A. Collection Information:

Form PEP (**Physical Exam Form**) was completed at the entry, annual, and exit visits during both Phase 2 and Phase 3. The physical exam was to be completed at a time when the patient was free of signs and symptoms of an acute event. The following evaluations were performed:

- Measurements of height, weight, blood pressure, distance between tonsils, liver size, and spleen size;
- Examination of extremities for pain and limitation of motion;
- Neurological examination (see Section 1.3)

B. Data Collection Period: 09/89-09/98

Approximately 5 patients completed their last exam between 10/1/98 and 1/15/99.

- C. <u>Form Versions</u>: G (08/04/89)
 - A (09/30/90)
 - E (10/01/91)
 - F (03/21/94)

Notes are included in the codebook for questions not included on all form versions. Questions which were on the Physical Exam form used during phase 2 but not Phase 3 are at the end of the codebook.

- D. <u>Files Used to Store Information</u>: SAS System File: **PEP_PUBN.SD2** Format File: **PEPN.FMT**
- E. <u>Unique Record Identifiers</u>: ANONID, PEPID2
 Records within the dataset are sorted by ANONID and PEPID2.
- F. Number of Observations (Patients) in SAS Dataset: 3112 (467)

G. Contents of SAS Dataset:

- Alphabetical Listing of Variables: See pp. 6-7
- Listing of Variables by Position: See pp. 8-9
- H. Notes About Selected Variables:
 - **PETONSIL**, **PE_NEURO**, **PEABNE** not required if age < 6
- I. Computed Variables: None

J. Inter-Relationship With Other Datasets:

Physical exam data were also collected on

Form Abbreviation	SAS Dataset	See Section
PFIF	PFIFPUBN.SD2	2.11
PFTP	PFTPPUBN.SD2	2.12

ANONID PEID2

COOPERATIVE STUDY OF SICKLE CELL DISEASE

PHYSICAL EXAM

1.	Person completing form (Name):	PEFC	(Initials):
2.	CSSCD code number of person completing form:	PECODE	
3.	Date of physical exam (Month, Day, Year):		/ PE_DATE
4.	HEIGHT (cm):	PEHGT	
5.	WEIGHT (kg):	PEWGT	
6.	BLOOD PRESSURE - SUPINE, BEFORE BLOOD DRAWING OR A	T LEAST 15 MINUTES AFTE	R BLOOD DRAWING
		(Sys/Dia) PE	BPS PEBPD
7.	TONSILS - ESTIMATE DISTANCE BETWEEN MEDIAL SURFACES OF	TONSILS -OR- CHECK APP	
8.	LIVER - distance below RCM at the MCL (cm)		PELVRS
9.	SPLEEN - distance below LCM at the MCL (cm) PESP		N/A Splenectomized
10.	EXTREMITIES: pain and/or limitation of motion in:		
	(CHECK NO OR YES FOR 10 A - D)		1. NO 2.YES
	10.A. Right hip		PERHPLM
	10.B. Left hip		
	10.C. Right shoulder		PERSHLM
	10.D. Left shoulder		PELSHLM
11.	Was a neurologic exam performed during this visit? IF YES TO QUESTION 11, COMPLETE A NEUROLOG	I. NO	
Sigi	nature of Data Coordinator:		Date: //
	CSSCD PHYSICAL EXAM FO	DRM - VERSION F - 03/21/94 -	PAGE 3 OF 1 ML DE

QUESTION-BY-QUESTION SPECIFICATIONS FOR PHYSICAL EXAM FORM

Question 1. Person completing form: The doctor or nurse performing the exam should enter his/her name on the line and his/her initials in the three boxes to the right of the line.

Question 2. CSSCD code number of person completing form: The code number of the doctor or nurse completing the form/performing the exam is to be assigned by the Data Coordinator at each clinic.

Question 3. Date of physical exam: The date the physical exam was performed should be entered in the MM/DD/YY date format (e.g. October 24, 1994 would be entered 10/24/94).

Question 4. Height: Height measurements are to be made with the patient in stocking (bare) feet using a standard wall or scale set. Feet should be together and touching the wall with the patient's arms at his/her side. The chin should be straight and the patient is to be straightened by the examiner. The height measurement should be recorded in centimeters (cm). The formula for conversion from inches to centimeters is as follows: height in inches X 2.54 = height in centimeters. If a patient is unusually short or tall for his/her age, please note this on the form to the left of the height boxes.

Question 5. Weight: Weight measurements are to be made when the patient has no shoes on and most of his/her clothing has been removed. A standard hospital scale should be used. The weight measurement should be recorded in kilograms (kg). The formula for conversion from pounds to kilograms is as follows: weight in pounds/2.2 = weight in kilograms. If the patient is moderately to grossly under- or over-weight for his or her age, please note this on the form to the left of the weight boxes.

