DESCRIPTION & CODES	CONTROL COUNTS	SOURCE	SRT TAPE POSITION
	FROM	TO					
172	201		1	<p>HEART DISEASE RECODES AND SUMMARY</p> <p>Heart disease summary (in descending priority)</p> <p>Code 1 - <u>Definite</u> - Aortic Stenosis 12</p> <p>2 - <u>Definite</u> - one or more of the following 102</p> <ul style="list-style-type: none"> <li>a) Complete AV block inside or outside criteria</li> <li>b) Left bundle branch block with or without J-V block</li> <li>c) Auricular fibrillation</li> <li>d) Left ventricular hypertrophy inside or outside criteria or both left and right ventricular hypertrophy and one or more of the following: <ul style="list-style-type: none"> <li>1) left ventricular ischemia inside or outside criteria</li> <li>2) subendocardial ischemia or subendocardial ischemia/digitalis inside or outside criteria or current of injury</li> </ul> </li> </ul> <p>Code 3 - <u>Suspect</u> - Definite enlargement on Chest X-Ray 1116</p> <p>Code 4 - <u>Suspect</u> - One or more of the following 39</p> <ul style="list-style-type: none"> <li>a) partial AV block inside or outside criteria</li> <li>b) right bundle branch block</li> <li>c) right ventricular hypertrophy or both right and left hypertrophy</li> </ul> <p>5 - No heart disease 5403</p>			840

ITEM	OFFICE LOCATION	NUMBER OF POSITIONS	ITEM DESCRIPTION & CODES	CO. YPOI. COUNTS	SOURCE	TYPE POSITION
171	205	1	<p>Blood Pressure Primary</p> <p>Code 1 - <u>Diastolic hypertension</u> Average Diastolic blood pressure at 95 mm Hg. or over or average systolic blood pressure at 160 mm Hg. or over. (Defined by diastolic pressure when heart rate was under 60);</p> <p>2 - <u>Borderline hypertension</u> Average Diastolic blood pressure below 95 mm Hg. and average Systolic blood pressure below 160 mm Hg., but not simultaneously below both 140 and 90 mm Hg. (Defined by diastolic pressure when heart rate was under 60)</p> <p>3 - <u>Normotension</u> Average Diastolic blood pressure below 90 mm Hg. and Average Systolic blood pressure below 140 mm Hg.</p> <p>4 - <u>Unknown</u></p>	<p>1016</p> <p>927.</p> <p>4728</p> <p>1</p>		842

ITEM	TAPE POSITION		NUMBER OF POSITIONS	ITEM DESCRIPTION & CODES	CONTROL COUNTS	SOURCE	SRT TAPE POSITION:
	FROM	TO					
174	206		1	Hypertensive heart disease summary (in descending priority) Code 1 - <u>Definite</u> - hypertension in blood pressure recode and left ventricular hypertrophy in EKG and 35 years of age or older 2 - <u>Definite</u> - hypertension in blood pressure recode and definite enlargement in X-Ray. 3 - <u>Definite</u> - Under treatment for hypertension and left ventricular hypertrophy in EKG and 35 years of age or older 4 - <u>Definite</u> - under treatment for hypertension and definite enlargement in X-Ray 5 - <u>Suspect</u> - borderline hypertension in pressure recode and borderline enlargement in X-Ray 6 - <u>Suspect</u> - borderline hypertension in blood pressure recode and left ventricular hypertrophy in EKG and 35 years of age or older 7 - <u>Suspect</u> - borderline hypertension in blood pressure recode and definite enlargement in X-Ray 8 - No heart disease 9 - No hypertensive heart disease	208 330 18 53 0 80 184 4459 1332		843
175	207		1	Rheumatic heart disease summary Code 1 - Diastolic murmur(s) present 2 - Grade 4 systolic murmur and diagnosis of rheumatic heart disease 3 - Grade 3 systolic murmur and diagnosis of rheumatic heart disease and either history of rheumatic heart disease or chorea 4 - No rheumatic heart disease	68 4 3 6597		844



ITEM	TAPE POSITION		NUMBER OF POSITIONS	ITEM DESCRIPTION & CODES	CONTROL COUNTS	SOURCE	SERIAL TAPE POSITION
	FROM	TO					
176	208		1	Coronary heart disease summary Code 1 - Definite - Myocardial infarction 2 - Definite - Definite angina pectoris 3 - Definite - Left ventricular ischemia or myocardial infarction outside criteria with chest pain and/or heart pain history 4 - Suspect - Suspect angina pectoris 5 - No coronary heart disease	74 90 9  142 6357		845
177	209		1	Other heart disease summary Code 1 - Congenital heart disease 2 - Syphilitic " " 3 - Traumatic " " 4 - No heart disease	16 9 1 6646		846
178	210		1	Heart disease summary Code 1 - Definite hypertensive, rheumatic, coronary or other heart disease 2 - Suspect hypertensive coronary or other heart disease 3 - No heart disease	855 745 5072		847

