

**STANDARD OPERATING PROCEDURES**

**A PROTOCOL FOR THE  
SPECIALIZED CENTER OF RESEARCH - ARTERIOSCLEROSIS (SCOR-A)**

**School of Medicine  
Louisiana State University  
New Orleans, Louisiana  
September, 1973**

**Prepared Under Contract No. HL 15103  
Department of Health, Education, and Welfare  
Public Health Service  
National Institutes of Health  
National Heart and Lung Institute**

PUNCH CARD LAYOUT SHEET

Project SO GALUSA HEART STUDY: September 1973-May 1974

Investigator \_\_\_\_\_ Telephone \_\_\_\_\_

Instrument SCOR-A Date 5/30/74

Number of different formats \_\_\_\_\_

Number of cards to be punched per format \_\_\_\_\_

CARD 1 of 10

Column Number	Description of Data	Variable Name	Column Number	Description of Data	Variable Name
1.			41.	DATE OF BIRTH (CONT.)	
2.	STUDY NUMBER: B100		42.		
3.		STUDYNO1 \$	43.	SCHOOL CODE (1-14)	SC
4.			44.	GRADE CODE (1-9, K=11,	
5.			45.	SPEC. ED=20, ED. MENT. RET.=21)	GC
6.		ID	46.		
7.	SUBJECT NUMBER (10)	ID1	47.		
8.			48.		
9.			49.		
10.	CARD NUMBER-01	CARD1	50.		
11.			51.		
12.			52.		
13.			53.	ADDRESS	ADDRESS
14.			54.		
15.	CHILD'S NAME		55.		
17.	(LAST NAME FIRST, NO COMMA)	NAME \$	56.		
18.			57.		
19.			58.		
20.			59.		
21.			60.		
22.			61.		
23.			62.		
24.			63.		
25.			64.		
26.			65.	LOCATION (1=RURAL, 2=URBAN)	LOCATIO
27.			66.		
28.			67.		
29.			68.	TELEPHONE NUMBER	PHONE
30.			69.		
31.			70.		
32.	SEX (1=M 2=F)	SEX	71.		
33.	RACE (1=W 2=NW)	RACE	72.		
34.	WARD NUMBER		73.		
35.	(STUDY INCLUDES WARD 4 ONLY)	WN	74.	DUPLICATE ID NUMBER	
36.	DATE OF BIRTH	MM	75.	(FOR BLIND DUPLICATE, ID=DUP_ID;	
37.		DAY	76.	OTHERWISE, ID=DUP_ID)	DUP_ID
38.		YEAR	77.		
39.		YY	78.		
40.			79.		
41.			80.		

Notes:

By: *llc*

PUNCH CARD LAYOUT SHEET

Project BOGALUSA HEART STUDY: September 1973-May 1974

Investigator \_\_\_\_\_ Telephone \_\_\_\_\_

Department SCOR-A Date 5/30/74

Number of different formats \_\_\_\_\_

Number of cards to be punched per format \_\_\_\_\_

CARD 2 of 10

Column Number	Description of Data	Variable Name	Column Number	Description of Data	Variable Name
1.			41.		
2.	STUDY NUMBER: B100		42.		
3.			43.		
4.		STUDYN02 \$	44.		
5.			45.	PARENT ADDRESS (CONT.)	
6.			46.		
7.	SUBJECT NUMBER (ID)		47.		
8.		ID2	48.		
9.			49.		
10.	CARD NUMBER-02	CARD2	50.		
11.			51.		
12.			52.		
13.			53.		
14.			54.		
15.			55.	TELEPHONE NUMBER	
16.			56.		
17.			57.		PA_PHONE
18.	PARENT NAME		58.		
19.	(LAST NAME FIRST, NO COMMA)		59.	RACE (1=W 2=NW)	PA_RACE
20.			60.	RELATIONSHIP 1=MOTHER	REL
21.		PA_NAME \$	61.	2=FATHER	
22.			62.	3=GUARDIAN	
23.			63.	4=OTHER	
24.			64.		
25.			65.		
26.			66.		
27.			67.		
28.			68.		
29.			69.		
30.			70.		
31.			71.		
32.			72.		
33.			73.		
34.			74.		
35.	PARENT ADDRESS		75.		
36.			76.		
37.		PA_AD \$	77.		
38.			78.		
39.			79.		
40.			80.		

Notes:

By: Cpn

PUNCH CARD LAYOUT SHEET

Project BOGALUSA HEART STUDY: September 1973-May 1974

Investigator \_\_\_\_\_ Telephone \_\_\_\_\_  
 Treatment SCOR-A Date 5/30/74

Number of different formats \_\_\_\_\_

Number of cards to be punched per format \_\_\_\_\_ CARD 3 of 10

Column Number	Description of Data	Variable Name	Column Number	Description of Data	Variable Name
1.			41.	PENICILLIN	PENI
2.	STUDY NUMBER: B100		42.	HEART MEDICINE	HEART_M
3.			43.	BIRTH CONTROL PILLS	BCP
4.		STUDYN03 \$	44.	MEDICINE FOR CONVULSIONS	MED_CON
5.			45.	SPECIAL DIET	SPE_DIET
6.			46.	SMOKE	SMOKE
7.	SUBJECT NUMBER (ID)	ID3	47.	WATER (1=CITY 2=WELL 3=OTHER)	WATER
8.			48.		
9.			49.		
10.			50.	NAME OF PERSON	
11.	CARD NUMBER-03	CARD3	51.	COMPLETING HEALTH HISTORY	
12.			52.		
13.			53.		
14.			54.		
15.			55.	(LAST NAME FIRST, NO COMMA)	
16.			56.		
17.	CHILD'S NAME		57.		
18.	(LAST NAME FIRST, NO COMMA)		58.		
19.			59.		NAME_HH \$
20.			60.		
21.			61.		
22.		CHILDHH \$	62.		
23.			63.		
24.			64.		
25.			65.		
26.			66.		
27.			67.		
28.			68.		
29.			69.		
30.			70.	REL. OF PERSON COMPLETING HEALTH HISTORY REL	
31.			71.	(1=MOTHER 2=FATHER 3=GUARDIAN 4=OTHER)	
32.	LUNG 1=YES 2=NO 3=UNK	LUNG	72.		
33.	HIGH BLOOD PRESSURE	HBP	73.		
34.	RHEUMATIC HEART DISEASE	RHD	74.		
35.	CONGENITAL HEART DISEASE	CHD	75.		
36.	OTHER HEART DISEASE	OHD	76.		
37.	SUGAR DIABETES	SD	77.		
38.	SEVERE KIDNEY DISEASE	SKD	78.		
39.	BLOOD DISEASE	BD	79.		
40.	INSULIN	INSULIN	80.		

Notes:

By: *cm*

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CARD 4 of 10

Column Number	Description of Data	Variable Name	Column Number	Description of Data	Variable Name
1.			41.	EXAMINER CODE-WEIGHT	EX_WT
2.	STUDY NUMBER: B100		42.	(001-701)	
3.		STUDYNO4 \$	43.		
4.			44.	ARM MEASURED (1=RT 2=LEFT 9=UNK)	ARM_SF
5.			45.	SKINFOLD-FIRST	SF1
6.			46.	(NEAREST MM)	
7.	SUBJECT NUMBER (10)		47.	SKINFOLD-SECOND	SF2
8.		ID4	48.	(NEAREST MM)	
9.			49.	SKINFOLD-THIRD	SF3
10.			50.	(NEAREST MM)	
11.	CARD NUMBER-04	CARD4	51.		
12.			52.	EXAMINER CODE-SKINFOLD	EX_SF
13.	FIRST MANUAL HEIGHT	HT_M1	53.	(001-701)	
14.	(CM- 1 DECIMAL PLACE)		54.		
15.			55.	EXAMINER CODE-HEIGHT	EX_HT
16.			56.	(001-701)	
17.	SECOND MANUAL HEIGHT	HT_M2	57.	FIRST AUTOMATIC HEIGHT	HT_A1
18.	(CM- 1 DECIMAL PLACE)		58.	(KG- 1 DECIMAL PLACE)	
19.			59.		
20.			60.		
21.	FIRST AUTOMATIC WEIGHT	WT_A1	61.		
22.	(KG- 1 DECIMAL PLACE)		62.	SECOND AUTOMATIC HEIGHT	HT_A2
23.			63.	(KG- 1 DECIMAL PLACE)	
24.			64.		
25.	SECOND AUTOMATIC WEIGHT	WT_A2	65.		
26.	(KG- 1 DECIMAL PLACE)		66.		
27.			67.		
28.			68.		
29.	FIRST MANUAL WEIGHT	WT_M1A	69.		
30.	(KG- 1 DECIMAL PLACE)	(WHOLE NO.)	70.		
31.			71.		
32.	(WT_M1=WT_M1A+WT_M1B)	WT_M1B	72.		
33.		(1 DECIMAL PL)	73.		
34.			74.		
35.	SECOND MANUAL WEIGHT	WT_M2A	75.		
36.	(KG- 1 DECIMAL PLACE)	(WHOLE NO.)	76.		
37.			77.		
38.	(WT_M1=WT_M1A+WT_M1B)	WT_M2B	78.		
39.		(1 DECIMAL PL)	79.		
40.			80.		

Notes:

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CARD 5 of 10

Column Number	Description of Data	Variable Name	Column Number	Description of Data	Variable Name
1.			41.	OTHER (1=NOR 2=SUS 3=ABN 9=UNK)	F_OTHER
2.	STUDY NUMBER: B100	STUDYN05 \$	42.	ACTIVE DISEASE (BREAST & GEN)	BRE_GEN
3.				(MALE OR FEMALE)	
4.				1=NOR 2=SUS 3=ABN 9=UNK	
5.					
6.					
7.	SUBJECT NUMBER (ID)	IDS			
8.					
9.					
10.	CARD NUMBER-05	CARD5			
11.					
12.					
13.					
14.	DATE OF EXAM	MONTH MME			
	(DATE_EX)	DAY DDE			
17.					
18.		YEAR YYE			
19.	MALE-BENIGN ADOLESCENT	BA			
20.	WITH TENDERNESS	WT			
21.	DIFFUSE DUE TO OBESITY	DIF_OB			
22.					
23.	PUBIC HAIR	PH			
24.	GENITAL	GEN			
25.	OTHER	OTHER			
26.					
27.					
28.	FEMALE-BREAST RT. MAT. STAGE	BREAST_R			
29.	BREAST LEFT MAT. STAGE	BREAST_L			
30.	OTHER FINDINGS RIGHT	OF_R			
31.	OTHER FINDINGS LEFT	OF_L			
32.					
33.	PUBIC HAIR	F_PH			
34.					
35.					
36.	MENARCHEAL (1=NO 2=YES)	F_MEN			
	(BLANK IF COL. 36=1)	MONTH T_MEN_M			
39.	(T_MEN)	YEAR T_MEN_Y			
40.					

(COLUMNS 43-80 ARE BLANK)

1=NO 2=RIGHT 3=LEFT 4=BOTH

STAGES 1-5, 9=UNK

1=NOR 2=SUS 3=ABN 9=UNK

STAGES 1-5, 9=UNK

1=NOR 2=SUS 3=ABN 9=UNK

STAGES 1-5, 9=UNK

Notes:

By: *cm*

PUNCH CARD LAYOUT SHEET

Project BOGALUSA HEART STUDY: September 1973-May 1974

Investigator \_\_\_\_\_ Telephone \_\_\_\_\_

Department SCOR-A

Date 5/30/74

Number of different formats \_\_\_\_\_

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CARD 6 of 10

Column Number	Description of Data	Variable Name	Column Number	Description of Data
1.				
2.	STUDY NUMBER: B100			
3.		STUDYN06 \$		
4.				(COLUMNS 41-80 ARE BLANK)
5.				
6.				
7.	SUBJECT NUMBER (10)	ID6		
8.				
9.				
10.	CARD NUMBER-06	CARD6		
11.				
12.	SIGNIFICANT PAST HISTORY	SPH		
13.	DRUGS	DRUGS		1=NO 3=YES 9=UNK
14.	SPECIAL DIET	SPEC_D		
15.	CHRONIC DISEASE	AD		1=NOR 2=SUS 3=ABN 9=UNK
16.	LIPID XANTHOMA	XAN		
17.	IMPETIGO	IMP		1=NO 3=YES 9=UNK
18.	ACNE	ACNE		GRADES 1-5
19.	SKIN DISEASE	SKIN		
20.	XANTHELASMA	XAN_LAS		
21.	EYES	EYES		
22.	EAR, NOSE & THROAT	ENT		1=NOR 2=SUS 3=ABN 9=UNK
23.	NECK	NECK		
24.	PULMONARY	PULM		
25.	ABDOMEN	ABD		
26.	CARDIOVASCULAR	C_V		
27.	HEART	HEART		1=NOR 2=CONG 3=RHEU 4=OTHER 9=UNK
28.	NODES	NODES		1=NON-PALP. 2=PALP. NONSUS 3=SUS 4=ABN 9=UNK
29.	EXTREMITIES	EXTREM		
30.	BREAST AND GENITALIA	B_G		1=NOR 2=SUS 3=ABN 9=UNK
31.	NUTRITIONAL APPRAISAL	N_A		1=NOR 2=UNDER 3=5% 4=10% 5=20% 9=UNK
32.	TAG CHART	TAG_CH		1=NO 3=YES 9=UNK
33.				
34.	EXAMINER CODE-			
35.	PHYSICAL EXAM (001-009)	EX_PE		
36.				
37.	RECORDER CODE-			
38.	PHYSICAL EXAM (001-701)	REC_PE		
39.				
40.				