Question 6. Blood pressure: Blood pressure measurements are to be made while the patient is supine and has been lying still for at least 5 minutes. The blood pressure should be taken before blood drawing or at least 15 minutes after blood drawing. If the blood pressure is to be done following the blood draw, the blood pressure should be taken on the opposite arm of the blood draw. The patient should not have had a

CSSCD Phases 2 and 3 1.2: Physical Exam – Form PEP

cigarette for at least 30 minutes. The blood pressure readings should be recorded in millimeters of mercury (mm Hg).

Proper measurement of blood pressure begins with selection of a cuff of appropriate size. The blood pressure cuff should cover 2/3 of the upper arm and is applied to the arm approximately one inch above the natural crease across the inner aspect of the elbow. The tubing to be connected to the sphygmomanometer should be away from the patient's body, while the tubing to the inflating bulb should be close to the patient's body. Attach the cuff connection to the standard device and inflate the cuff while palpating the radial pulse. The pressure is slowly increased until the patient's pulse is no longer palpable and the mercury reading at which this occurs is noted and will be used to determine the inflation level for all blood pressure readings.

Measuring systolic blood pressure - Systolic blood pressure is determined by inflating the cuff at a smooth continuous rate to 30 mmHg higher than the reading at which the patient's pulse was no longer palpable, and then deflating the cuff at a slow constant rate (approximately 2 mmHg/second) until beats can first be heard with a stethoscope that has been placed over the brachial artery. This is the systolic blood pressure that should be recorded.

Measuring diastolic blood pressure - Diastolic blood pressure is determined by continuing to deflate the blood pressure cuff until there is a dampening of the beats heard, followed by the disappearance of perceptible beats. This latter point is the fifth phase and is the diastolic pressure that should be recorded.

Question 7. Tonsils: The distance between the medial surfaces of the tonsils should be estimated in centimeters and recorded in the appropriate box for question 7. This measurement <u>should be rounded to the nearest whole number</u> (e.g. 3, not 2.5) when appropriate, or a check mark should be made in the box of one of the other three choices (Kissing, N/A i.e., patient had tonsillectomy, or Not Done). Recording of two values (e.g., 2-3 cm) is an inappropriate response. If the estimated distance is between two whole numbers, the measurement should be rounded to the closest whole number.

Question 8. Liver size: Using a tape measure, project a line down the abdomen from the midclavicular line (MCL) to the lower costal margin on the right (RCM). The liver size

CSSCD Phases 2 and 3 1.2: Physical Exam – Form PEP

is to be recorded in centimeters (cm) from this point to the palpated lower margin of the liver while the patient is taking a deep breath. The measured distance should be rounded to the nearest whole number (e.g. if the liver is 1.5 cm below the RCM at the MCL the value should be rounded up to 2 and recorded on the physical exam form as 2).

Question 9. Spleen size: Using a tape measure, measure in centimeters (cm) the spleen at its point of maximal extension below the left costal margin (LCM) at the midclavicular line (MCL) while the patient is taking a deep breath. The measured distance should be rounded to the nearest whole number (e.g. if the spleen is palpated at 0.5 cm below the LCM at the MCL, the value should be rounded up to I and recorded on the physical exam form as 1). If the patient has been splenectomized, DO NOT record the measurement as 0, instead put a check mark in the box to the left of the words "N/A Splenectomized".

Question 10. Extremities: The extremities (right & left hips, right and left shoulders) should be assessed for pain as well as range of motion. Evaluate pain and range of motion in each shoulder by passively flexing and extending each arm at the shoulder. Evaluate pain and range of motion in each hip by passively adducting, abducting, flexing and extending each leg at the hip. Place a check in the appropriate NO or YES box next to each extremity being assessed.

Question 11. Was a neurological exam performed during this visit?: Completion of a neurological exam and the Neurological Evaluation Form <u>are required</u>. The neurological evaluation should be completed on the same day as the physical examination for the study visit. Place a check mark in the appropriate NO or YES box for this question. If question 11 is answered YES i.e., a neurological evaluation was performed at this visit, please be sure to send the completed CSSCD Neurological Evaluation Form to the SCC along with the rest of the study forms for this visit. If a neurological evaluation was not performed, please write in the reason on the Physical Exam form.

If developmental delay, hearing, vision, speech, and/or other neurological problems are identified, the appropriate clinical referral(s) should be made.