ITEM	TAPE POSITION		NUMBER OF POSITIONS	ITEM DESCRIPTION & CODES	CONTROL COUNTS	SOURCE	SRT. TAPE POSITION
	FROM	TO					
179	211		1	Possible heart disease Code 1 - One or more of the following EKG abnormalities a) Anterior or posterior myocardial infarction outside criteria b) Right axis deviation inside or outside criteria c) Left ventricular hypertrophy inside or outside criteria or right ventricular hypertrophy outside criteria d) Sub-ischemia, sub-ischemia/digitalis or current of injury inside or outside criteria e) Non-specific T-Wave inside or outside criteria or left ventricular ischemia outside criteria f) Incomplete right bundle branch block or I-V block g) Ventricular tachycardia, Aur., Nod. or supra-vent tachycardia abnormal ventricular rhythm or abnormal nodal rhythm h) Miscellaneous EKG readings Code 2 - Left axis deviation and one or more of the following: a) chest pain history b) heart pain history c) high blood pressure history d) heart trouble history Code 3 - First degree AV block inside or outside criteria <u>and</u> one or more of the following: a) rheumatic fever history b) chorea history c) high blood pressure history d) heart trouble history Code 4 - One or more of the following: a) venous engorgement b) thrills c) significant systolic murmurs	395		848
					.39		
					5		
					174		

ITEM	TAPE POSITION		NUMBER OF POSITIONS	ITEM DESCRIPTION & CODES	CONTROL COUNTS	SOURCE	SET TYPE POSITION
	FROM	TO					
180	212		1	Code 4 - continued e) splitting of second sound f) other heart sound noted Code 0 - No heart disease diagnosis Code 0 in items 174, 175, 176, or 177 Heart Disease Diagnosis Code 1 - Exam +, Physician +      70 2 - Exam +, Physician -      84 3 - Exam -, Physician +      22 4 - Exam -, Physician -      312 5 - Exam +, No physician      65 6 - Exam -, No physician      208 0 - Other                      5910	6059		1150
181	213		1	Coronary Heart Disease Diagnosis Code 1                              17 2                              21 3                              24 4                    same as 180      426 5                              12 6                              262 0                              5910			1151
182	214		1	Hypertensive Heart Disease Diagnosis Code 1                              34 2                              52 3                              21 4                    same as 180      381 5                              44 6                              230 0                              5910			1152
183	215		1	Hypertension Diagnosis Code 1                              73 2                              91 3                              25 4                    same as 180      299 5                              86 6                              188			1153

ITEM	TAPE POSITION:		NUMBER OF POSITIONS	ITEM DESCRIPTION & CODES	CONTROL COUNTS	SOURCE	SERIAL TAPE POSITION:
	FROM	TO					
184	216		1	Hypertension Diagnosis by Personal Physician Code 1 - Positive 2 - Negative 3 - ? 4 - il. A, Unknown and DK 0 - By Physician examination	65 387 33 3 6184		1154
185	217		1	Peripheral Vascular Disease Diagnosis by Personal Physician Code 1 2 3 same as 184 4 0	28 426 32 2 6184		1155
186	218		1	Coronary Heart Disease Diagnosis by Personal Physician Code 1 2 3 same as 184 4 0	18 442 23 5 6184		1156
187	219		1	Hypertensive Heart Disease Diagnosis by Personal Physician Code 1 2 3 same as 184 4 0	33 433 22 0 6184		1157
188	220		1	Rheumatic Heart Disease Diagnosis by Personal Physician Code 1 2 3 same as 184 4 0	10 473 5 0 6184		1158

ITEM	TAPE POSITION		NUMBER OF POSITIONS	ITEM DESCRIPTION & CODES	CONTROL COUNTS	SOURCE	SAL. TAPE POSITION
	FROM	TO					
109	221		1	Other Heart Disease Diagnosis by Personal Physician Code 1 2 3 same as 104 4 0	11 473 1 3 6184		1159
	222	250	29	Unused - all blanks			

Detail Note #1

File Sequence Number

This five digit code represents two identifying numbers. The first is the number 'three' which is given to every record. This number identifies the tape as being a cardiovascular tape. The last four digits sequentially number all of the records ( from 0001 to 6672) on the tape.

Detail Note #2

Final Estimate Weight

This data item is the final weighting factor that will adjust the sampled person to the PSU selection technique and to the post-stratification by age and sex for the final national estimates. In addition this number was adjusted so that the biasing effect of non-response would be minimized.

Detail Notes #3 - #46

Data items #3 through #46 are based on information received from the self-administered medical history questionnaire (HES-204). The medical history questions related to cardiovascular disease appear in Appendix C.

The cardiovascular examination began with this self-administered medical history. After a brief interview by a receptionist, the examinee was asked to complete a medical history form. The receptionist remained available to provide the examinee with any assistance necessary. Upon completion of the form, the receptionist reviewed the history both for completeness and consistency and queried the examinee further where any deficiencies were evident.

The examining physician reviewed the medical history to attempt to correct any incompleteness or inconsistency remaining in the record. Where the examinee had been uncertain in his answer, the physician attempted to arrive at a definite "yes" or "no" by further questioning. In some cases he could not. For most of the questions related to cardiovascular symptoms or disease, the physician was instructed to ask for further information if an answer of "yes" or "?" had been checked, or if the examinee had indicated that he did not know the answer. A series of standard probes were used (Appendix C) and the answers to these were recorded. When these probes were completed the physician was free to further question the examinee until he was satisfied that he had all the relevant information that could be obtained in a single session.