Notes:

By: *CFN*

PUNCH CARD LAYOUT SHEET

Project BOGALUSA HEART STUDY: September 1973-May 1974

Investigator \_\_\_\_\_ Telephone \_\_\_\_\_

Department SCOR-A Date 5/30/74

Number of different formats \_\_\_\_\_

Number of cards to be punched per format \_\_\_\_\_

CARD 7 of 10

Column Number	Description of Data	Variable Name	Column Number	Description of Data	Variable Name
1.			41.	DB12(CONT.)	
2.	STUDY NUMBER: B100		42.		
3.		STUDYN07 \$	43.	FIFTH PHASE, 1ST STATION	
4.			44.	2ND READING	FP12
5.			45.	SYSTOLIC, 1ST STATION	
6.	SUBJECT NUMBER (ID)	ID7	46.	3RD READING	SB13
7.			47.		
8.			48.	DIASTOLIC, 1ST STATION	
9.			49.	3RD READING	DB13
10.			50.		
11.	CARD NUMBER-07	CARD7	51.	FIFTH PHASE, 1ST STATION	
12.			52.	3RD READING	FP13
13.			53.		
14.			54.	STATION NUMBER*	ST1
15.			55.	AUTOMATIC INSTRUMENT NO. (1 OR 2)	AUTO_BPI
16.			56.	ARM USED (1=LEFT, 2=RIGHT, 9=UNK)	ARM_BPI
17.			57.	EXAMINER CODE-	
18.			58.	BLOOD PRESSURE (001-701)	EX_BPI
19.	RIGHT ARM LENGTH	RAL1	59.		
20.	(CM-WHOLE)		60.	BLOOD PRESSURE EVALUATION	BPE_1
21.			61.	(1=NOR, 2=SUS, 3=ABN, 9=UNK)	
22.	RIGHT ARM CIRCUMFERENCE		62.		
23.	(CM-WHOLE)	RAC1	63.		
24.	CUFF SIZE SEL. (L,A,M,S,P,1-5)	CSS1 \$	64.	*1,2,4,5=BAUM	
25.	PHYSICAL BEHAVIOR (1-8)	PB1	65.	3,6=PHYSIOMETRICS	
26.	CUFF SIZE USED (L,A,M,S,P,1-5)	CSU1 \$	66.		
27.	BLOOD PRESSURE-		67.		
28.	SYSTOLIC, 1ST STATION	SB11	68.		
29.	1ST READING		69.		
30.	DIASTOLIC, 1ST STATION		70.		
31.	1ST READING	DB11	71.		
32.			72.		
33.	FIFTH PHASE, 1ST STATION		73.		
34.	1ST READING	FP11	74.		
35.			75.		
36.	SYSTOLIC, 1ST STATION		76.		
37.	2ND READING	SB12	77.		
38.			78.		
39.	DIASTOLIC, 1ST STATION		79.		
40.	2ND READING	DB12	80.		

Notes:

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PUNCH CARD LAYOUT SHEET

Project BOGALUSA HEART STUDY: September 1973-May 1974

Investigator \_\_\_\_\_ Telephone \_\_\_\_\_

Department SCOR-A Date 5/30/74

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CARD 8 of 10

Column Number	Description of Data	Variable Name	Column Number	Description of Data	Variable Name
1.			41.	DB22 (CONT.)	
2.			42.	FIFTH PHASE, 2ND STATION	
3.	STUDY NUMBER: B100		43.	2ND READING	FP22
4.		STUDYN08 \$	44.		
5.			45.	SYSTOLIC, 2ND STATION	
6.			46.	3RD READING	DB23
7.	SUBJECT NUMBER (ID)	ID8	47.		
8.			48.	DIASTOLIC, 2ND STATION	
9.			49.	3RD READING	DB23
10.			50.		
11.	CARD NUMBER-08	CARD8	51.	FIFTH PHASE, 2ND STATION	
12.			52.	3RD READING	FP23
13.			53.		
14.			54.	STATION NUMBER*	ST2
15.			55.	AUTOMATIC INSTRUMENT NUMBER (1 OR 2) AUTO	
16.			56.	ARM USED (1=LEFT, 2=RIGHT, 9=UNK) ARM_BP2	
17.			57.	EXAMINER CODE-	
18.			58.	BLOOD PRESSURE (001-701)	EX_BP2
19.	RIGHT ARM LENGTH	RAL2	59.		
20.	(CM-WHOLE)		60.	BLOOD PRESSURE EVALUATION	BPE_2
21.			61.	(1=NOR 2=SUS 3=ABN 9=UNK)	
22.	RIGHT ARM CIRCUMFERENCE	RAC2	62.		
23.	(CM-WHOLE)		63.		
24.	CUFF SIZE SEL (L,A,M,S,P,1-5)	CSS2 \$	64.		
25.	PHYSICAL BEHAVIOR (1-8)	PB2	65.		
26.	CUFF SIZE USED (L,A,M,S,P,1-5)	CSU2 \$	66.	*1,2,4,5=BAUM	
27.	BLOOD PRESSURE-		67.		
28.	SYSTOLIC, 2ND STATION	SB21	68.	3,6=PHYSIOMETRICS	
29.	1ST READING		69.		
30.	DIASTOLIC, 2ND STATION		70.		
31.	1ST READING	DB21	71.		
32.			72.		
33.	FIFTH PHASE, 2ND STATION		73.		
34.	1ST READING	FP21	74.		
35.			75.		
36.	SYSTOLIC, 2ND STATION		76.		
37.	2ND READING	SB22	77.		
38.			78.		
39.	DIASTOLIC, 2ND STATION		79.		
40.	2ND READING	DB22	80.		

Notes:

By: DM.

PUNCH CARD LAYOUT SHEET

Project BOGALUSA HEART STUDY: September 1973-June 1974

Investigator \_\_\_\_\_ Telephone \_\_\_\_\_

Department SCOR-A Date 5/30/74

Number of different formats \_\_\_\_\_

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CARD 9 of 10

Column Number	Description of Data	Variable Name	Column Number	Description of Data	Variable Name
1.			41.	DB32 (CONT.)	
2.			42.	FIFTH PHASE, 3RD STATION	
3.	STUDY NUMBER: B100		43.	2ND READING	FP32
4.		STUDYN09 \$	44.		
5.			45.	SYSTOLIC, 3RD STATION	
6.			46.	3RD READING	SB33
7.	SUBJECT NUMBER (ID)		47.		
8.		ID9	48.	DIASTOLIC, 3RD STATION	
9.			49.	3RD READING	DB33
10.			50.		
11.	CARD NUMBER-09	CARD9	51.	FIFTH PHASE, 3RD STATION	
12.			52.	3RD READING	FP33
13.			53.		
14.			54.	STATION NUMBER*	ST3
15.			55.	AUTOMATIC INSTRUMENT NUMBER (1 OR 2) AUTO	
16.			56.	ARM USED (1=LEFT, 2=RIGHT, 9=UNK)	ARM_BP3
17.			57.	EXAMINER CODE-	
18.			58.	BLOOD PRESSURE (001-701)	EX_BP3
19.	RIGHT ARM LENGTH		59.		
20.	(CM-WHOLE)	RAL3	60.	BLOOD PRESSURE EVALUATION	BPE_3
21.			61.	(1=NOR 2=SUS 3=ABN 9=UNK)	
22.	RIGHT ARM CIRCUMFERENCE		62.		
23.	(CM-WHOLE)	RAC3	63.		
24.	CUFF SIZE SEL. (L,A,M,S,P,1-5)	CSS3 \$	64.		
25.	PHYSICAL BEHAVIOR (1-8)	PB3	65.		
26.	CUFF SIZE USED (L,A,M,S,P, 1-5)	CSU3 \$	66.	*1,2,4,5=BAUM	
27.	BLOOD PRESSURE-		67.	3,6=PHYSIOMETRICS	
28.	SYSTOLIC, 3RD STATION	SB31	68.		
29.	1ST READING		69.		
30.	DIASTOLIC, 3RD STATION		70.		
31.	1ST READING	DB31	71.		
32.			72.		
33.	FIFTH PHASE, 3RD STATION		73.		
34.	1ST READING	FP31	74.		
35.			75.		
36.	SYSTOLIC, 3RD STATION		76.		
37.	2ND READING	SB32	77.		
38.			78.		
39.	DIASTOLIC, 3RD STATION		79.		
40.	2ND READING	DB32	80.		

Notes:

By: *CM*

PUNCH CARD LAYOUT SHEET

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Investigator \_\_\_\_\_ Telephone \_\_\_\_\_

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CARD 10 of 10

Column Number	Description of Data	Variable Name	Column Number	Description of Data	Variable Name
1.			41.		
2.	STUDY NUMBER: B100		42.	B_PREB_I (CONT.)	
3.		STDYNO10 \$	43.		
4.			44.	B + PREB LP CHOLESTEROL	
5.			45.	(MG%-WHOLE NUMBER)	B_PREB_C
6.			46.		
7.	SUBJECT NUMBER (ID)		47.		
8.		ID10	48.	TOTAL CHOLESTEROL	
9.			49.	(MG%-WHOLE NUMBER)	TOT_C
10.			50.		
11.	CARD NUMBER-10	CARD10	51.		
12.			52.		
13.	SCHOOL CODE (1-14)	SC_B	53.	TRIGLYCERIDE	TRIGLY
14.			54.	(MG%-WHOLE NUMBER)	
	MONTH	MMB	55.	ELECTROPHORESIS	
16.	DATE BLOOD DRAWN		56.	(BETA TO PREB PROPORTION)	X(BETA) X
17.	DAY	DDB	57.		
18.	(DATE_BL)		58.		Y(PREB) Y
19.	YEAR	YYB	59.	CHYLOMICRONS (1=NO 3=YES 9=UNK)	CHYL
20.			60.	MULT. BANDS (1=NONE 2=α 3=β 4=PREB 9=UNK)	
21.	HOUR	HR_B	61.	HEMOGLOBIN COND. (1=NOR 3=ABN 9=UNK)	
22.	TIME BLOOD DRAWN		62.		
23.	(TIME_BL \$)	MINUTE MIN_B	63.	HEMOGLOBIN QUANTITY	HB_QU
24.		AM OR PM AMPM_B \$	64.	(G%- 1 DECIMAL PLACE)	
25.	FASTING SAMPLE (1=NO 3=YES 9=UNK) FAST		65.	EXAMINER CODE-	
26.			66.	VENIPUNCTURE (001-701)	EX_BL
27.	HOUR	HR_F	67.		
28.	HOUR OF LAST		68.	BLOOD SAMPLE DRAWN (1=NO 3=YES 9=UNK)	BL_SD
29.	FOOD INTAKE	MINUTE MIN_F	69.	QUAN. SUFF.-SERUM (1=NO 3=YES 9=UNK)	QS_S
30.	(TIME_F \$)	AM OR PM AMPM_F \$	70.	QUAN. SUFF.-HB (1=NO 3=YES 9=UNK)	QS_H
31.			71.		
32.	MONTH	MML	72.		
33.	DATE ANALYZED		73.	AUTO ANALYZER USED (BLANK=NO *=YES)	AA \$
34.	DAY	DDL	74.		
35.	(DATE_LAB)		75.		
	YEAR	YYL	76.		
			77.		
	TURBID (1=NO 2=SLIGHT 3=YES 9=UNK) TURBID		78.		
	HEMOLYZED (")	HEMOL	79.		
39.	B + PREB LP INDEX	B_PREB_I	80.		
40.	(3 DECIMAL PLACES)				

Notes:

By: *CM*

## V. DEFINITIONS OF TERMS

### A. POPULATION

1. Ward 4: The political ward, including the boundary, of Washington Parish (County) of Louisiana.
2. Urban: The incorporated area including the boundary of Bogalusa.
3. Rural: The area within or on the boundary of Ward 4 but outside the urban area.
4. Respondent: A child whose parents or guardians have given written consent for the child's participation in the Bogalusa Heart Study.
5. Refusal: A child whose parents or guardians have refused to allow the child to participate in the Bogalusa Heart Study.
6. Age: The span of time in years, to the last whole year, between the birth-date (month, day, year) of a child and the child's date of examination (month, day, year).
7. Cohort: A child living in Ward 4 whose age in years is defined by the table below.

Age	Interval of occurrence of date of birth
0 (Newborns)	1/1/74 - 12/31/74
1	1/1/73 - 12/31/73
2	1/1/72 - 12/31/72
3	1/1/71 - 12/31/71
4	1/1/70 - 12/31/70
5	1/1/69 - 12/31/69
6	1/1/68 - 12/31/68
7	1/1/67 - 12/31/67
8	1/1/66 - 12/31/66
9	1/1/65 - 12/31/65
10	1/1/64 - 12/31/64
11	1/1/63 - 12/31/63
12	1/1/62 - 12/31/62
13	1/1/61 - 12/31/61
14	1/1/60 - 12/31/60

8. Newborn: A child living in Ward 4 who is born between January 1, 1974, and December 31, 1974.
9. SCOR-A child: Any person living in Ward 4 who is aged three (3) to fourteen (14) years, inclusive, on or before December 31, 1974; any newborn living in Ward 4. Shut-ins, permanently institutionalized children, and non-ambulatory children are specifically excluded from this definition.

B. PHYSICAL EXAMINATION--GENERAL

Items 1-4 refer to all organ systems.

1. Normal: No apparent organ abnormality.
2. Suspicious: Neither definitely normal nor definitely abnormal.
3. Abnormal: To be defined for each organ system.
4. Unknown: The organ or system examined permits no classification as to normal, suspicious or abnormal.
5. Skin:
  - a. Xanthoma: A condition characterized by the presence of small, flat, yellow plaques in the skin, due to deposits of lipids.
  - b. Impetigo: A bacterial, inflammatory skin disease, characterized by the appearance of pustules.
  - c. "Dew" sores: Lesions on the lower extremities, usually in children, resulting from walking barefooted in the grass; a secondary infection resulting from chigger and mosquito bites. May be active, ulcerated with secondary infection with excoriation from scratching; may have staphylococcal, streptococcal, and mixed infection; often occur as healed and pigmented lesions.
  - d. Acne (See accompanying pictures.)

- 1) Grade 1: No acne.
- 2) Grade 2: Sparse to profuse comedones with little or no inflammatory reaction. Only minimal attention is desirable. The only sequela of significance is "enlarged pores" in some patients.
- 3) Grade 3: Acne consisting of comedones and superficial pustular and inflammatory lesions at the follicular orifice. This process is ordinarily confined to the face. It does not produce significant scarring unless the lesions are excoriated and picked. Topical treatment is reasonably effective, along with a search for precipitating factors in the diet. Complete spontaneous remission is ordinarily seen within one to two years. The habit of picking and excoriating the skin of the face may persist long after the acne has subsided.
- 4) Grade 4: Acne characterized by comedones, small pustules, and a tendency to deeper inflamed lesions. These inflammatory nodules are not definitely related to the follicular pore and apparently result from rupture of the sebaceous duct, with extrusion of sebum into the skin tissue, and from inflammation caused by chemical and bacterial factors. There is reason to believe that the principal organisms concerned are the Propionibacteria rather than Staphylococci. The anerobic Propionibacteria are capable of breaking down sebum, with the formation of highly irritating propionic acid. The inflammatory lesions tend to be confined to the face, neck, tops of the shoulders, and presternal region. At this point, acne begins to assume real significance in terms of psychic

trauma, eventual scarring, persistence, and potential extension. It becomes a true disease rather than a passing cosmetic change.