PHYSICAL EXAM FORM

CSSCD INFANT COHORT PATIENTS

CONTENTS OF SAS DATASET: PEP_PUBN.SD2 DATA FROM CSSCD FORM PEP - PHYSICAL EXAM VARIABLES ARE LISTED IN ALPHABETICAL ORDER AND IN ORDER OF THEIR POSITION IN THE SAS DATASET AND ON FORM PEP DATE VARIABLES HAVE BEEN REMOVED & CSSCD ID #S REPLACED W/ ANONYMIZED ID #

The SAS System

14:00 Friday, February 13, 2004 2

The CONTENTS Procedure

Data Set Name:	IN.PEP_PUBN	Observations:	3112
Member Type:	DATA	Variables:	25
Engine:	V6	Indexes:	0
Created:	14:07 Friday, February 13, 2004	Observation Length:	187
Last Modified:	14:07 Friday, February 13, 2004	Deleted Observations:	0
Protection:		Compressed:	NO
Data Set Type:		Sorted:	NO
Label:			

-----Engine/Host Dependent Information-----

Data Set Page Size: Number of Data Set Pages:	16384 36
First Data Page:	1
Max Obs per Page:	87
Obs in First Data Page:	69
Number of Data Set Repairs:	0
File Name:	pep_pubn.sd2
Release Created:	6.08.00
Host Created:	WIN

-----Alphabetic List of Variables and Attributes-----

#	Variable	Туре	Len	Pos	Format	Informat	Label
1	ANONID	Char	8	0			
25	PEABNE	Num	8	179	2.	2.	ABNORMAL NEUROLOGICAL EXAM (PH 2)
4	PEBNO	Num	8	17	3.	з.	DATA ENTRY BATCH NUMBER
8	PEBPD	Num	8	49	з.	3.	6B DIASTOLIC BLOOD PRESSURE-DIASTOLIC
7	PEBPS	Num	8	41	з.	3.	6A SYSTOLIC BLOOD PRESSURE-SUPINE
24	PEEXLM	Char	8	171			LOCATION OF PAIN/LIMITATION (PH 2)
5	PEHGT	Num	8	25	5.1	5.1	4 HEIGHT
2	PEID2	Num	8	8	з.	3.	FOLLOW-UP IDENTIFIER
22	PELANLM	Num	8	155	2.	2.	PAIN/MOTION LIMITATION IN L ANKLE (PH
2)							
13	PELHPLM	Num	8	89	2.	2.	10B PAIN/MOTION LIMITATION IN L HIP
20	PELKNLM	Num	8	139	2.	2.	PAIN/MOTION LIMITATION IN L KNEE (PH 2)
15	PELSHLM	Num	8	105	2.	2.	10D PAIN/MOTION LIMITATION IN L
SHOUI	LDER						
10	PELVRSZ	Num	8	65	2.	2.	8 LIVER - DIST BELOW RCM AT MCL (CM)
23	PEOTHLM	Num	8	163	2.	2.	OTHER SITE OF PAIN/LIMITATION (PH 2)
18	PEOVERS	Char	2	129			VERSION DATA TRANSCRIBED FROM
21	PERANLM	Num	8	147	2.	2.	PAIN/MOTION LIMITATION IN R ANKLE (PH 2)
12	PERHPLM	Num	8	81	2.	2.	10A PAIN/LIMITATION OF MOTION IN R HIP
19	PERKNLM	Num	8	131	2.	2.	PAIN/MOTION LIMITATION IN R KNEE (PH 2)
14	PERSHLM	Num	8	97	2.	2.	10C PAIN/MOTION LIMITATION IN R SHOULDER
11	PESPLTP	Num	8	73	2.	2.	9 SPLEEN - DIST BELOW LCM AT MCL (CM)
9	PETONSIL	Num	8	57	2.	2.	7 DIST BETW MEDIAL SURFACES OF TONSILS
17	PETRNSC	Num	8	121	2.	2.	DATA TRANSCRIBED FROM OLDER VERSION
3	PEVERS	Char	1	16			FORM VERSION

PHYSICAL EXAM FORM

CSSCD INFANT COHORT PATIENTS

6	PEWGT	Num	8	33	5.1	5.1	5 WEIGHT
16	PE_NEURO	Num	8	113	2.	2.	11 NEUROLOGICAL EXAM PERFORMED

PROC FORMAT;

VALUE ID2F 1='1-PH2 ENTRY VIS' 3='3-PH2 ANN 1 VIS' 5='5-PH2 ANN 2 VIS' 7='7-PH2 ANN 3 VIS' 9='9-PH2 ANN 4 VIS' 11='11-PH3 ENTRY VIS' 13='13-PH3 ANN 1 VIS' 15='15-PH3 ANN 2 VIS' 17='17-PH3 ANN 3 VIS' 19='19-PH3 ANN 4 VIS';

* Format NO_YES used for the following variables: PERHPLM PELHPLM PERSHLM PELSHLM PE_NEURO PETRNSC PERKNLM PELKNLM PERANLM PELANLM PEOTHLM PEABNE;