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Questions 21 and 22 (Appendix C), dealing with chest pain and heart pain, were of importance for the diagnosis of heart disease. It was on the basis of the response to these questions and associated probes that a diagnosis of angina pectoris was made. Response to the other cardiovascular questions on the medical history form were also of assistance in, although not sufficient in themselves for, heart disease diagnosis.

Detail Note #47

Time of examination is the time the examinee began his examination.

Possible values include '01'-'24' such that '01' represents 1 A.M. and '24' represents 12 midnight.

Detail Notes #48 - #51

The average systolic and diastolic blood pressure readings were computed from the three blood pressure measurements that were taken. The first measurement was taken just after the physician met the examinee. The second was taken midway in the examination, after completing the auscultation of the heart in the sitting position. The third measurement was taken at the end of the physical examination.

Blood pressures were taken while the examinee was sitting on the examining table. The nurse placed the middle of the cuff over the bulge in the upper left arm. The cuff was left on the arm between the first and second measurements, was removed after the second, and returned for the third. The physician held the arm of the level of the atrium, with the nurse raising the Gaumanometer to the physician's eye level. Using the bell of his stethoscope, the physician noted the pressure when the sound first was heard, when it first became muffled and when it disappeared. All three measurements were recorded. The point at which the Korotkov sounds disappeared was taken as the diastolic pressure. If the sounds did not disappear, the point of muffling, if distinctly heard, was used. Since the Gaumanometer is scaled in intervals of 2mm., measurements were so recorded.

Detail Notes #53 - #64

The codes refer to Ocular Fundi conditions which were checked off on the Physical Examination Form (HES-205) by the examining physician (Appendix D).

Items #55 and #56 are coded as '3' if one of the following conditions exist:

- . increased light reflex
- . narrow arterioles
- . tortuous arterioles
- . AV compression

Detail Notes #88 - #99

These data items are the results of the standardized cardiac examination. Findings from the examination were recorded on the Physical Examination Form (HES-205) by the examining physician. The examinee did not exercise prior to the examination.

The precordium was palpated for thrills with the examinee first sitting upright, then leaning forward. This was first done with the examinee breathing normally and then repeated with the examinee holding his breath in expiration. Auscultation was done with a stethoscope, using both the bell and the diaphragm, and proceeded from the apex upward along the left sternal border and then to the pulmonic and aortic areas. It was done with the examinee upright, first breathing normally and then holding his breath in expiration. Next, palpation and auscultation were repeated with the examinee supine. Finally, he rolled over on his left side and was examined with the bell and palpated for thrills.

Findings from this examination were recorded on the standard Physical Measurements Form (Appendix U).

In item #98, significant murmurs are described in terms of intensity, which was graded on a five-point scale, from very faint (Grade 1) to very loud (Grade 5). Codes '1', '2' and '3' represent Grades 3, 4 and 5, respectively. Code '4' represents Grades 1 and 2.

Detail Notes #104 - #152

The electrocardiogram was read independently by three cardiologists according to certain criteria that they developed. The criteria and classifications used and the ECG Code Sheet (HES-212), the form on which the findings were entered, appear in Appendix E.

For all major findings allowance was made for designating any electrocardiographic abnormality observed by the reader even though the specified criteria for that abnormality were not satisfied. These abnormalities not meeting the specific criteria are suffixed by the phrase "outside criteria" in the coded items.

The three electrocardiographic readings were compared. Where they all agreed, the unanimous decision was used for subsequent diagnosis. In the event that there was any disagreement, the three readers met with a coordinator and came to a final decision.

Detail Notes #153 - #161

These three sets of data items are derived from the interpretation of X-ray films by three radiologists with a special interest in pulmonary disease. In addition to noting evidence of pulmonary disease, the readers were requested to record evidence of distinct cardiovascular abnormality. The form used in recording the radiological findings appears in Appendix F.

In determining Heart Enlargement (Items 154, 157, 160), the readers were instructed to identify generalized cardiac enlargement (GCE) and chamber enlargement, especially left ventricular hypertrophy (LVH). Code '3' represents borderline GCE which is defined as present if the heart was 10 to 20 percent larger than normal. Persons with larger hearts were coded as '2' representing definite GCE. If the enlargement was not generalized, the hypertrophied chamber was specified. (Codes '4' - '7').

In determining other cardiovascular pathology (Items 155, 158, 161), the readers were told to specify the abnormality as calcification of the aorta, abnormality of the shape of the aorta and increased pulmonary vascularity.

Detail Note #162

The final evaluation code of heart enlargement was determined by the following procedure. A finding of general cardiac enlargement or left ventricular hypertrophy, definite or borderline, was considered "positive". All films were read by two pulmonary readers and one cardiovascular reader. The determination of the two pulmonary readers provided a preliminary evaluation. If both considered the film "positive" a decision of enlargement was made whatever the findings of the cardiovascular reader. If they disagreed and the cardiovascular reader considered the film positive, the decision was that enlargement was present. Otherwise, a second cardiovascular reader interpreted the film and his decision was final. If the two pulmonary readers considered the film "negative" and the cardiovascular reader agreed with them, the decision was that no enlargement was present. Otherwise, a second cardiovascular reader examined the film and his decision was binding. All decisions were made independently and no reconciliation of differences was undertaken.

The combination of possible findings by the readers is summarized below.