- 5) Grade 5: This is an extensive, secondarily infective, cystic acne (acne conglobata). The face and neck may be severely involved, with extensive lesions on the upper trunk. Some extension up into the scalp on the posterior neck may be noted. Coalescence of lesions occurs, with production of boggy canalized sinuses. The resulting scarring may be markedly distorting, with cord-like bands and hypertrophic ridges.<sup>1</sup>

6. Eyes:

- a. Xanthelasma: A form of xanthoma affecting the eyelids and characterized by soft yellowish spots and plaques.

C. PHYSICAL EXAMINATION--HEART:

1. Tentative Diagnosis of Heart Disease

- a. Normal: No abnormal physical signs.
- b. Congenital: Unequivocal evidence of a congenital cardiovascular defect. Acquired valvular heart disease (rheumatic, syphilitic) can be excluded.<sup>2</sup>
- c. Rheumatic fever: "Jones Criteria (modified) for Guidance in the Diagnosis of Rheumatic Fever. The presence of two major criteria or one major and two minor criteria indicates a high probability of the presence of rheumatic fever.

1) Major criteria

- a) Carditis

<sup>1</sup>D.M. Pillsbury, W.B. Shelley, and A.M. Kligman, Textbook of Dermatology (Philadelphia: W.B. Saunders Co., 1956), p. 810.

<sup>2</sup>Puerto Rico Heart Health Program Manual of Procedure Second Examination Cycle (University of Puerto Rico School of Medicine, 1968), p. 75.

- b) Polyarthritiis
- c) Chorea
- d) Subcutaneous nodules
- e) Erythema marginatum

2) Minor criteria

- a) Fever
- b) Arthralgia
- c) Prolonged P-R interval in the ECG
- d) Increased ESR, WBC, or presence of C-reactive protein
- e) Preceding beta-hemolytic streptococcal infection
- f) Previous rheumatic fever or inactive rheumatic heart disease."<sup>3</sup>

d. Rheumatic:

1) "Heart involvement

- a) Cardiomegaly
- \*b) Murmur

All diastolic; systolic of grade 3/6 or greater"<sup>4</sup> and in special locations, transmission, including the characteristics described under C.I.C. Rheumatic Fever (sic).

- c) "Heart failure"<sup>4</sup>--with or without arrhythmias
- d) "Atrial fibrillation in an individual with a confirmed history of rheumatic fever in the absence of another recognizable cause of cardiac disease.

\*Murmur is essential.

2) Presence of mitral stenosis as determined by physical examination.

<sup>3</sup>Primer on the Rheumatic Diseases. (A Committee of the American Rheumatism Association, 1964), p. 64.

<sup>4</sup>Puerto Rico Heart Health Program, p. 73.



\* a) Diastolic murmur with presystolic accentuation.

\*\*b) Accentuated M<sub>1</sub>.

\*\*c) Opening snap.

Supplemented by electrocardiographic findings (atrial hypertrophy, right ventricular hypertrophy).

\* Alone--establishes diagnosis.

\*\*Two needed in order to make the diagnosis."<sup>5</sup>

- 3) Indication of "... aortic stenosis and insufficiency by auscultatory findings as described in C.I.d.1 consistent with the diagnoses.
- 4) A grade 3/6 systolic murmur at the apex with evidence of left ventricular hypertrophy and/or left atrial enlargement by EKG in the absence of another recognizable cause of cardiac disease.
- 5) ...Evidence of aortic and mitral valvular involvement on basis of murmurs described above.

e. Questionable Rheumatic Heart Disease

- 1) Presence of a grade 2/6 systolic apical murmur with history of rheumatic fever but no other manifestations of heart involvement."<sup>6</sup>
- 2) Lack of agreement between examiners about presence of "... aortic stenosis and insufficiency ...
- 3) Atrial fibrillation without a murmur in a patient with a confirmed history of rheumatic fever."<sup>7</sup>
- 4) Lack of agreement between examiners about "... evidence of aortic and mitral involvement ..."<sup>8</sup>

<sup>5</sup>Ibid., p. 73.

<sup>6</sup>Ibid., pp. 73-74.

<sup>7</sup>Ibid., p. 74.

<sup>8</sup>Ibid., p. 74.

f. Other: Other known defect.

D. PHYSICAL EXAMINATION--MATURATION

1. Male Breast

- a. Benign adolescent gynecomastia: Firm, disk-like plaque of subareolar breast tissue - freely movable, often tender, and ranging in size from 1-10 centimeters in diameter. Must be differentiated from fat pads in obese males. Unilateral or bilateral.
- b. Gynecomastia with tenderness: Refer to definition D.1.a.
- c. Diffuse gynecomastia due to obesity (with or without endocrine disorder): Large breast mass, with puffy areolae, usually bilateral, and always bilateral if endocrine disorder is present. This condition is rare; however, obese males may have breast development quite similar in appearance to the true gynecomastia.<sup>9</sup>

2. Male Genitalia (See accompanying photographs.)

a. Pubic hair:

- 1) Grade 1: No pubic hair.
- 2) Grade 2: Sparse growth of fine hair which is straight or slightly curled.
- 3) Grade 3: Growth of greater amount of dark, coarser and more curled hair. Hair begins to cover the mons pubis.
- 4) Grade 4: Hair is full and of adult type but does not spread to the inner borders of the thighs.
- 5) Grade 5: Hair is adult in quantity, has spread to the inner borders of the thighs and forms the classical inverse triangle.<sup>10</sup>

<sup>9</sup> J.R. Gallagher, Medical Care of the Adolescent (New York: Appleton-Century-Crofts, 1960), pp. 134-135.

<sup>10</sup> J.M. Tanner, Growth at Adolescence (Springfield, Illinois: Charles C. Thomas, 1955), pp. 25-26.

b. Genitals:

- 1) Grade 1: Pre-adolescent. The size and proportion of the penis are similar to that of early childhood.
- 2) Grade 2: The scrotum and testes enlarge. The texture of the skin of the scrotum changes; this skin also reddens. There is no enlargement or only slight enlargement of the penis at this stage.
- 3) Grade 3: The penis enlarges with initial enlargement principally in length. Additionally, the testes and scrotum continue to grow.
- 4) Grade 4: The size of the penis increases in breadth with accompanying gland development. The testes and scrotum enlarge further.
- 5) Grade 5: Genitalia reach adult stage in size and shape. No further growth takes place after this stage is reached.<sup>11</sup>

3. Female Breast (See accompanying photographs.)

- a. Grade 1: Pre-adolescent. There is elevation of the nipple only.
- b. Grade 2: Development of breast budding. There is elevation of the breast and nipple as a small mound.
- c. Grade 3: Breast and areola are both enlarged and elevated but there is no separation of the contour of the breast and the contour of the areola and nipple.
- d. Grade 4: The areola and the nipple form a secondary mound projecting above the contour of the breast.
- e. Grade 5: The areola becomes part of the contour of the breast with the projection of the nipple only.<sup>12</sup>

<sup>11</sup> Ibid., p. 25.

<sup>12</sup> Ibid., p. 30.

4. Female Genitalia--Pubic Hair (See accompanying photographs.)

Refer to definitions D.2.a.1 through D.2.a.5.

E. BLOOD PRESSURE

1. Standard Examiner: The blood pressure examiner on a given team of three examiners whose blood pressure measurements on a particular child serve as the reference measurements for other readings on this same child.
2. First Standard Examiner: The standard examiner whose name appears first in an alphabetical ordering of the names of the two standard examiners.
3. First Physiometrics Instrument: The Physiometrics Automatic Blood Pressure Recorder whose serial number appears first in a numerical ordering of the two numbers.

F. PERSONNEL

1. Escort: An adult volunteer or staff attendant.
2. Examiner: A person who collects data by performing a test on an examinee and recording this information on the appropriate data collection form.

G. MISCELLANEOUS

1. Syncope: A partial or complete temporary suspension of respiration and circulation due to cerebral ischemia.
2. Parallax: The apparent displacement or the difference in apparent direction of an object as seen from two different points not on a straight line with the object.
3. Registration List: The list of all children attending a given school.
4. Respondent List: The list of all respondents in a given school.
5. Screening List: The randomly generated list of names of those children scheduled for screening on a given day. This list consists of two pages, one page refers to boys and the other to girls.

6. Screening List--Blood Pressure: The Screening List containing the randomly generated blood pressure station assignments for each child.
7. Blind Duplicate Candidates Table: The table listing the names of 10 children, randomly selected from the Screening List, four of whom supply additional blood samples.
8. Blind Duplicates Table: The names of the four children, taken from the Blind Duplicate Candidates Table, who actually supply additional blood samples.
9. Rescreening Candidate List: The list of names of six children, randomly selected from the Screening List, four of whom undergo re-examination at all stations except for venipuncture.
10. Rescreening List: The list of names of the four children, taken from the Rescreening Candidate List, who actually undergo re-examination at all stations except for venipuncture.
11. Reschedule List: The list of names of those children absent on their scheduled day of screening.

## VI. CORE CLINICAL LABORATORY

### A. GENERAL

The Core Clinical Laboratory uses the serum obtained from a sample of blood to determine the level of triglyceride, the total cholesterol, the values of  $\alpha$ ,  $\beta$  and pre- $\beta$  lipoproteins, and the levels of cholesterol associated with each of these lipoproteins. In addition, the Laboratory determines the hemoglobin level for each sample of blood.

### B. METHODOLOGY

The methodology of the Core Laboratory falls into four categories:

1. simultaneous cholesterol, triglyceride analysis by AutoAnalyzer II,
2. separate cholesterol, triglyceride analysis using manual methods, (backup method),
3. gel electrophoresis and scanning,
4.  $\beta$ + pre- $\beta$ -lipoprotein (LP) index determination

Specifically, the Laboratory determines serum lipids as follows:

<u>LIPID</u>	<u>METHOD</u>
1. mg% total cholesterol	Manual or AutoAnalyzer II Lieberman-Burchard; Pearson method
2. mg% triglyceride	Kessler, et al.: Krehl-Lopez Manual or AutoAnalyzer II
3. $\beta$ + pre- $\beta$ -LP index	Turbidity produced by heparin and $\text{CaCl}_2$  Method of G.S. Berenson's Cardiovascular Research Laboratory Manual or AutoAnalyzer II

- |    |   |  |
|----|---|--|
| 4. | mg% $\beta$ + pre- $\beta$ -LP              | Turbidity produced by heparin and $\text{CaCl}_2$<br><br>Method of G.S. Berenson's Cardiovascular Research Laboratory Manual or AntoAnalyzer 11, |
| 5. | mg% $\alpha$ -LP cholesterol                | Total cholesterol less $\beta$ + pre- $\beta$ -LP cholesterol,   |
| 6. | proportion of $\beta$ - to pre- $\beta$ -LP | Densitometric scanning of serum LP pattern<br>Nobel's method of agarose gel electrophoresis,   |
| 7. | mg% $\beta$ -LP, pre- $\beta$ -LP           | Method of G.S. Berenson's Cardiovascular Research Laboratory,  |
| 8. | mg% $\alpha$ -LP                            | mg% $\alpha$ -LP cholesterol multiplies by 5.9.  |

C. QUALITY CONTROL

1. External

The National Heart and Lung Institute requires all SCOR Centers and all Lipid Research Clinics to participate in the collaborative standardization program of the Center for Disease Control in Atlanta, Georgia. The goal of this program is to eliminate the interlaboratory differences for serum cholesterol/triglyceride determinations caused by systematic bias. Toward this end the CDC provides the following items and services to the SCOR-A Core Laboratory:

- a) A primary standard of pure (99%) triolein (used to prepare a 50% working solution of triglyceride in isopropanol)
- b) A primary standard of pure cholesterol
- c) Serum calibrators (reference serum) having known concentrations of cholesterol and triglyceride.
- d) The CDC itself acts as the reference laboratory for the Core Laboratory. In this regard the CDC and the Core Laboratory

participate in a three-phase program of:

- 1) self-evaluation by the Core Laboratory by using the primary standards
- 2) standardization of the Core Laboratory, by using the serum calibrators
- 3) surveillance by the CDC in which the precision and accuracy of the Core Laboratory are checked periodically through the use of serum samples whose serum cholesterol and triglyceride values are known only to CDC.

2. Internal

- a) The Office of Planning and Analysis: P&A randomly selects those serum samples used for blind duplicate analysis. (See Appendix G for the BLIND DUPLICATES PROTOCOL.)
- b) Core Laboratory: Quantities of serum, sufficient to span a five-year period and which have been pooled and frozen in small aliquots, monitor the laboratory over this time period. Monitoring these values every day over the five-year period checks any variation in the method of analysis caused by a change in the quality of cholesterol/triglycerid standards or by faulty procedures.

The laboratory standardizes the colorimeter for turbidity ( $\beta$ + pre- $\beta$  LP) measured by using precipitated barium sulfate dispersions. Laboratory quality control serum described in C.2.b. above serves as a daily check. Of the samples processed, 1/10 undergo a re-scan of the electrophoresis pattern.

The laboratory uses serum lipoprotein electrophoretic patterns with known  $\beta$ /pre- $\beta$  ratio to check the printout from the automatic scanning device.



INSTRUCTIONS: Please circle the correct answers to the questions.

EXAMPLE: Does your child walk from home to school? YES  NO DON'T KNOW

If your child rides a bus to school you would answer the question "NO".

CHILD'S  
NAME

LABEL

I.D. NUMBER \_\_\_\_\_

Does your child now have or has your child had in the past any of the following?