Final Evaluation Code	Pulmonary reader		Cardiovascular reader	
	1	2	1	2
0	Negative	Negative	Negative	---
1	Positive	Positive	Positive	---
2	Positive	Positive	Negative	---
3	Positive	Negative	Positive	---
4 Definite	Negative or	Positive		
	Positive or	Negative	Negative	Positive
5	Negative	Positive		
6 Borderline	Negative	Negative	Positive	Positive
	Positive or	Negative	Negative	Negative
7	Negative	Positive		
	Negative	Negative	Positive	Negative



Detail Note #163

This item is included because serum cholesterol levels are associated with the development of coronary heart disease. It has been proven that patients with angina pectoris and coronary disease have levels of total blood cholesterol substantially greater than those of normal controls.

A blood specimen was collected from each examinee in a 15 cc. Sheppard-Kaidel tube. The tube was kept at room temperature for a minimum of one hour following venipuncture then refrigerated for a minimum of six hours to assure a good clot. The blood clot was freed gently from the tube and the tube was centrifuged for twenty minutes.

Determination of total serum cholesterol concentration were made by a modified ferric chloride procedure. The values were then converted to comparable Abell-Kandall values.

Detail Notes #164 - #170

During the Household Interview, the individuals were asked if anyone in their family has any of a number of chronic conditions. These chronic conditions were listed on Condition Card B. The answers were coded according to the International Disease Codes. The conditions relating to cardiovascular disease appear in data items #164 - #170.

Detail Notes #172 - #179

These heart disease summary items are the final diagnoses of the cardiovascular examination. These items were used to obtain the published statistical tables on the prevalence of heart disease in the United States.

To progress from examination findings to heart disease diagnoses, several steps were involved. First, the chest X-ray film and electrocardiographic tracing were interpreted. Then, a set of diagnostic criteria was constructed. Finally, a procedure was developed for translating the findings from the examination and the interpretation of the X-ray and electrocardiogram into specific diagnoses.

The first step in arriving at a diagnosis was to supply a set of rules suitable for computer diagnosis. The rules would convert the coded information from the medical record and from the interpretation of the X-ray film and the electrocardiogram into a diagnostic decision. The sets of conditions which identify specific heart diseases appear in the item and code description section.

Some of the computer decisions were subject to review. They include:

- 1) cases with significant murmurs.
- 2) cases with a diagnosis of angina pectoris.
- 3) cases where the diagnosis depended on a history of hypertension or a history of myocardial infarction.
- 4) cases with electrocardiographic findings of myocardial infarction outside of criteria or left ventricular ischemia, where a diagnosis of definite coronary heart disease had not been made.
- 5) cases diagnosed as having heart disease by the examining physician but not by the computer.

This omitted from the review were those cases with a clear and definite diagnosis of heart disease on the available evidence and those cases where there was no possibility of diagnosing heart disease from the available evidence.

In most cases where the computer diagnosis was reviewed, the diagnostic decision made by the computer was unaltered. In a few instances, however, there was a diagnostic change on the basis of review.

Item #178 is the final summary of the prevalence of heart disease in the United States.

Detail Notes #180 - #189

These data items are based on:

1. Diagnosis of heart disease by the Health Examination Survey.
2. Diagnosis of heart disease by the personal physicians of a sample of HES examinees.

Inquiries were sent to the personal physicians of a subsample of the HES examinees; 488 usable replies were received.

In items #180 - #183, the 488 cases are coded as '1', '2', '3' or '4'. Both the examination and physician diagnosis are available for these cases.

Items #184 - #189, show the personal physician's diagnosis of heart disease for the 488 cases.

Appendix A --

Special Case Coding Corrections.

In item 91, the code was changed from '3' to '2' for file sequence number 32190 also, in item 92, the code was changed from ' ' to '0'. This was done to make these two items consistent with the other items on Heart Sounds (Items 93-97). The other items specify that 5118 cases have all normal heart sounds. Items 91 and 92 have been recoded to indicate this.

## Appendix B

Angina pectoris - a disease condition marked by brief paroxysmal attacks of chest pain precipitated by deficient oxygenation of the heart muscles.

Hypertension - abnormally high blood pressure, especially, arterial blood pressure.

Myocardial infarction - the death of the tissue in the middle muscular layer of the heart wall resulting from obstruction of the local circulation by a thrombus or embolus.

Embolus - an abnormal particle (as an air bubble) circulating in the blood.

Thrombus - a clot of blood formed within a blood vessel and remaining attached to its place of origin.

Aortic stenosis - a narrowing or constriction of the diameter of the aorta.

Atrial fibrillation - very rapid irregular contractions of the muscle fibers of the auricle of the heart resulting in a lack of synchronism between heartbeat and pulse beat.

## APPENDIX C

### MEDICAL HISTORY QUESTIONS RELATED TO CARDIOVASCULAR DISEASE

(Excerpts From HES-204, Medical History—Self Administered)

1. a. In the past few years have you had any headaches?  YES  NO  ?
- If YES b. How often?  Every few days  Less often
- c. Do they bother you  quite a bit  just a little Process 4.8
- 
2. a. In the past few years have you had any nosebleeds?  YES  NO  ?
- If YES b. How often?  Every few days  Less often Process 4
- c. Do they bother you  quite a bit  just a little
- 
3. a. At any time over the past few years, have you ever noticed ringing in your ears or have you been bothered by other funny noises in your ears?  YES  NO  ? Process 4.2
- If YES b. How often?  Every few days  Less often
- c. Do they bother you  quite a bit  just a little
- 
4. a. Have you ever had spells of dizziness?  YES  NO  ? Process 4
- If YES b. How often?  Every few days  Less often
- c. Do they bother you  quite a bit  just a little
- 
5. Have you ever fainted or blacked out?  YES  NO  ?
- 
6. a. Have you ever had a stroke?  YES  NO  ?
- If YES b. Have you had a stroke in the past 12 months?  YES  NO  ?
- c. Have you ever seen a doctor about it?  YES  NO  ?
- 
7. Has any part of your body ever been paralyzed?  YES  NO  ?
- 
8. Was there anytime in your life when you had a lot of bad sore throats?  YES  NO  ?
- 
16. a. Have you ever been bothered by shortness of breath when climbing stairs?  YES  NO  ? Process 4.3
- If YES b. How often?  almost everytime  Less often
- c. Does it bother you  quite a bit  just a little



17. a. Have you ever been bothered by shortness of breath when doing physical work or exercising? YES NO ?

If YES b. How often? Almost everytime Less often

c. Does it bother you quite a bit just a little

Probe A

18. a. Have you ever been bothered by shortness of breath when you were not doing physical work or exercising? YES NO ?

If YES b. How often? Every few days Less often

c. Does it bother you quite a bit just a little

19. a. Have you ever been bothered by shortness of breath when you are excited or upset about something? YES NO ?

If YES b. How often? Almost everytime Less often

c. Does it bother you quite a bit just a little

Probe A

20. a. Have you ever waked up at night because you were short of breath? YES NO ?

If YES b. How often? Every few nights Less often

c. Does it bother you quite a bit just a little

Probes A, B

21. a. In the past few years, have you ever had any pain, discomfort, or tightness in your chest? YES NO ?

If YES, please answer questions b through i below.

b. How often? Every few days Less often

c. Does it bother you quite a bit just a little

d. Where does it bother you? (Check every place it bothers you.)

Front Back Right side Middle Left side

Somewhere else State where

e. Does it usually stay in one place move around ?

f. How long does the pain usually last?

Just a few minutes Few minutes to an hour More than an hour

g. Does it usually come when you take a lot of exercise or

when you are quiet or

is there no difference

h. Does it usually come when you are upset or

doesn't this make any difference

i. Do you take any pills or medicine for it? YES NO ?

22. a. In the past few years, have you ever had any pain, discomfort, or trouble in or around your heart?  YES  NO  ?

If YES, please answer questions b through j below.

b. How often?  Every few days  Less often  
c. Does it bother you  quite a bit  just a little

d. Where does it bother you? (Check every place it bothers you.)  
 Front  Back  Right side  Middle  Left side

Probes A, B

Somewhere else State where \_\_\_\_\_

e. Does it usually  stay in one place  move around  ?

f. How long does the pain usually last?  
 Just a few minutes  Few minutes to an hour  More than an hour

g. Does it usually come  When you take a lot of exercise or  
 when you are quiet or  
 is there no difference

h. Does it usually come  when you are upset or  
 doesn't this make any difference

i. Do you take any pills or medicine for it?  YES  NO  ?

23. a. Sometimes, our hearts "act funny" (odd) like missing a beat, or beating real fast, or seem to turn over. Have you ever noticed your heart do anything like that?  YES  NO  ?

Probes A, B

If YES b. How often?  Every few days  Less often  
c. Does it bother you  quite a bit  just a little

24. a. Have you ever been bothered by your heart beating hard?  YES  NO  ?  
If YES b. How often?  Every few days  Less often  
c. Does this bother you  quite a bit  just a little

Probes A, B

25. a. Are your ankles ever swollen at bedtime?  YES  NO  ?  
If YES b. Is the swelling gone by morning?  YES  NO  ?

Probe A

26. a. When you walk, do you have pains or cramps in your legs?  YES  NO  ?  
If YES b. How often?  Every few days  Less often  
c. Does it bother you  quite a bit  just a little

Probe A

27. a. Has a doctor ever said you had rheumatic fever (inflammatory rheumatism)  YES  NO  
If YES b. Have you had it in the past 12 months?  YES  NO  ?

c. Are you taking any pills or medicine for it?  YES  NO

If YES d. What is it? \_\_\_\_\_

64. Has a doctor ever said you had chorea or St. Vitus' Dance?  YES  NO

Probe C

65. a. Has a doctor ever told you that you have hardening of the arteries?  YES  NO

If YES b. Have you had this condition in the past 12 months?  YES  NO  ?

66. a. Have you ever had any reason to think you may have high blood pressure?  YES  NO  ?

If YES or ? b. Did a doctor tell you it was high blood pressure?  YES  NO

Probe C

c. How long ago did you first start having it?  
 1 year  1-5 years  over 5 years

d. Have you had it in the past 12 months?  YES  NO  ?

e. Do you take any pills or medicine for it?  YES  NO  ?

If YES f. Give name of the medicine \_\_\_\_\_

67. a. Have you ever had any reason to think you may have heart trouble?  YES  NO  ?