Lung Disease or Chronic Cough or Bronchitis	YES	NO	DON'T KNOW
High Blood Pressure	YES	NO	DON'T KNOW
Rheumatic Heart Disease	YES	NO	DON'T KNOW
Congenital (born-with) Heart Disease	YES	NO	DON'T KNOW
Other Heart Disease	YES	NO	DON'T KNOW
Sugar Diabetes	YES	NO	DON'T KNOW
Severe Kidney Disease (including Bright's disease)	YES	NO	DON'T KNOW
Blood Disease (including anemia)	YES	NO	DON'T KNOW

Is your child now taking any of these medicines?

Insulin	YES	NO	DON'T KNOW
Penicillin or any 'Mycin	YES	NO	DON'T KNOW
Heart (cardiac) Medicine	YES	NO	DON'T KNOW
Birth Control Pills	YES	NO	DON'T KNOW
Medicine for Convulsions (fits)	YES	NO	DON'T KNOW
<u>Has your doctor put your child on a special diet?</u>	YES	NO	DON'T KNOW
<u>Does your child smoke cigarettes?</u>	YES	NO	DON'T KNOW
<u>Where do you get your drinking and cooking water?</u>	CITY	WELL	OTHER

Person completing form \_\_\_\_\_

Relationship to child: Mother  Father  Guardian  Other

SCOR-A  
FORM B3 - LIPID CHEMISTRY

BOGALUSA HEART STUDY

COLUMN	CODE	ITEM						
5-9	I.D. NUMBER -----	<div style="border: 1px solid black; width: 150px; height: 60px; margin: 0 auto; text-align: center; padding: 5px;">LABEL</div>						
10-11	1   0	CARD NUMBER						
12-13		SCHOOL OR CLINIC CODE						
14-19	<table border="1" style="display: inline-table; border-collapse: collapse;"> <tr> <td style="text-align: center;">MO.</td> <td style="text-align: center;">DAY</td> <td style="text-align: center;">YEAR</td> </tr> <tr> <td style="text-align: center;"> </td> <td style="text-align: center;"> </td> <td style="text-align: center;"> </td> </tr> </table>	MO.	DAY	YEAR				DATE BLOOD SAMPLE DRAWN
MO.	DAY	YEAR						
20-24	<table border="1" style="display: inline-table; border-collapse: collapse;"> <tr> <td style="text-align: center;">HR.</td> <td style="text-align: center;">MIN.</td> <td style="text-align: center;">AM, PM</td> </tr> <tr> <td style="text-align: center;"> </td> <td style="text-align: center;"> </td> <td style="text-align: center;"> </td> </tr> </table>	HR.	MIN.	AM, PM				TIME BLOOD SAMPLE DRAWN
HR.	MIN.	AM, PM						
25	<table style="margin-left: auto; margin-right: auto;"> <tr> <td style="text-align: center;"><u>NO</u></td> <td style="text-align: center;"><u>YES</u></td> <td style="text-align: center;"><u>UNK.</u></td> </tr> <tr> <td style="text-align: center;">1</td> <td style="text-align: center;">3</td> <td style="text-align: center;">9</td> </tr> </table>	<u>NO</u>	<u>YES</u>	<u>UNK.</u>	1	3	9	FASTING SAMPLE? (Circle One Number)
<u>NO</u>	<u>YES</u>	<u>UNK.</u>						
1	3	9						
26-30	<table border="1" style="display: inline-table; border-collapse: collapse;"> <tr> <td style="text-align: center;">HR.</td> <td style="text-align: center;">MIN.</td> <td style="text-align: center;">AM, PM</td> </tr> <tr> <td style="text-align: center;"> </td> <td style="text-align: center;"> </td> <td style="text-align: center;"> </td> </tr> </table>	HR.	MIN.	AM, PM				HOUR OF LAST FOOD INTAKE
HR.	MIN.	AM, PM						
65-67		EXAMINER'S CODE NUMBER						
68	<table style="margin-left: auto; margin-right: auto;"> <tr> <td style="text-align: center;"><u>NO</u></td> <td style="text-align: center;"><u>YES</u></td> <td style="text-align: center;"><u>UNK.</u></td> </tr> <tr> <td style="text-align: center;">1</td> <td style="text-align: center;">3</td> <td style="text-align: center;">9</td> </tr> </table>	<u>NO</u>	<u>YES</u>	<u>UNK.</u>	1	3	9	BLOOD SAMPLE DRAWN
<u>NO</u>	<u>YES</u>	<u>UNK.</u>						
1	3	9						
69	<table style="margin-left: auto; margin-right: auto;"> <tr> <td style="text-align: center;"><u>NO</u></td> <td style="text-align: center;"><u>YES</u></td> <td style="text-align: center;"><u>UNK.</u></td> </tr> <tr> <td style="text-align: center;">1</td> <td style="text-align: center;">3</td> <td style="text-align: center;">9</td> </tr> </table>	<u>NO</u>	<u>YES</u>	<u>UNK.</u>	1	3	9	QUANTITY SUFFICIENT
<u>NO</u>	<u>YES</u>	<u>UNK.</u>						
1	3	9						
		SERUM						
70	<table style="margin-left: auto; margin-right: auto;"> <tr> <td style="text-align: center;"><u>NO</u></td> <td style="text-align: center;"><u>YES</u></td> <td style="text-align: center;"><u>UNK.</u></td> </tr> <tr> <td style="text-align: center;">1</td> <td style="text-align: center;">3</td> <td style="text-align: center;">9</td> </tr> </table>	<u>NO</u>	<u>YES</u>	<u>UNK.</u>	1	3	9	HEMOGLOBIN
<u>NO</u>	<u>YES</u>	<u>UNK.</u>						
1	3	9						

Rev. 9/73

COLUMN	CODE	ITEM						
5-9	I.D. NUMBER -----	LABEL						
10-11	0 4	CARD NUMBER						
12-15	<table border="1"> <tr> <td></td><td></td><td></td> </tr> <tr> <td></td><td></td><td></td> </tr> </table>							HEIGHT (Nearest 1/10 CM.)
16-19	FIRST READING							
		SECOND READING						
20-23		WEIGHT (Nearest 1/10 KG.)						
24-27		AUTOMATIC ONE						
		AUTOMATIC TWO						
28	<table border="0"> <tr> <td><u>MANUAL</u></td> <td><u>AUTO.</u></td> <td><u>UNK.</u></td> </tr> <tr> <td>1</td> <td>3</td> <td>9</td> </tr> </table>	<u>MANUAL</u>	<u>AUTO.</u>	<u>UNK.</u>	1	3	9	SCALE USED
<u>MANUAL</u>	<u>AUTO.</u>	<u>UNK.</u>						
1	3	9						
X	GUIDE LINE - AUTO. ONE							
	GUIDE LINE - AUTO. TWO							
29-34	<table border="1"> <tr> <td></td><td></td><td></td> </tr> <tr> <td></td><td></td><td></td> </tr> </table>							MANUAL ONE
35-40	MANUAL TWO							
41-43		EXAMINER'S CODE NUMBER						
X		TRICEPS SKINFOLD THICKNESS (Nearest MM.)						
44	<table border="0"> <tr> <td><u>RIGHT</u></td> <td><u>LEFT</u></td> <td><u>UNK.</u></td> </tr> <tr> <td>1</td> <td>2</td> <td>9</td> </tr> </table>	<u>RIGHT</u>	<u>LEFT</u>	<u>UNK.</u>	1	2	9	ARM MEASURED (Prefer Right)
<u>RIGHT</u>	<u>LEFT</u>	<u>UNK.</u>						
1	2	9						
45-46		FIRST READING						
47-48		SECOND READING						
49-50		THIRD READING						
51-53		EXAMINER'S CODE NUMBER						
54-56		HEIGHT EXAMINER'S CODE						

SCOR-A

BOGALUSA HEART STUDY

B5-1

FORM B5 - PHYSICAL EXAMINATION - GENERAL

DATE      /      /       
 Mo. Day Yr

CODE				ITEM				
				LABEL		I.D. NUMBER		
				AGE (LAST BIRTHDAY)				
MALE 1 FEMALE 2				SEX				
				EXAMINER'S CODE NUMBER				
				RECORDER'S CODE NUMBER				
<u>NOR.</u>	<u>SUS.</u>	<u>ABN.</u>	<u>UNK.</u>	SKULL				
1	2	3	9					
1	2	3	9	HAIR				
				SKIN				
<u>NO</u> <u>YES</u> <u>UNK.</u>				<u>NO</u> <u>YES</u> <u>UNK.</u>				
				LIPID, XANTHOMA				
				1 3 9				
				INFECTION, IMPETIGO				
				1 3 9				
				"DEW" SORES				
				1 3 9				
				ULCERATED AND INFECTED				
				1 3 9				
				HEALED AND PIGMENTED				
				1 3 9				
				OTHER LESIONS				
				1 3 9				
				ACNE GRADE				
				<u>GRADE</u>				
				1 2 3 4 5				
				ACTIVE DISEASE (SKIN)				
				<u>NOR.</u> <u>SUS.</u> <u>ABN.</u> <u>UNK.</u>				
				1 2 3 9				
				EYES				
<u>NO</u> <u>YES</u> <u>UNK.</u>				<u>NO</u> <u>YES</u> <u>UNK.</u>				
				XANTHELASMA				
				1 3 9				
				STRABISMUS				
				1 3 9				
				CONGENITAL ANOMALIES				
				1 3 9				
				XEROSIS CONJUNCTIVAE				
				1 3 9				
				INFLAMMATION				
				1 3 9				
<u>NOR.</u>	<u>SUS.</u>	<u>ABN.</u>	<u>UNK.</u>					
1	2	3	9	PUPILS				
1	2	3	9	SCLERAE				
1	2	3	9	CORNEA				
1	2	3	9	LIDS				
				ACTIVE DISEASE (EYES)				
				<u>NOR.</u> <u>SUS.</u> <u>ABN.</u> <u>UNK.</u>				
				1 2 3 9				

FORM B5 - PHYSICAL EXAMINATION - GENERAL

CODE				ITEM				
				<b>EARS</b>				
<u>NO</u>	<u>YES</u>	<u>UNK.</u>						
1	3	9						
1	3	9						
1	3	9						
1	3	9						
				<b>NOSE</b>				
<u>NO</u>	<u>YES</u>	<u>UNK.</u>						
1	3	9						
<u>NOR.</u>	<u>SUS.</u>	<u>ABN.</u>	<u>UNK.</u>					
1	2	3	9	OTHER FINDINGS				
				<b>MOUTH AND THROAT</b>				
<u>NOR.</u>	<u>SUS.</u>	<u>ABN.</u>	<u>ABS.</u>	<u>UNK.</u>				
1	2	3		9				
1	2	3		9				
1	2	3	4	9				
1	2	3		9				
<u>ABS.</u>	<u>MIN.</u>	<u>MOD.</u>	<u>SEV.</u>					
1	2	3	9					
<u>NO</u>	<u>SUS.</u>	<u>YES</u>	<u>UNK.</u>					
1	2	3	9					
				<b>ACTIVE DISEASE (ENT)</b>				
				<u>NO</u>	<u>SUS.</u>	<u>YES</u>	<u>UNK.</u>	
				1	2	3	9	
				<b>NECK</b>				
<u>NO</u>	<u>SUS.</u>	<u>YES</u>	<u>UNK.</u>					
1	2	3	9					
1	2	3	9					
1	2	3	9					
1	2	3	9					
				<b>ACTIVE DISEASE (NECK)</b>				
				<u>NO</u>	<u>SUS.</u>	<u>YES</u>	<u>UNK.</u>	
				1	2	3	9	

SCOR-A

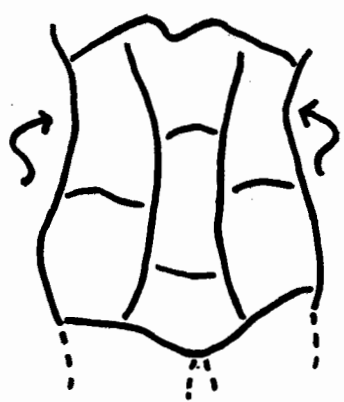
BOGALUSA HEART STUDY

B5-3

FORM B5 - PHYSICAL EXAMINATION - GENERAL

I.D. NO. \_\_\_\_\_

CODE				ITEM	COMMENTS								
NO	YES	UNK.											
				<b>CHEST</b>									
1	3	9		DEFORMITY									
				LUNGS									
1	3	9		PRODUCTIVE COUGH									
1	3	9		RALES									
1	3	9		RHONCHI, WHEEZES									
1	3	9		PNEUMONIA									
				ACTIVE DISEASE (PULMONARY)	<table border="1"> <thead> <tr> <th>NOR.</th> <th>SUS.</th> <th>ABN.</th> <th>UNK.</th> </tr> <tr> <th>1</th> <th>2</th> <th>3</th> <th>9</th> </tr> </thead> </table>	NOR.	SUS.	ABN.	UNK.	1	2	3	9
NOR.	SUS.	ABN.	UNK.										
1	2	3	9										
				<b>ABDOMEN</b>									
<u>NO</u>	<u>SUS.</u>	<u>YES</u>	<u>UNK.</u>	INGUINAL HERNIA									
1	2	3	9	UMBILICAL HERNIA									
1	2	3	9	RECTUS HERNIA									
<u>NO</u>	<u>RIGHT</u>	<u>LEFT</u>		TENDERNESS									
1				MASS									
1				SCARS									
<u>NO</u>	<u>YES</u>	<u>LARGE</u>	<u>UNK.</u>	PALPABLE									
1	2	3	9	LIVER									
1	2	3	9	SPLEEN									
1	2	3	9	KIDNEY									
1	2		9	BRUIT									
				ACTIVE DISEASE (ABDOMEN)	<table border="1"> <thead> <tr> <th>NOR.</th> <th>SUS.</th> <th>ABN.</th> <th>UNK.</th> </tr> <tr> <th>1</th> <th>2</th> <th>3</th> <th>9</th> </tr> </thead> </table>	NOR.	SUS.	ABN.	UNK.	1	2	3	9
NOR.	SUS.	ABN.	UNK.										
1	2	3	9										