Probe C

If YES or ? b. Did a doctor tell you that you had heart trouble?  YES  NO

If YES, what did he call it? \_\_\_\_\_

c. How long ago did you first start having it?  
 1 year  1-5 years  over 5 years

d. Have you had it in the past 12 months?  YES  NO  ?

e. Do you take any pills or medicine for it?  YES  NO  ?

If YES f. Give name of the medicine \_\_\_\_\_

- Probes: A. Do you have any idea what causes your \_\_\_\_\_?  
B. Tell me how it feels.  
C. In what way does it bother or affect you?  
D. How many flights?

These questions were used, where indicated, if the examinee answered either "yes" or "?"

# APPENDIX D

## FINDINGS ON THE PHYSICAL EXAMINATION RELATED TO CARDIOVASCULAR DISEASE

Confidentiality has been assured the individual as set forth in 22 FR 1687

PHS-301a  
REV. 4-61

Health Examination Survey  
**PHYSICAL EXAMINATION**  
PHS-205

BLOOD PRESSURE - LEFT ARM				
TIME	SYSTOLIC	DIASTOLIC 1	DIASTOLIC 2	
1.				
2.				
3.				

OCULAR FUNDI	RIGHT	LEFT	REMARKS	CODE
4. Normal				X
5. Fundus not visualized				X
6. Globe Absent				
7. Increased Light Reflex				
8. Narrow arterioles				
9. Tortuous arterioles				
10. AV Compression				
11. Hemorrhage				
12. Exudate				
13. Venous Enlargement				
14. Papilledema				
15. Disc Abnormal				
16. Lens Opacities				
17. Iritis				
18. Other (Specify)				
19. I → Grade	0	1	2	3
	4	5		

EARS	RIGHT	LEFT	REMARKS	CODE
20. Normal				X
21. Drum not visualized				
22. Malformation				
23. Exudate				
24. Perforated Drum				
25. Scarred Drum				

NECK	
26. Venous Engorgement (upright)	<input checked="" type="checkbox"/> YES <input checked="" type="checkbox"/> NO

PERIPHERAL ARTERIES - Inspection and palpation					
27. All Normal <input type="checkbox"/>					
RIGHT SIDE	NORMAL	SCLEROTIC	TORTUOUS	NOT DONE*	CODE
28. Superficial Temporal					
29. Brachial					
30. Radial					
LEFT SIDE	NORMAL	SCLEROTIC	TORTUOUS	NOT DONE*	CODE
31. Superficial Temporal					
32. Brachial					
33. Radial					
*NOT DONE (Specify which item number and why not done) _____					

QUALITY OF ARTERIAL PULSATIOMS						
34. All normal <input type="checkbox"/>						
RIGHT SIDE	NORMAL	BOUNDING	DIMINISHED	NOT PALPABLE	NOT DONE*	CODE
35. Radial						
36. Dorsalis Pedis						
37. Post-tibial						
LEFT SIDE	NORMAL	BOUNDING	DIMINISHED	NOT PALPABLE	NOT DONE*	CODE
38. Radial						
39. Dorsalis Pedis						
40. Post-tibial						

LOWER EXTREMITIES	RIGHT	LEFT	REMARKS	CODE
41. Normal				
42. Not Done*				
43. Varicosities				
44. Dependent Edema				
45. Ulcers				

\* NOT DONE (Specify which item number and why not done)

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---

HEART

46. Thrills none

IF present, specify: Location \_\_\_\_\_  
Timing \_\_\_\_\_

47. Apical impulse not felt

MCL        
intervals

48. Heart Sounds

normal

Accentuated

Diminished

A<sub>2</sub>

P<sub>2</sub>

M<sub>1</sub>

Third heart sound  Splitting of second sound abnormal

Other (Specify) \_\_\_\_\_

49. Murmurs IF present, specify (in order): location, intensity (grades I through V), pitch, quality, duration, timing, transmission, and whether significant or non-significant.

Systemic none

\_\_\_\_\_

Diastolic none

\_\_\_\_\_

MUSCULOSKELETAL SYSTEM

50. Arthritis and Rheumatism

no positive findings

IF positive findings are present, fill out Summary of Joint Involvement on next page.

EXAMINING PHYSICIAN'S IMPRESSION

Cardiovascular Diseases

	NEGATIVE	POSITIVE	SUSPECT
Hypertension.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Peripheral arteriosclerosis.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Organic heart disease.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Angina pectoris.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

If positive or suspect,

Etiology \_\_\_\_\_

Anatomy \_\_\_\_\_

Physiology \_\_\_\_\_

Functional capacity \_\_\_\_\_

Other \_\_\_\_\_

Comments \_\_\_\_\_

Arthritis and Rheumatism

No arthritis

Classical arthritis (give specific diagnosis) \_\_\_\_\_

Definite arthritis \_\_\_\_\_

Rheumatic complaints \_\_\_\_\_

Questionable complaints \_\_\_\_\_

Other Diseases and Conditions

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_  
Signature





## APPENDIX E

### ELECTROCARDIOGRAPHIC CRITERIA

#### Criteria and Classification

The following are the criteria and classifications used in electrocardiographic (ECG) reading by the Health Examination Survey. They were developed by

the cardiologists who read the ECG's. The draft version of these criteria was submitted to cardiologists experienced in reading electrocardiograms for survey purposes, and their criticisms and suggestions were taken into account in this working version.

<u>Criteria</u>	<u>Leads</u>	<u>Interpretations</u>	
<b>1. Q &amp; QS patterns (Q must be 1 mm. or more)</b>			
a. Q duration = 0.04 second or more	I, II, $V_1$ - $V_6$ (any)	Anterior myocardial infarction	} Anterior myocardial infarction
b. Q duration = 0.04 second or more	AVL	Anterior or lateral myocardial infarction	
c. QS pattern when R wave is present in adjacent precordial lead to the right	$V_2$ - $V_5$ (any)	Anterior myocardial infarction	
d. QS pattern	$V_1$ - $V_6$ (all) $V_1$ - $V_2$ (all) $V_1$ - $V_5$ (all)	Anteroseptal myocardial infarction Anterior myocardial infarction Anterolateral myocardial infarction	
e. Q duration = 0.05 second or more and a Q wave in AVF	III	Posterodaphragmatic myocardial infarction	} Posterior myocardial infarction
f. Q duration = 0.05 second or more and R = 2 mm. or more	AVF	Posterodaphragmatic myocardial infarction	
g. Q duration = 0.04 second	II, III, and AVF (all)	Posterodaphragmatic myocardial infarction	
<b>2. QRS axis deviation</b>			
a. QRS axis = $+30^\circ$ or more	I, II, and III	Left axis deviation	
b. QRS axis = $-90^\circ$ or more	I, II, and III	Right axis deviation	
<b>3. Ventricular hypertrophy (hypertrophy)</b>			
a. R (+) R = 25 mm. or more NOTE: Record associated ST- or T-wave abnormalities separately	$R_S$ in $V_1$ or $V_2$ , and $R_T$ in $V_3$ or $V_5$	Left ventricular hypertrophy	
b. QRS duration less than 0.12 second and R = 1 mm. or more and R/S = 1:3 or more and transition zone (decreasing R/S) left of $V_1$	$V_1$	Right ventricular hypertrophy	
<b>4. ST depression and segments (ST interval is baseline)</b>			
a. ST junction depression 1 mm. or more	I, II, AVL, AVF, $V_1$ - $V_6$ (any)	Subendocardial ischemia	
b. ST depression 0.5-0.3 mm. and ST segment horizontal or downward	I, II, AVL, AVF, $V_1$ - $V_6$ (any)	Subendocardial ischemia and/or digitalis effect	
c. No ST depression as much as 0.5 mm. but ST segment starting down and reaching 0.5 mm. or more below baseline	I, II, AVL, AVF, $V_1$ - $V_6$ (any)		

<u>Category</u>	<u>Leads</u>	<u>Impressions</u>
<b>4. ST segment and segment—Continued</b>		
d. ST segment elevation, any of 2 m. or more	$V_1-V_4$ (any) $V_5$ , $V_6$ (any)	} Current of injury
3 m. or more	$V_1-V_4$ (any)	
e. ST segment elevation and ST contour upward (convex), with elevation	$I, II, III, V_5$ , $V_6$ (any)	
2 m. or more	$V_1-V_4$ (any)	
3 m. or more	$V_1-V_4$ (any)	
f. ST segment elevation and concave, with elevation	$I, II, III, V_5$ , $V_6$ (any)	
2 m. or more	$V_1-V_4$ (any)	
3 m. or more	$V_1-V_4$ (any)	
<b>5. T wave</b>		
a. T = 5 m. or more and QRS mainly upright	$I, II, III, AVL, AVF$ , $V_2-V_6$ (any)	} Nonspecific T-wave abnormality
b. T wave flat or small diphasic (± 1 m.) and when QRS mainly upright	$I, II, V_4-V_6$ (any)	
and T = -5 m. or more	$AVL, AVF$ (either)	} Left ventricular ischemia
c. T = -1 to 5 m.	$I, II, AVL, V_2-V_5$ (any)	
when T = (+) 5 m. or more when QRS mainly upright	$AVL$ $AVF$	
<b>6. A-V conduction</b>		
a. Complete A-V block (permanent or intermittent)	Any	Complete heart block
b. Partial (varying) A-V block	Any	Partial A-V block
c. P-R interval over 0.25 second (any heart rate)	$I, II, III$ (any)	First degree heart block
d. Accelerated conduction	Any	Wolff-Parkinson-White syndrome
<b>7. Ventricular conduction</b>		
a. QRS duration 0.12 second or more and S peak duration 0.06 second or more (in absence of infarct criteria, category 4, above)	$I, II, III$ (any) $I, AVL, V_5, V_6$ (any)	Left bundle branch block
b. S prime greater than S and QRS duration over 0.12 second	$V_1$	Right bundle branch block
c. S prime greater than S and QRS duration <u>not</u> over 0.12 second and not less than 0.10 second	$V_1$	Incomplete right bundle branch block
d. QRS at 0.10 second or more, but without QRS or QRS	$I, II, III$ (any)	Intraventricular block