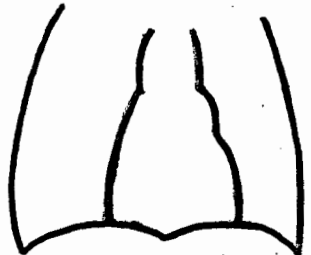
BOGALUSA HEART STUDY

SCOR-A

B5-4

FORM B5 - PHYSICAL EXAMINATION - GENERAL

CODE										ITEM				
										<b>HEART</b>		COMMENTS		
										RATE				
										RHYTHM				
										S. ARRH.				
										S. TACHY.				
										OTHER				
										SIZE				
										SOUNDS				
										MURMURS				
										THRILL				
										APICAL				
										SYSTOLIC				
										DIASTOLIC				
										PULMONIC AREA				
										SYSTOLIC				
										DIASTOLIC				
										AORTIC AREA				
										SYSTOLIC				
										DIASTOLIC				
										R. OR L. STERNAL BORDER				
										SYSTOLIC				
										DIASTOLIC				
										PULSES		COMMENTS		
										FEMORAL PALPABLE				
										OTHER				
ACTIVE DISEASE (C-V)										<u>Nor.</u>	<u>Sus.</u>	<u>Abn.</u>	<u>Unk.</u>	
										1	2	3	9	
TENTATIVE DIAGNOSIS OF HEART DISEASE										<u>Nor.</u>	<u>Cong.</u>	<u>Rheu.</u>	<u>Other</u>	<u>Unk.</u>
										1	2	3	4	9



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CODE					ITEM															
<u>Non-palp.</u>	<u>Palp. Nonsus.</u>	<u>Sus.</u>	<u>Abn.</u>	<u>Unk.</u>	<b>NODES</b>					COMMENTS										
1	2	3	4	9	POST-CERVICAL, AURICULAR															
1	2	3	4	9	ANT. CERVICAL, SUBMAX., SUBMENTAL, SUPRACLAVICULAR															
1	2	3	4	9	EPITROCHLEAR															
1	2	3	4	9	AXILLARY															
1	2	3	4	9	INGUINAL															
					ACTIVE DISEASE (NODES)					<table border="1"> <thead> <tr> <th><u>Non-palp.</u></th> <th><u>Palp. Nonsus.</u></th> <th><u>Sus.</u></th> <th><u>Abn.</u></th> <th><u>Unk.</u></th> </tr> <tr> <td>1</td> <td>2</td> <td>3</td> <td>4</td> <td>9</td> </tr> </thead> </table>	<u>Non-palp.</u>	<u>Palp. Nonsus.</u>	<u>Sus.</u>	<u>Abn.</u>	<u>Unk.</u>	1	2	3	4	9
<u>Non-palp.</u>	<u>Palp. Nonsus.</u>	<u>Sus.</u>	<u>Abn.</u>	<u>Unk.</u>																
1	2	3	4	9																
					<b>EXTREMITIES</b>					COMMENTS										
<u>Nor.</u>	<u>Sus.</u>	<u>Abn.</u>	<u>Unk.</u>	RIGHT																
1	2	3	9	FRACTURES																
1	2	3	9	MALFORMATION																
1	2	3	9	CLUBBING																
1	2	3	9	LESIONS																
1	2	3	9	OTHER																
<u>Nor.</u>	<u>Sus.</u>	<u>Abn.</u>	<u>Unk.</u>	LEFT																
1	2	3	9	FRACTURES																
1	2	3	9	MALFORMATION																
1	2	3	9	CLUBBING																
1	2	3	9	LESIONS																
1	2	3	9	OTHER																
	<u>No</u>	<u>Yes</u>	<u>Unk.</u>	<b>POSTURE</b>																
	1	3	9	KYPHOSIS																
	1	3	9	SCOLIOSIS																
					ACTIVE DISEASE (EXTREMITIES)						<table border="1"> <thead> <tr> <th><u>Nor.</u></th> <th><u>Sus.</u></th> <th><u>Abn.</u></th> <th><u>Unk.</u></th> </tr> <tr> <td>1</td> <td>2</td> <td>3</td> <td>9</td> </tr> </thead> </table>	<u>Nor.</u>	<u>Sus.</u>	<u>Abn.</u>	<u>Unk.</u>	1	2	3	9	
<u>Nor.</u>	<u>Sus.</u>	<u>Abn.</u>	<u>Unk.</u>																	
1	2	3	9																	



FORM B5 - PHYSICAL EXAMINATION - MATURATION

COLUMN	CODE				ITEM												
10-11		0	5	CARD NUMBER													
5-9	MO. DAY YEAR				LABEL	I.D. NUMBER											
						-----											
13-18					DATE OF EXAM												
19	<table border="1"> <tr> <td></td> <td><u>NO</u></td> <td><u>RIGHT</u></td> <td><u>LEFT</u></td> <td><u>BOTH</u></td> <td></td> </tr> <tr> <td>1</td> <td>2</td> <td>3</td> <td>4</td> <td></td> </tr> </table>					<u>NO</u>	<u>RIGHT</u>	<u>LEFT</u>	<u>BOTH</u>		1	2	3	4		<b>MALE</b>	COMMENTS
						<u>NO</u>	<u>RIGHT</u>	<u>LEFT</u>	<u>BOTH</u>								
					1	2	3	4									
					BREAST												
					GYNECOMASTIA												
BENIGN ADOLESCENT																	
WITH TENDERNESS																	
20					DIFFUSE DUE TO OBESITY	COMMENTS											
21					GENITALIA												
23	<table border="1"> <tr> <td></td> <td><u>STAGE</u></td> <td></td> <td><u>UNK.</u></td> <td></td> </tr> <tr> <td>1</td> <td>2</td> <td>3</td> <td>4</td> <td>5</td> <td>9</td> </tr> </table>						<u>STAGE</u>		<u>UNK.</u>		1	2	3	4	5	9	MATURATION
							<u>STAGE</u>		<u>UNK.</u>								
					1		2	3	4	5	9						
PUBIC HAIR																	
24					GENITAL												
25	<table border="1"> <tr> <td></td> <td><u>NOR.</u></td> <td><u>SUS.</u></td> <td><u>ABN.</u></td> <td><u>UNK.</u></td> </tr> <tr> <td>1</td> <td>2</td> <td>3</td> <td>9</td> </tr> </table>					<u>NOR.</u>	<u>SUS.</u>	<u>ABN.</u>	<u>UNK.</u>	1	2	3	9	OTHER			
						<u>NOR.</u>	<u>SUS.</u>	<u>ABN.</u>	<u>UNK.</u>								
1	2	3	9														
28	<table border="1"> <tr> <td></td> <td><u>STAGE</u></td> <td></td> <td><u>UNK.</u></td> <td></td> </tr> <tr> <td>1</td> <td>2</td> <td>3</td> <td>4</td> <td>5</td> <td>9</td> </tr> </table>					<u>STAGE</u>		<u>UNK.</u>		1	2	3	4	5	9	<b>FEMALE</b>	COMMENTS
						<u>STAGE</u>		<u>UNK.</u>									
					1	2	3	4	5	9							
					BREAST												
					MATURATION												
					RIGHT												
					LEFT												
OTHER FINDINGS																	
RIGHT																	
LEFT																	
29	<table border="1"> <tr> <td></td> <td><u>STAGE</u></td> <td></td> <td><u>UNK.</u></td> <td></td> </tr> <tr> <td>1</td> <td>2</td> <td>3</td> <td>4</td> <td>5</td> <td>9</td> </tr> </table>					<u>STAGE</u>		<u>UNK.</u>		1	2	3	4	5	9	GENITALIA	
						<u>STAGE</u>		<u>UNK.</u>									
1	2	3	4	5	9												
30	<table border="1"> <tr> <td></td> <td><u>NOR.</u></td> <td><u>SUS.</u></td> <td><u>ABN.</u></td> <td><u>UNK.</u></td> </tr> <tr> <td>1</td> <td>2</td> <td>3</td> <td>9</td> </tr> </table>					<u>NOR.</u>	<u>SUS.</u>	<u>ABN.</u>	<u>UNK.</u>	1	2	3	9	MATURATION			
						<u>NOR.</u>	<u>SUS.</u>	<u>ABN.</u>	<u>UNK.</u>								
1	2	3	9														
31	<table border="1"> <tr> <td></td> <td><u>STAGE</u></td> <td></td> <td><u>UNK.</u></td> <td></td> </tr> <tr> <td>1</td> <td>2</td> <td>3</td> <td>9</td> </tr> </table>					<u>STAGE</u>		<u>UNK.</u>		1	2	3	9	PUBIC HAIR			
						<u>STAGE</u>		<u>UNK.</u>									
1	2	3	9														
33	<table border="1"> <tr> <td></td> <td><u>NO</u></td> <td><u>YES</u></td> <td></td> <td></td> <td></td> </tr> <tr> <td>1</td> <td>2</td> <td>(MO.)</td> <td>(YR.)</td> </tr> </table>					<u>NO</u>	<u>YES</u>				1	2	(MO.)	(YR.)	MENARCHAL		
						<u>NO</u>	<u>YES</u>										
1	2	(MO.)	(YR.)														
36-40	<table border="1"> <tr> <td></td> <td><u>NOR.</u></td> <td><u>SUS.</u></td> <td><u>ABN.</u></td> <td><u>UNK.</u></td> </tr> <tr> <td>1</td> <td>2</td> <td>3</td> <td>9</td> </tr> </table>					<u>NOR.</u>	<u>SUS.</u>	<u>ABN.</u>	<u>UNK.</u>	1	2	3	9	OTHER			
						<u>NOR.</u>	<u>SUS.</u>	<u>ABN.</u>	<u>UNK.</u>								
1	2	3	9														
41	<table border="1"> <tr> <td></td> <td><u>STAGE</u></td> <td></td> <td><u>UNK.</u></td> <td></td> </tr> <tr> <td>1</td> <td>2</td> <td>3</td> <td>9</td> </tr> </table>					<u>STAGE</u>		<u>UNK.</u>		1	2	3	9	OTHER			
						<u>STAGE</u>		<u>UNK.</u>									
1	2	3	9														
42	ACTIVE DISEASE (BREAST AND GENITALIA)				<table border="1"> <tr> <td></td> <td><u>NOR.</u></td> <td><u>SUS.</u></td> <td><u>ABN.</u></td> <td><u>UNK.</u></td> </tr> <tr> <td>1</td> <td>2</td> <td>3</td> <td>9</td> </tr> </table>			<u>NOR.</u>	<u>SUS.</u>	<u>ABN.</u>	<u>UNK.</u>	1	2	3	9		
						<u>NOR.</u>	<u>SUS.</u>	<u>ABN.</u>	<u>UNK.</u>								
1	2	3	9														

**BOGALUSA HEART STUDY**

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**FORM B6 - HISTORY AND PHYSICAL EXAMINATION CHECKLIST**

COL.	CODE					ITEM	
10-11	0 6					CARD NUMBER	
5-9	I.D. NUMBER -----					LABEL	
	<u>No</u>		<u>Yes</u>		<u>Unk.</u>	<b>HISTORY</b>	
12	1		3		9	SIGNIFICANT PAST HISTORY OF DISEASE	
13	1		3		9	DRUGS	
14	1		3		9	SPECIAL DIET	
15	<u>Nor.</u> 1	<u>Sus.</u> 2	<u>Abn.</u> 3		<u>Unk.</u> 9	ACTIVE DISEASE (CURRENT ILLNESS)	
	<u>No</u>		<u>Yes</u>		<u>Unk.</u>	<b>PHYSICAL EXAMINATION</b>	
16	1		3		9	LIPID, XANTHOMA	
17	1		3		9	IMPETIGO	
18	1	2	3	4	5	ACNE GRADE	
	<u>Nor.</u>	<u>Sus.</u>	<u>Abn.</u>		<u>Unk.</u>		
19	1	2	3		9	ACTIVE DISEASE (SKIN)	
20	1	2	3		9	XANTHELASMA	
21	1	2	3		9	ACTIVE DISEASE (EYES)	
22	1	2	3		9	ACTIVE DISEASE (ENT)	
23	1	2	3		9	ACTIVE DISEASE (NECK)	
24	1	2	3		9	ACTIVE DISEASE (PULMONARY)	
25	1	2	3		9	ACTIVE DISEASE (ABDOMEN)	
26	1	2	3		9	ACTIVE DISEASE (C-V)	
27	<u>Nor.</u> 1	<u>Cong.</u> 2	<u>Rheu.</u> 3	<u>Other</u> 4	<u>Unk.</u> 9	TENTATIVE DIAGNOSIS OF HEART DISEASE	
28	Non- palp.	Palp. Nonsus.	<u>Sus.</u>	<u>Abn.</u>	<u>Unk.</u>	ACTIVE DISEASE (NODES)	
	1	2	3	4	9		
29	<u>Nor.</u> 1	<u>Sus.</u> 2	<u>Abn.</u> 3		<u>Unk.</u> 9	ACTIVE DISEASE (EXTREMITIES)	
30	1	2	3		9	ACTIVE DISEASE (BREAST AND GENITALIA)	
31	<u>Nor.</u> 1	<u>Under</u> 2	<u>5%</u> 3	<u>10%</u> 4	<u>20%</u> 5	<u>Unk.</u> 9	SUBJECTIVE NUTRITIONAL APPRAISAL
32	<u>No</u> 1		<u>Yes</u> 3		<u>Unk.</u> 9	TAG CHART FOR END OF DAY REVIEW	
33-35						EXAMINER'S CODE NUMBER	
36-38						RECORDER'S CODE NUMBER	

BOGALUSA HEART STUDY

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FORM B7 - BLOOD PRESSURE - 1

COLUMN	CODE	ITEM
10-11	0 7	CARD NUMBER
5-9	I.D. NUMBER -----	LABEL
19-20		RIGHT UPPER ARM LENGTH (CM.)
22-23		RIGHT UPPER ARM CIRCUM. (CM.)
24	L A M S P	CUFF SIZE SELECTED (Circle One)
25	1 Calm                      5 Hyperactive 2 Alert                      6 Lethargic 3 Crying                    7 Irritable 4 Hypoactive              8 Excessively Frightened	PHYSICAL BEHAVIOR (Circle One Number)

BLOOD PRESSURE (RIGHT UPPER ARM, NEAREST EVEN MM OF HG)

26	L	A	M	S	P	CUFF SIZE USED (Circle One)
<del>26</del>	1		4		5	PHASE
27-35						FIRST READING
36-44						SECOND READING
45-53						THIRD READING
54	1 2	3 4	5 6			STATION (Circle One Number)
55						AUTO. INSTR. NUMBER
56		<u>Left</u> 1	<u>Right</u> 2	<u>Unk.</u> 9		ARM USED (Circle One Number)
57-59						EXAMINER'S CODE NUMBER
60	<u>Nor.</u> 1	<u>Sus.</u> 2	<u>Abn.</u> 3	<u>Unk.</u> 9		BLOOD PRESSURE EVALUATION

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**BOGALUSA HEART STUDY**

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FORM B7 - BLOOD PRESSURE - 2

COLUMN	CODE	ITEM
10-11	0 8	CARD NUMBER
5-9	I.D. NUMBER -----	<div style="border: 1px solid black; width: 150px; height: 60px; margin: auto;">                     LABEL                 </div>
19-20		RIGHT UPPER ARM LENGTH (CM)
22-23		RIGHT UPPER ARM CIRCUM. (CM)
24	L A M S P	CUFF SIZE SELECTED (Circle One)
25	1 Calm                      5 Hyperactive 2 Alert                      6 Lethargic 3 Crying                      7 Irritable 4 Hypoactive              8 Excessively Frightened	PHYSICAL BEHAVIOR (Circle One Number)

**BLOOD PRESSURE (RIGHT UPPER ARM, NEAREST EVEN MM OF HG)**

26	L A M S P	CUFF SIZE USED (Circle One)								
<del>26</del>	1 4 5	PHASE								
27-35	<table border="1" style="display: inline-table; vertical-align: middle;"><tr><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td></tr></table>							FIRST READING		
36-44	<table border="1" style="display: inline-table; vertical-align: middle;"><tr><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td></tr></table>							SECOND READING		
45-53	<table border="1" style="display: inline-table; vertical-align: middle;"><tr><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td></tr></table>							THIRD READING		
54	1 2 3 4 5 6	STATION (Circle One Number)								
55		AUTO. INSTR. NUMBER								
56	<table border="0"> <tr> <td></td> <td align="center"><u>Left</u></td> <td align="center"><u>Right</u></td> <td align="center"><u>Unk.</u></td> </tr> <tr> <td></td> <td align="center">1</td> <td align="center">2</td> <td align="center">9</td> </tr> </table>		<u>Left</u>	<u>Right</u>	<u>Unk.</u>		1	2	9	ARM USED (Circle One Number)
	<u>Left</u>	<u>Right</u>	<u>Unk.</u>							
	1	2	9							
57-59		EXAMINER'S CODE NUMBER								
60	<table border="0"> <tr> <td align="center"><u>Nor.</u></td> <td align="center"><u>Sus.</u></td> <td align="center"><u>Abn.</u></td> <td align="center"><u>Unk.</u></td> </tr> <tr> <td align="center">1</td> <td align="center">2</td> <td align="center">3</td> <td align="center">9</td> </tr> </table>	<u>Nor.</u>	<u>Sus.</u>	<u>Abn.</u>	<u>Unk.</u>	1	2	3	9	BLOOD PRESSURE EVALUATION
<u>Nor.</u>	<u>Sus.</u>	<u>Abn.</u>	<u>Unk.</u>							
1	2	3	9							

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**BOGALUSA HEART STUDY**

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**FORM B7 - BLOOD PRESSURE - 3**

COLUMN	CODE	ITEM								
10-11	0 9	CARD NUMBER								
5-9	I.D. NUMBER -----	<div style="border: 1px solid black; width: 100px; height: 50px; margin: 0 auto;">LABEL</div>								
19-20		RIGHT UPPER ARM LENGTH (CM.)								
22-23		RIGHT UPPER ARM CIRCUM. (CM.)								
24	L A M S P	CUFF SIZE SELECTED (Circle One)								
25	<table style="width: 100%; border: none;"> <tr> <td style="width: 50%;">1 Calm</td> <td style="width: 50%;">5 Hyperactive</td> </tr> <tr> <td>2 Alert</td> <td>6 Lethargic</td> </tr> <tr> <td>3 Crying</td> <td>7 Irritable</td> </tr> <tr> <td>4 Hypoactive</td> <td>8 Excessively Frightened</td> </tr> </table>	1 Calm	5 Hyperactive	2 Alert	6 Lethargic	3 Crying	7 Irritable	4 Hypoactive	8 Excessively Frightened	PHYSICAL BEHAVIOR (Circle One Number)
1 Calm	5 Hyperactive									
2 Alert	6 Lethargic									
3 Crying	7 Irritable									
4 Hypoactive	8 Excessively Frightened									

**BLOOD PRESSURE (RIGHT UPPER ARM, NEAREST EVEN MM OF HG)**

26	L A M S P	CUFF SIZE USED (Circle One)								
<del>26</del>	1 4 5	PHASE								
27-35	<table style="display: inline-table; border: none;"><tr><td style="border: 1px dashed black; width: 20px; height: 20px;"></td><td style="border: 1px dashed black; width: 20px; height: 20px;"></td></tr><tr><td style="border: 1px dashed black; width: 20px; height: 20px;"></td><td style="border: 1px dashed black; width: 20px; height: 20px;"></td></tr><tr><td style="border: 1px dashed black; width: 20px; height: 20px;"></td><td style="border: 1px dashed black; width: 20px; height: 20px;"></td></tr></table>							FIRST READING		
36-44	<table style="display: inline-table; border: none;"><tr><td style="border: 1px dashed black; width: 20px; height: 20px;"></td><td style="border: 1px dashed black; width: 20px; height: 20px;"></td></tr><tr><td style="border: 1px dashed black; width: 20px; height: 20px;"></td><td style="border: 1px dashed black; width: 20px; height: 20px;"></td></tr><tr><td style="border: 1px dashed black; width: 20px; height: 20px;"></td><td style="border: 1px dashed black; width: 20px; height: 20px;"></td></tr></table>							SECOND READING		
45-53	<table style="display: inline-table; border: none;"><tr><td style="border: 1px dashed black; width: 20px; height: 20px;"></td><td style="border: 1px dashed black; width: 20px; height: 20px;"></td></tr><tr><td style="border: 1px dashed black; width: 20px; height: 20px;"></td><td style="border: 1px dashed black; width: 20px; height: 20px;"></td></tr><tr><td style="border: 1px dashed black; width: 20px; height: 20px;"></td><td style="border: 1px dashed black; width: 20px; height: 20px;"></td></tr></table>							THIRD READING		
54	1 2 3 4 5 6	STATION (Circle One Number)								
55		AUTO. INSTR. NUMBER								
56	<table style="display: inline-table; border: none;"> <tr> <td style="text-align: center;"><u>Left</u></td> <td style="text-align: center;"><u>Right</u></td> <td style="text-align: center;"><u>Unk.</u></td> </tr> <tr> <td style="text-align: center;">1</td> <td style="text-align: center;">2</td> <td style="text-align: center;">9</td> </tr> </table>	<u>Left</u>	<u>Right</u>	<u>Unk.</u>	1	2	9	ARM USED (Circle One Number)		
<u>Left</u>	<u>Right</u>	<u>Unk.</u>								
1	2	9								
57-59		EXAMINER'S CODE NUMBER								
60	<table style="display: inline-table; border: none;"> <tr> <td style="text-align: center;"><u>Nor.</u></td> <td style="text-align: center;"><u>Sus.</u></td> <td style="text-align: center;"><u>Abn.</u></td> <td style="text-align: center;"><u>Unk.</u></td> </tr> <tr> <td style="text-align: center;">1</td> <td style="text-align: center;">2</td> <td style="text-align: center;">3</td> <td style="text-align: center;">9</td> </tr> </table>	<u>Nor.</u>	<u>Sus.</u>	<u>Abn.</u>	<u>Unk.</u>	1	2	3	9	BLOOD PRESSURE EVALUATION
<u>Nor.</u>	<u>Sus.</u>	<u>Abn.</u>	<u>Unk.</u>							
1	2	3	9							

Rev. 9/73

## VENIPUNCTURE PROTOCOL

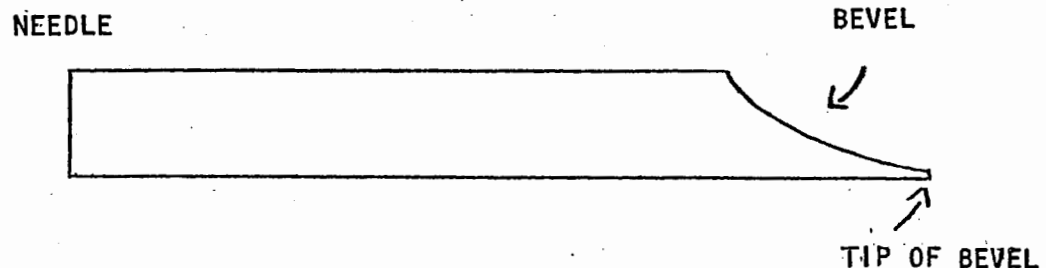
1. Use the following equipment at the venipuncture station:

Lavender top tubes (Vacutainers)\* with anticoagulant  
Red top tubes (Vacutainers)\*  
Vacutube needle holder equipped with 20 gauge needle  
10cc syringes equipped with a 21 gauge needle (Use if vein collapses or is too small. However, use the Vacutainers as a first choice.)  
Supply of sterilized needles of sizes 20, 21 and 22 gauge.  
One tourniquet  
Numbered blood specimen tube racks  
Alcohol sponges  
Band-Aids  
Ammonia inhalant  
Tables with clean tops  
Lamps  
Laboratory stools with back (on which child sits)  
Arm boards  
Gauze rolls  
Sealed boxes for disposal of used needles  
Several wash cloths and small basin filled with cool water (These materials will be used to wash the face of a child who becomes ill.)  
Kim wipes (i.e., disposable paper wipes, Bay wipes, Kleenex, etc.)  
Trash container with liner  
Rolls of paper towels  
Clean sheet  
Scissors  
Cold Pack Box equipped with frozen ice packs  
Watches  
Pens  
Blind Duplicates Chart  
Scotch tape

2. Use only CLEAN vacutube needle holder, CLEAN sterile Vacutainer, and sterile syringes for procedures for each child.

\*Use the 4 ml (pediatric) tube for children in the Kindergarten through third grade. Use the 7 ml or 10 ml tube for children in the fourth and higher grades. Whenever veins are small, use the 4 ml size tube. Whenever using the 4 ml size red top tube, obtain two samples per examinee in order to have a sufficient quantity of serum for analysis. The examiner determines the size of needle (20, 21 or 22 gauge) to use by the size or width of the child's vein.

3. Utilize four or more trained examiners, including one R.N. (Venipuncture staff received training in first aid and Cardio-Pulmonary Resuscitation.)
4. Prepare for venipuncture as follows: Obtain data pack and child from escort. Check that the color of the child's wrist band and that of the data pack match. Seat child on chair with his left (or right--depending on vein) arm NEXT TO THE TABLE TOP and in a comfortable position on the table top. Reassure child. Check the Blind Duplicates Table to determine if the examiner needs to draw blind duplicate samples from the examinee. (See BLIND DUPLICATES PROTOCOL in Appendix G.)
5. Obtain the blood sample as follows: Reassure examinee. Gently tap antecubital space several times. Prep the skin with alcohol then apply tourniquet to the left upper arm above the expected puncture site. Ask the examinee to make a tight fist with his hand (on same side blood is drawn). Stroke veins on inner forearm, wrist to elbow, several times. On Form B3 record the TIME BLOOD DRAWN. (See Appendix I for instructions in completing form.) Place the Vacutainer in the Vacutube shield being sure that the tube label does not face the examiner. (This allows the examiner to observe the blood as it enters the tube.) Insert the needle with the tip of the bevel down parallel to the vein in the left arm.



- Do NOT TWIST the tube after inserting the needle into the vein.

Note: If a problem exists with the veins in the left arm, use the right arm. Make only two attempts.. If it is impossible to obtain blood, note this on the inside front cover of the data pack under the COMMENTS section and also circle "No" on lipid sheet and on form B10. It is important to obtain the blood sample; if vein appears difficult after one attempt, please ask designated examiner to draw the blood.

6. If blood return is slow, use one of the following methods to obtain the blood sample:
  - a) With a finger, gently tap the area over the needle several times;
  - b) Lift up the tourniquet without releasing it;
  - c) Ask the examinee to open and close his appropriate fist several times.
7. Draw blood to completely fill the red top tube. Change to the lavender top tube and draw 2-3cc of blood. Release tourniquet when sufficient blood is obtained. Break the vacuum by pulling back on the collection tube. Do not withdraw the tube completely from the needle. Press the vein just above the needle to stop the blood flow. Remove the needle from the vein. Ask the examinee to open his fist and give him an alcohol sponge to press tightly with 2-3 fingers on the puncture site. Elevate the examinee's arm over his head. Gently invert the lavender tube two or three times to mix blood with anticoagulant. On each tube of blood, place an I.D. label containing the child's identification number, last and first name (in that order), the study number and the date. Place a strip of scotch tape over the label to secure it. Place the blood samples in the correct order in the blood specimen rack.\*

\*The rack is labeled horizontally one through twelve (1-12) and vertically A through F. Place the first sample of blood in rack #1 in position A1, the second sample in position A2, ..., the thirteenth sample in position B1. Continue in order until the last sample is placed in rack #1. When rack #1 is filled, follow the same ordering procedures for rack #2. The rack with its samples remains at room temperature (15°C-21°C) until ready for packing and transportation to the Bogalusa Laboratory.



Place a Band-Aid on the puncture site after the examinee's blood has stopped flowing from the venipuncture. Complete requested information on Form B3 of the data pack according to Form B3 instructions. On the inside front cover of the examinee's data pack next to VENIPUNCTURE enter the CODE NUMBER of the examiner who drew the blood sample. Lead the examinee to the escort; return the data pack to the escort.

Note: When using the 10cc syringe, remove the needle from the syringe in order to put the blood into the Vacutainer. After removing the Vacutainer top, prevent hemolysis by gently releasing the blood against the side of the tube. If unable to obtain a blood sample, label the empty tube as described in step 7 and place the tube in the rack with the other samples. Record the fact that no blood specimen was obtained on the inside front cover of the examinee's data pack.