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were

effect

<u>Category</u>	<u>Leads</u>	<u>Impression</u>
<b>8. <u>Arrhythmias</u></b>		
a. 3 or more premature ventricular contractions in sequence	Any	Ventricular tachycardia
b. Atrial fibrillation or flutter	Any	Atrial fibrillation or flutter
c. Atrial (over 120/minute), nodal or supraventricular (over 100/minute) tachycardia	Any	Atrial, nodal, or supraventricular tachycardia
d. Nodal rhythm (up to 100/minute) PR interval less than 0.12 second with either a positive or negative P wave or absent P or T following QRS	Any	Nodal rhythm
<b>9. <u>Low QRS, High T</u></b>		
a. Total R or S amplitude in leads I plus II plus III equals less than 15 mm.	I, II, III (all)	Low QRS voltage
b. T wave over 12 mm.	Any	High T voltage
<b>10. <u>Premature Beats and Miscellaneous</u></b>		
a. Premature atrial, nodal, or ventricular systoles Rare (up to 3 in 40 complexes) Frequent (4 or more in 40 complexes)	Any	Premature atrial, nodal, or ventricular systoles
b. Miscellaneous items not mentioned elsewhere		
1. Q-T interval >0.42, at any rate	Any	Prolonged QT
2. P waves notched, or peaked (3 mm.), or prolonged >0.12 second	Any	P-wave abnormality
3. Q duration of 0.03-0.04 second (but not diagnostic of posterior myocardial infarction)	III and aVF (both)	Other Q-wave abnormality

NOTE: In each category the ECG readers were allowed to designate abnormalities outside of criteria. For some categories such findings were fairly common.

ECG Code Sheet

APPENDIX E

Phy-3762 ECG CODE SHEET (Clinical)  
 REV. 12-61 HES-212

Deck 30

CASE NUMBER (1-3)	READER (4)
-------------------	------------

RATE (7-9)	PR (10-11)	QRS (12-13)
------------	------------	-------------

CODE: 1—Abnormal  
 2—Abnormal—Outside criteria  
 X—All normal  
 Y—Unsatisfactory ECG } Column 14  
 9—No ECG

14 <input type="checkbox"/> Ant MI	15 <input type="checkbox"/> Post MI	16 <input type="checkbox"/> LAD	17 <input type="checkbox"/> RAD	18 <input type="checkbox"/> LVH	19 <input type="checkbox"/> RVH
--	---	---------------------------------------	---------------------------------------	---------------------------------------	---------------------------------------

ST S or J	20 <input type="checkbox"/> Sub. Inch.	21 <input type="checkbox"/> Sub. Inch. / digitalis	22 <input type="checkbox"/> Current of Injury
--------------	--	---	--

T Wave	23 <input type="checkbox"/> Non-Specific	24 <input type="checkbox"/> LV Inch.
-----------	--	--

AV Cond.	25 <input type="checkbox"/> Complete Block	26 <input type="checkbox"/> Partial Block	27 <input type="checkbox"/> 1 or 2 degree Block	28 <input type="checkbox"/> VPE
----------	---	--	--	---------------------------------------

Venc. Cond.	29 <input type="checkbox"/> LBBB	30 <input type="checkbox"/> RBBB	31 <input type="checkbox"/> Inc. RBBB	32 <input type="checkbox"/> I-V Block
----------------	--	--	--	--

Athyria- mia	33 <input type="checkbox"/> Venc. Tach.	34 <input type="checkbox"/> Atr. Fib.	35 <input type="checkbox"/> Atr. Nod., Supra-Venc. Tach.	36 <input type="checkbox"/> Venc. Rhythm	37 <input type="checkbox"/> Normal Rhythm
-----------------	--	---	--	---	--

38 <input type="checkbox"/> Low QRS	39 <input type="checkbox"/> High T	40 <input type="checkbox"/> Low Pressure	41 <input type="checkbox"/> Fastest Systolic	42 (Circle one) A1 Y2 N3	
---	--	---	---	--------------------------------	--

43 <input type="checkbox"/> Misc.	REMARKS
---	---------



APPENDIX E

INTERPRETATION OF CHEST X-RAY

Form Used in Pulmonary Reading

PHS-3739 4-61		NATIONAL HEALTH SURVEY CHEST X-RAY INTERPRETATION	
X-RAY NUMBER	READER	DATE	CHECK HERE IF FILM IS UNSATISFACTORY <input type="checkbox"/>
PULMONARY PATHOLOGY			
NONE <input type="checkbox"/>	EXISTENCE OF LESION (Check one) <input type="checkbox"/> Definite <input type="checkbox"/> Indefinite	IF LESION EXISTS, STATE MOST LIKELY ETIOLOGY	
CARDIOVASCULAR PATHOLOGY			
NONE <input type="checkbox"/>	HEART ENLARGEMENT (Check one) <input type="checkbox"/> Definite <input type="checkbox"/> Borderline	OTHER CVD (Check one) <input type="checkbox"/> Definite <input type="checkbox"/> Borderline	
IF OTHER CVD, PLEASE SPECIFY			
PLEASE SPECIFY BELOW ANY OTHER SIGNIFICANT PATHOLOGY			

*Instructions for interpreting cardiovascular pathology*

Heart enlargement: Borderline enlargement is defined as 10 to 20 percent larger than normal. If enlargement was not generalized specify the hypertrophied chamber.

Other cardiovascular pathology is to be specified as follows: Calcification of the ascending aorta, calcification of the aortic knob, calcification of other portions of the aorta, abnormality of shape of aorta (specify), increased pulmonary vascularity.