8. Clean the table top and prepare for the next examinee.
9. Repeat steps 3-8 for each child.
10. One hour after the last venipuncture, count all samples, and record on B10 form. Place all serum samples in the Cold Pack Box in order of time drawn. Also place hemoglobin samples in Cold Pack Box. Be careful to secure the box with a belt for transportation.
11. Clean venipuncture area; take samples to Bogalusa lab (See Appendix G for BLOOD TRANSPORTATION PROTOCOL.) This completes the venipuncture procedure.

## PHYSICAL EXAMINATION PROTOCOL--NURSE OR EXAMINER'S ASSISTANT

1. Use an examination table equipped with both a bottom and a top sheet; use a small stool or stepladder to assist the child in climbing onto the table.
2. Prepare the child for examination as follows: Obtain the data pack from the examinee's escort. When the child enters the examination room close the door and relax him with a few cheerful words. Introduce him to the examiner (pediatrician, medical student, or physician's assistant).  
Check that the color of yarn on the child's wrist and that of the data pack match. Help the child onto the examination table; if he is very light, lift him onto the table. (NO BACK INJURIES TO NURSE, PLEASE!) Instruct the child to face the nurse and to sit in the middle of the examination table with his legs hanging over the side of the table. Place the top sheet on his lap so that it covers his knees and upper legs.
3. During the examination proceed as follows: Scan the History Form for any abnormalities and inform the examiner of them. Record on the Physical Examination Form all information determined by the examiner. Assist the examiner in having child change position. When the child is supine, loosen his gown straps and cover him with the top sheet. When the examiner begins the examination of the abdomen, gently roll the examination gown up to the shoulders and pull the top sheet to the child's neck.
  - a) Female examinee: When the examiner moves the top sheet down to the abdomen, make every effort to have either the examination gown or the sheet cover lower area of the abdomen not being examined.
  - b) Male examinee: Step outside the examination room door while the examiner determines the puberty stages. Return when summoned by the examiner and record this information, as given by the examiner, on FORM B5--PHYSICAL EXAMINATION--MATURATION.

4. Attempt to observe the organ systems being examined and recall subject matter on the examination forms as needed to assist examiner. DO NOT HESITATE TO REMIND EXAMINER OF OBSERVATIONS NOT COMPLETED.
5. When the examiner completes the examination pull down the gown, retie the straps, and help the child from the table.
6. Check that all items of FORM B5--PHYSICAL EXAMINATION and FORM B6--HISTORY AND PHYSICAL EXAMINATION CHECKLIST are completed before the child leaves the room.
7. Next to the appropriate station initial the inside front cover of the data pack check that the examiner also initials this area of the data pack.
8. Remind the examiner of the following points:
  - a) to note any abnormalities or observations needing further study,
  - b) to initial the upper left-hand corner of the inside front cover of those data packs needing further review,
  - c) to write clear instructions on the data pack to help the Final Edit Desk Officer determine the disposition of the child.
9. If the examiner observes abnormalities he proceeds as follows:
  - a) Make no statement to alarm or even to alert the child.
  - b) Always be reassuring. Further studies handle such problems after parents are notified.
  - c) Help control conversation in all areas of the MRU as well as in the examining rooms.
  - d) Act in a professional manner; be sympathetic, pleasant and stern when necessary.
10. Escort the child to the examination room door; hand the data pack to the waiting escort. Instruct the escort to accompany the child to the next station. This completes the physical examination.

PHYSICAL EXAMINATION  
SPELLING LIST FOR NURSES\*

Head

Occipital

Coronal

Skin

Excoriation

Tinea capitis

Comedo

Nevus

Petechiae

Vitiligo

Eye

Epicanthal

Palpebral

Bulbar

Canthus

Ear

Pinna

Nose

Epistaxis

Coryza

Mouth

Cheilosis

Neck

Nodule

Isthmus

Chest

Pectus excavatum

Rales

Crepitant

Sub-crepitant

Sibilant

Sonorous

Intercostal

Bruit

Mid-clavicular

Abdomen

Ventral

Femoral

Extremities and Spine

Genu Valgum

Metatarsus

Kyphosis

Scoliosis

Lordosis

General

Discrete

Serous

Muco-purulent

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\* Newman-Dorland, W.A., The American Illustrated Medical Dictionary, W. B. Sanders Co. 1945.

PHYSICAL EXAMINATION PROTOCOL--EXAMINER  
(PEDIATRICIAN, MEDICAL STUDENTS, PHYSICIAN'S ASSISTANTS)

GENERAL INSTRUCTIONS

The object of the physical examination is to provide a health service to the child while making observations for the SCOR-A research program. Essentially, make observations for any active disease warranting further examination, study or treatment by a physician. Refer child to a private physician as designated by the parent or guardian or to the Washington-St. Tammany Charity Hospital (or other resource services with which the SCOR-A team can act in assistance). Treatment forms no part of the program unless requested by the child's physician. If requested, consultations and aid to the practicing physicians will be available in any manner that SCOR-A personnel can provide. The SCOR-A program does not intend to interfere with the practice of medicine in the community or with the personal physician. The program is research-oriented with service offered for the child's benefit. No unnecessary delay occurs during the examination. Conversation in the presence of the child is considerate, discreet, professional, light when possible and stern when needed.

Note on Form B6 to the left of TAG CHART FOR END OF DAY REVIEW any detail detected during the examination warranting further study and initial the upper left-hand corner of the data pack cover. Such tagging of the data pack signifies the necessity of promptly notifying the child's parents and personal physician. Unless he deems it ABSOLUTELY NECESSARY, the examiner does NOT ALERT THE CHILD to any abnormalities.

SPECIFIC INSTRUCTION

1. Use an examination table equipped with both a bottom and a top sheet; one

stethoscope, one otoscope, a flashlight (have extra fully charged batteries readily available).

2. During the physical examination proceed as follows:

a) Head:

Examine the skull for symmetry, bossing, and abnormal ridges. Examine the hair and scalp for texture, alopecia, or active dermatological lesions.

b) Skin:

Specifically inspect the skin for xanthomas, impetigo, active staphylococcal infections, "dew" sores on the legs (infected or healed), deeply pigmented nevi, rashes or excoriations. Record the presence or absence of acne. If acne is present, classify it as to severity using a scale of 1, 2, 3, 4, 5. (See Definition of Terms.) Look for vitamin A deficiencies, eczema, allergic reactions and significant scars.

c) Eyes:

Examine the eyes for any abnormalities of the lids, palpebral and bulbar conjunctiva, cornea, sclera and pupils. Note specifically the presence of xanthelasma.

d) Ears:

Examine the ears for any congenital abnormality or active disease, infectious or otherwise, involving the external ear, the external auditory canal, or the tympanic membrane.

e) Nose:

Inspect the nose for the presence of coryza, epistaxis, or any evidence of upper respiratory infection.

f) Mouth and Throat:

Examine the mouth and throat for evidence of congenital anomalies, or

for the presence of active disease, infectious or otherwise, e.g., tonsillitis, pharyngitis, mouth ulcers, etc. Inspect the lips for cheilosis and the tongue for lesions and evidence of thiamin deficiency. Make a specific note regarding the state of oral hygiene, with particular reference to dental caries. Note caries as absent, minimum, moderate, or severe. NOTE SEVERE DENTAL OR GUM CHANGES FOR FURTHER REVIEW.

g) Neck:

Inspect the neck for muscle injury (torticollis) and flex it to test for rigidity. Palpate for masses, thyroid enlargement, thyroid nodules, or other abnormalities. Note the nodes: post- and anterior-cervical and submental.

h) Chest and Lungs:

Inspect the chest and rib cage for deformities of the scapulae or clavicles, for pigeon breast, and for pectus excavatum. Note whether beading of the ribs or flaring of the rib cage is present. Briefly examine the lung fields and perform limited auscultation for ronchi, rales, or rubs. If rales are heard, note this fact and describe them in the Comments Section. Active disease such as asthma or bronchopneumonia is to be noted.

i) Abdomen:

Palpate the abdomen for organ enlargement, specifically of the liver, spleen, or kidneys. Make note of any abnormal masses or bruit. Determine if hernia, umbilical or inguinal, is present. Feel femoral pulses; if weak, determine lag.

j) Heart:

Palpate the precordium for the presence or absence of thrills and for location of the point of maximal impulse. Estimate cardiac size by

percussion and palpation.

Perform auscultation over the mitral, pulmonary and aortic areas, and the right and left sternal borders. Carefully note -- as to its time in the cardiac cycle -- any murmur and describe its location, intensity, transmission and quality. Record data which might aid in the diagnosis of congenital, rheumatic, or other heart disease. If the physical examination indicates an abnormality of the heart, make a tentative anatomic and etiologic diagnosis.

k) Nodes:

Palpate the lymph nodes. Duly note any abnormality of size, movability, induration, or erythema. Great variability of node size occurs in pediatric populations. The examiner indicates nodes he judges to be significant, e.g., large asymmetric palpable groups.

l) Extremities and Spine:

Inspect the posture and note if it is abnormal.

Examine the extremities for symmetry, positional or orthopedic variations, clubbing of the fingers, and other lesions. Inspect the palms noting any abnormalities, and note the symmetry of the radial pulses.

m) Male Maturation:

Record the presence or absence of gynecomastia. If present, indicate whether it is benign adolescent with tenderness, or diffuse due to obesity. Estimate the genital maturity, both as to pubic hair and genitalia. Record the findings according to the Tanner Scale. (See Section V, Definition of Terms, for pictures.)

n) Female Maturation:

Estimate the stage of maturation using both breast development and genitalia. Record the findings according to the Tanner Scale. (See Section V, Definition of Terms, for pictures.) When applicable, obtain



a history regarding menarche and menstrual cycle.

o) Subjective Nutritional Appraisal:

Make a completely subjective rough index of general nutritional status. Record the findings as to underweight, normal, or degree of obesity.

## MERCURY SPHYGMOMANOMETER PROTOCOL

(Resting, seated blood pressure)

1. Use the Baum sphygmomanometer, the correct sized cuff, one stethoscope with comfortable ear pieces, one desk lamp, one table, two chairs, one high chair, seat cushions, and wooden blocks. Place the sphygmomanometer so that the mercury column faces the examiner with the meniscus of the mercury column at the general eye level of the examiner in order to avoid parallax. Arrange the desk lamp so that it lights the mercury column and numbers.
2. A trained examiner takes this measurement.
3. Seat child comfortably with his right upper arm exposed. The child's forearm is supported on the table and approximately at the level of his heart. Use seat cushions for elevation as needed or high chair.
4. Note the designated CUFF SIZE SELECTED on Form B7. The examiner circles the letter of the CUFF SIZE USED on Form B7.
5. Take the blood pressure readings as follows\*: Completely deflate the blood pressure cuff. Place the cuff firmly and smoothly around the examinee's right upper arm, with the lower margin approximately two centimeters above the antecubital space. With the inflatable rubber bag resting over the brachial artery, place the cuff tubing parallel to the brachial artery with one tube on each side of the artery. Palpate the brachial artery.

\*Reference: Recommendations for Human Blood Pressure Determination by Sphygmomanometer, American Heart Association (1967)

6. Close the screw valve; inflate the cuff until the radial pulse disappears. Disappearance of the radial pulse (palpation) estimates the systolic blood pressure, i.e., the minimum pressure above which the examiner elevates the system in subsequent measurements. Completely deflate the cuff. Apply the stethoscope bell (diaphragm) to the antecubital space over the brachial artery. Apply the stethoscope head firmly, but with as little pressure as possible and with no air space between the skin and the stethoscope. The stethoscope head does not touch the clothing, cuff, or tubing. Hold the stethoscope in place; close the screw valve and raise the cuff pressure 20 to 30 mm Hg above the pressure at which the radial pulse disappeared. Adroitly release and close the screw valve allowing the pressure to fall at the rate of 2 to 5 mm Hg per second (release slower or faster as needed with pulse rate to match Korotkoff sounds with falling mercury column).
7. Observe the Korotkoff sounds. Phase I of the Korotkoff sounds occurs as the FIRST APPEARANCE of the faint, clear pulse sound which gradually increases in intensity. Record this FIRST AUDIBLE SOUND as the systolic pressure. This sound becomes louder with the tapping proceeding through Phases II and III; the sounds are clearest and loudest in Phase III. Phase IV occurs as the distinct abrupt change of quality evidenced by the MUFFLING of the pulse sounds so that a soft, blowing sound is heard. Record this MUFFLING as Phase IV. This muffling sound ultimately disappears completely. The COMPLETE DISAPPEARANCE of the Korotkoff sounds, the point at which the pulse sounds disappear is Phase V. Record the COMPLETE DISAPPEARANCE of the Korotkoff sounds as Phase V. Excessive stethoscope pressure may cause sounds to persist to 0 mm Hg (occasional exception i.e., in aortic insufficiency). If sounds persist to 0 mm Hg, reduce the pressure on the stethoscope head over the brachial artery and repeat steps 5-7.

8. Record each of Phases I, IV, and V to the nearest even mm of Hg as a three-digit number on Form B7 next to FIRST READING, e.g., 

0	9	2
---	---	---

 / 

0	7	2
---	---	---

 - 

0	6	8
---	---	---

 . IMPORTANT: If either Phase I or Phase IV is not detected, repeat steps 4-7. When a repeat reading is necessary at any point in determining Phases I, IV, or V, completely deflate the cuff and rest approximately 30 seconds before repeating steps 6-7. If Phase V is not detected, draw one continuous line through the Phase V recording section on Form B7. If Phase V is detected and is 0, record this measurement as 000. Completely deflate the cuff. If difficulty arises in obtaining the blood pressure or if the examinee complains of arm pain, elevate the child's right arm and then return his arm to the original position.
- IMPORTANT: Auscultatory gap occasionally results in erroneously low systolic readings. Exclude this event by palpating for disappearance of the radial pulse.
9. Allow approximately 10-30 seconds for resting between blood pressure recordings.
10. Repeat steps 6-9 but record next to SECOND READING.
11. Repeat steps 6-9 but record next to THIRD READING.
12. After recording three readings remove the cuff.
13. Complete information on Blood Pressure Form B7.
14. Return child and data pack to escort and instruct escort to accompany child to next station.
15. If the ears become tender, indicate to staff member 301 that another examiner is needed to operate the station.

Table 2. -- Upper limits for normal range of systolic (Phase I) and diastolic (Phase IV) blood pressure<sup>†</sup> in mm of Hg by age<sup>††</sup>, Specialized Center of Research -- Arteriosclerosis (SCOR-A), September, 1973.

Age	Minimum Phase I	Minimum Phase IV
7	109.0	80.0
8	109.0	80.0
9	115.1	83.7
10	115.1	83.7
11	126.6	87.8
12	126.6	87.8
13	130.4	90.3
14	130.4	90.3

<sup>†</sup>Based on pilot data collected on children in the Franklinton, Louisiana School System, April, 1973.

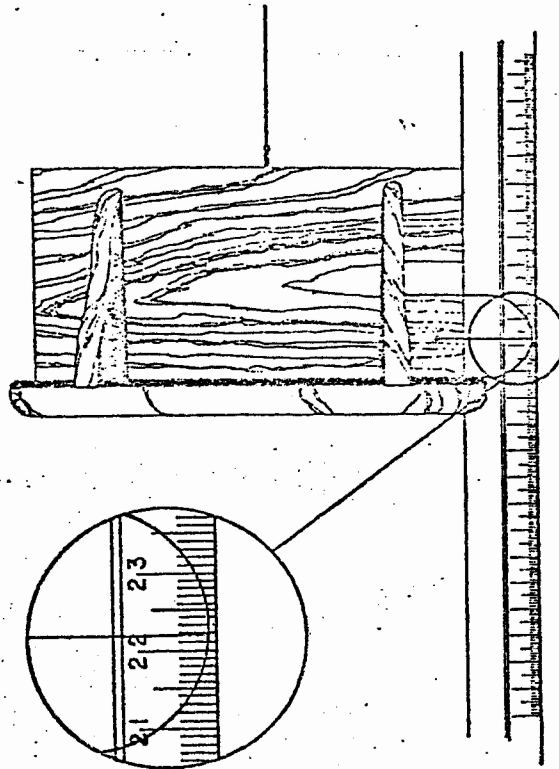
<sup>††</sup>Age given is in years as of last birthday.

## HEIGHT PROTOCOL--MANUAL BOARD

1. Use the Iowa Height Measuring Board and a pedestal.
2. A trained examiner takes this measurement.
3. Receive the standard to be measured from the designated person.
4. Raise the headboard to a height above the standard. Place the standard upright, with the numbered end down and the front forward, within the rectangle of tape at the base of the instrument. Lower the headboard so that it rests flatly and firmly against the top end of the standard. While pressing the headboard firmly against the top end of the standard, read the height marker.
5. Read the number on the meterstick immediately behind the indicator line of the plastic height marker. If necessary, the observer stands on the pedestal so that his eyes look directly at the indicator line. THE OBSERVER'S EYES ARE LEVEL WITH THE INDICATOR LINE to prevent parallax in reading the measurement.
6. Read the measurement to the nearest millimeter. Record the reading on Form 1 under MANUAL INSTRUMENT and to the left of First Reading in a four-digit format. For example, record a reading of 97.3 cm as 

0	9	7	.	3
---	---	---	---	---

 cm. (See the figure below.)



7. Raise the headboard; this completes a height measurement.
8. Repeat steps 3-7 if uncertain about the First Reading.
9. Repeat steps 3-7, but record the measurement next to Second Reading.
10. Repeat steps 3-7 if uncertain about the Second Reading.

## HEIGHT PROTOCOL--ELECTRONIC BOARD

1. Use the Electronic Height Board and the National Controls, Inc. Digiflex printer. The digits of the printer face the wall.
2. A trained examiner takes this measurement. A second trained examiner records the height on Form 1.

INSTRUCTIONS TO HEIGHT EXAMINER

3. Receive the standard to be measured from the designated person.
4. Raise the headboard to a height above the standard. Place the standard upright, with the numbered end down and the front forward, within the rectangle of tape at the base of the instrument. Lower the headboard so that it rests flatly and firmly on the top end of the standard.
5. While holding the headboard in place, ask the second examiner to record the height according to the SECOND EXAMINER INSTRUCTIONS given below.
6. Repeat steps 4 and 5. This completes the Electronic Height measurement.
7. Return the standard to the designated person.

INSTRUCTIONS TO SECOND EXAMINER

8. Check that the switch for the electronic board is turned to HEIGHT.
9. Insert FORM 1 - BOGALUSA STUDY OF HEIGHT MEASUREMENTS into the printer so that the vertical black guideline parallels the right edge of the printer.
10. Slide the form forward until the horizontal line (GUIDELINE--AUTO ONE) parallels the front edge of the printer.
11. Check that the Height Examiner is ready to have the measurement recorded.
12. If he is, firmly and quickly press and release the red push button.
13. Move the form forward until the horizontal line (GUIDELINE--AUTO TWO) parallels the front edge of the printer. When the Height Examiner indicates his readiness to take the second measurement, repeat steps 11-12. Remove the form from the printer. Check that two entries are printed on the form as in the example below:



122.5
122.7

AUTOMATIC INSTRUMENT (Nearest 1/10 CM.)
FIRST READING
SECOND READING

14. If the two readings are not printed on the form, repeat steps 8-13.

## HEIGHT PROTOCOL--ELECTRONIC BOARD (AGES 3-14 YEARS)

1. Use the Electronic Height Board and the National Controls, Inc. Digiflex printer.
2. A trained examiner takes this measurement. A trained WEIGHT examiner records the height on Form B4.

### INSTRUCTIONS TO HEIGHT EXAMINERS

3. Raise the headboard to a height above the examinee's head. Ask the child to stand erect, facing forward, with his heels, buttocks, and head firmly against the vertical backboard. Make sure that his knees are locked, his chin is parallel to the floor, his eyes are looking forward, and his hands are at his sides. The child wears foot socks, no shoes and a flat hair style which will not interfere with the taking of the height measurement--e.g., no topknot. While the child stands in this position, ask him to take a deep breath and hold. Lower the headboard so that it rests flatly and firmly on the child's head, compressing his hair.
4. While holding the headboard in place, ask the WEIGHT examiner to record the height according to the WEIGHT EXAMINER INSTRUCTIONS given below.
5. Repeat steps 3 and 4. This completes the Electronic Height measurement.
6. Return the child and data pack to the escort and direct them to the next station.

### INSTRUCTIONS TO WEIGHT EXAMINER

7. Check that the switch for the electronic board is turned to HEIGHT.
8. Insert FORM B4 - PHYSICAL EXAMINATION - ANTHROPOMETRIC into the printer so that the vertical black guide line (descending from the letter "O" in the title word ANTHROPOMETRIC) parallels the right edge of the printer.

9. Slide the form forward until the horizontal line (HT. GUIDE LINE-AUTO. ONE) parallels the front edge of the printer.
10. Check that the Height Examiner is ready to have the measurement recorded.
11. If he is, firmly and quickly press and release the red push button.
12. Move the form forward until the horizontal line (HT. GUIDE-TWO) parallels the front edge of the printer. When the Height Examiner indicates his readiness to take the second measurement, repeat steps 10 and 11. Remove the form from the printer. Check that two entries are printed on the form as in the example below:

122.5
122.7

HEIGHT (Nearest 1/10 CM.)
AUTOMATIC ONE
AUTOMATIC TWO

13. If the two readings are not printed on the form, repeat steps 7 through 12.

## WEIGHT PROTOCOL--ELECTRONIC SCALE

1. Use the National Controls, Inc. Digiflex scale and printer.
2. A trained examiner takes this measurement.
3. Have examinee stand STILL in the center of the scale with his arms hanging loosely. The child wears a short sleeve gown, underpants, socks, and no shoes. (Use gowns and footlets of a uniform weight.)
4. Take weight measurement as follows: While the child stands in the position described in step 3, the examiner stands facing the lighted red push button of the printer.
  - a) Insert FORM B4--PHYSICAL EXAMINATION--ANTHROPOMETRIC into the printer so that the vertical black guide line (descending from the letter "O" in the title word ANTHROPOMETRIC) parallels the right edge of the printer.
  - b) Slide the form forward until the horizontal line (WT. GUIDE LINE - AUTO. 0) parallels the front edge of the printer.
  - c) Check that the CHILD STANDS STILL..
  - d) Firmly and quickly press and release the red push button.
  - e) Move the form forward until the horizontal line (WT. GUIDE LINE - AUTO. TWO) parallels the front edge of the printer.
  - f) Repeats step 4.c-4.d.
5. Remove the form from the printer. Check that the form contains two printed entries as in the example below:

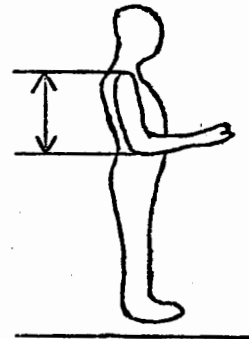
WEIGHT (Nearest 1/10 kg.)		
045.3		Automatic One
045.2		Automatic Two

6. If two readings are not printed on the form, repeat steps 3-5.
7. Return child and data pack to the escort. This completes the Weight Protocol--Electronic Scale.

## RIGHT UPPER ARM LENGTH PROTOCOL

(For selection of blood pressure cuff size see Appendix G for CUFF SELECTION PROTOCOL.)

1. Use the GPM (Swiss made) anthropometric caliper.
2. A trained examiner takes this measurement.
3. Have examinee stand with arms hanging loosely at his sides and with his right upper arm bare. While the child's right upper arm remains against his body, lift his right forearm until his elbow makes a 90 degree angle. Tell the child to retain this position until further instructed.
4. Take measurement of right upper arm length as follows: While the child's right arm is in position, place the metal tip of the anthropometric caliper at the top of the bony prominence in the shoulder (the acromion). Hold the caliper in place with one hand. With the other hand, guide the bottom tip of the caliper over the bony prominence of the elbow (the olecranon.)
5. Slide the two caliper tips together gently but firmly. Read the measurement in the small window at the bottom slide bar of the caliper. IMMEDIATELY record the measurement to the nearest centimeter on each of the three copies of Form B7 next to the RIGHT UPPER ARM LENGTH. The measurement is recorded as a two-digit number. For example, any reading greater than 25 1/2 cm but less than or equal to 26 1/2 cm is recorded as 26; any reading greater than 26 1/2 cm but less than or equal to 27 1/2 cm is recorded as 27.
6. Read the "midpoint chart" on the wall of the MRU to determine the midpoint reading on the anthropometric caliper scale.



7. Using the caliper as a guide, mark a cross with a felt tip pen of a clearly visible color at the midpoint on the back side of the upper arm. Make sure that this cross is made along the two midpoint planes parallel and perpendicular to the longitudinal axis of the right upper arm.
8. This completes the RIGHT UPPER ARM LENGTH measurement. The child can now rest his arm.

## RIGHT UPPER ARM CIRCUMFERENCE PROTOCOL

1. Use a woven linen centimeter tape measure.
2. A trained examiner takes this measurement.
3. Have examinee stand with arms hanging loosely at his sides and with his right upper arm bare. Tell the child to retain this position until further instructed.
4. Take measurement of the right upper arm circumference as follows: At the midpoint as marked during the right upper arm length measurement, place the tape measure around the child's right upper arm so that it forms a circle which touches but does not compress the right upper arm. Read the measurement and immediately record it to the nearest whole centimeter on each of the three copies of Form B7 next to RIGHT UPPER ARM CIRCUMFERENCE. Record the measurement as a two-digit number. For example, any reading greater than 25 1/2 cm, but less than or equal to 26 1/2 cm is recorded as **26**; any reading greater than 26 1/2 cm, but less than or equal to 27 1/2 cm is recorded as **27**.
5. This completes the RIGHT UPPER ARM CIRCUMFERENCE measurement.

### CUFF SELECTION PROTOCOL

1. Measure the right upper arm length according to the RIGHT UPPER ARM LENGTH PROTOCOL (See Appendix G).
2. Measure the right upper arm circumference according to the RIGHT UPPER ARM CIRCUMFERENCE PROTOCOL (See Appendix G).
3. Now refer to Table 1 or 2 below. Notice that the table columns refer to the right upper arm circumference and the table rows refer to the right upper arm length.
4. Determine which circumference column contains the measured value of the circumference. Read down this column until it intersects the row containing the measured value of the length. Notice the one letter (S, T, M, A, P, or L) which appears at the area of intersection in Table 1 or 2 below.

Table 1.--Permissible cuff size by right upper arm circumference and length (in cm) for use with the mercury sphygmomanometer and Physiometrics Automatic Blood Pressure Recorder, Specialized Center of Research--Arteriosclerosis (SCOR-A). Effective September 10, 1973 through November 11, 1974.

Length	Circumference		
	26-	27-29	30+
23-	S	S	S
24-27	M	M	M
28-31	M	A	A
32 <sup>†</sup>	M	A	L
All <sup>†</sup>	P <sup>†</sup>		

<sup>†</sup>Use single cuff size "P" at Physiometrics station in all cases.



Table 2.--Permissible cuff size by right upper arm circumference and length (in cm) for use with the mercury sphygmomanometer and Physiometrics Automatic Blood Pressure Recorder, Specialized Center of Research--Arteriosclerosis (SCOR-A). Effective November 12, 1974 to the present.

Length	Circumference		
	26-	27-29	30 <sup>†</sup>
21-	T	T	M
22-27	M	M	A
28-31	M	A	A
32 <sup>†</sup>	M	A	L
All <sup>†</sup>	P <sup>†</sup>		

<sup>†</sup> Use single cuff size P at Physiometrics station in all cases.

- On the three copies of Form B7 next to CUFF SIZE SELECTED circle the one letter determined in step 4.

Table 3.--Description of cuffs used with the mercury sphygmomanometer and automatic blood pressure measuring instruments.

Cuff	Instrument		Dimensions of Bag (in cm.)
	Baum (Mercury)	Physiometric (automatic)	
S	X		6.98 x 12.06
T	X		7.00 x 21.59
M	X		9.52 x 21.59
A	X		12.06 x 22.22
L	X		15.2 x 33
P (hard)		X	
X (soft)		X	

\* An "M" cuff modified by A.W. Voors

\*\* Length may be slightly larger depending on the manufacturer of the "L" cuff.

\*

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6. This completes the Cuff Selection Protocol.