VALUE NO_YES 1='NO' 2='YES';

format PEID2 ID2F.
 PERHPLM PELHPLM PERSHLM PELSHLM PE_NEURO PETRNSC PERKNLM
 PELKNLM PERANLM PELANLM PEOTHLM PEABNE NO_YES.;

run; quit;

PHYSICAL EXAM FORM

CSSCD INFANT COHORT PATIENTS

PEID2 ----- FOLLOW-UP IDENTIFIER type: numeric (float) label: PEID2 range: [1,19] units: 1 coded missing: 0 / 3112 unique values: 12 tabulation: Freq. Numeric Label 467 1 1-PH2 ENTRY VIS 421 3 3-PH2 ANN 1 VIS 394 5 5-PH2 ANN 2 VIS 7 7-PH2 ANN 3 VIS 378 9 9-PH2 ANN 4 VIS 141 378 11 11-PH3 ENTRY VIS 12 1 323 13 13-PH3 ANN 1 VIS 2 14 293 15 15-PH3 ANN 2 VIS 17 17-PH3 ANN 3 VIS 297 19 19-PH3 ANN 4 VIS 17 PEVERS ----- FORM VERSION type: string (str1) unique values: 4 coded missing: 0 / 3112 tabulation: Freq. Value 422 "A" 903 "E" 1312 "F" 475 "G" PEHGT ------ 4 HEIGHT type: numeric (float) range: [76.2,193] units: .1 coded missing: 61 / 3112 unique values: 660 mean: 135.83 std. dev: 19.6865 50% 10% 25% 75% percentiles: 90% 136 122.3 110 150 162

PHYSICAL EXAM FORM

CSSCD INFANT COHORT PATIENTS

PEWGT					5 WEIGHT
type:	numeric (floa	at)			
range: unique values:	[7.6,118.2] 586		unit coded missir	ts: .1 ng: 18 /	
mean: std. dev:	33.7461 15.0626				
percentiles:	10% 18.1	25% 22.8		75% 41.1	90% 54.9
PEBPS	numeric (floa		6A SYSTOLIC	BLOOD PRI	ESSURE-SUPINE
cype.					
	[70,160]			ts: 1	
unique values:	65		coded missir	ng: 1847	/ 3112
mean: std. dev:	109.508 11.3218				
percentiles:	10% 96	25% 100		75% 118	90% 123
PEBPS:					
1. Response required	only if PEVER	S=F.			
PEBPDtype:	numeric (floa		DIASTOLIC BLO	DOD PRESS	URE-DIASTOLIC
range:	[30,94]		unit	ts: 1	
unique values:	53		coded missir	ng: 1848	/ 3112
mean:	60.6812				
std. dev:					
percentiles:	10% 50	25% 54	50% 60	75% 68	90% 72

PEBPD:

1. Response required only if PEVERS=F.

PHYSICAL EXAM FORM

CSSCD INFANT COHORT PATIENTS

PETONSIL ------ 7 DIST BETW MEDIAL SURFACES OF TONSILS type: numeric (float) range: [0,10] units: 1 unique values: 10 coded missing: 982 / 3112 tabulation: Freq. Value 86 0 441 1 964 2 392 3 195 4 43 5 6 6 1 7 1 8 1 10 PETONSIL: 1. Response required only if PEVERS=A, E, or F. PELVRSZ ------ 8 LIVER - DIST BELOW RCM AT MCL (CM) type: numeric (float) units: 1 range: [0,14] unique values: 11 coded missing: 59 / 3112 tabulation: Freq. Value 2311 0 312 1 244 2 110 3 32 4 22 5 11 6 6 7 2 9 2 10 1 14

PHYSICAL EXAM FORM

CSSCD INFANT COHORT PATIENTS

PESPLTP ------ 9 SPLEEN - DIST BELOW LCM AT MCL (CM) type: numeric (float) range: [0,8] coded missing: 167 / 3112 units: 1 unique values: 9 tabulation: Freq. Value 2661 0 85 1 78 2 50 3 29 4 18 5 19 6 4 7 1 8 PERHPLM ----- 10A PAIN/LIMITATION OF MOTION IN R HIP type: numeric (float) label: PERHPLM range:[1,2]units:1values:2coded missing:2 / 3112 unique values: 2 tabulation: Freq. Numeric Label 3066 1 NO 2 YES 44 PELHPLM ------ 10B PAIN/MOTION LIMITATION IN L HIP type: numeric (float) label: PELHPLM
 range:
 [1,2]
 units:
 1

 unique values:
 2
 coded missing:
 3 / 3112
 tabulation: Freq. Numeric Label 3073 1 NO 36 2 YES PERSHLM ------ 10C PAIN/MOTION LIMITATION IN R SHOULDER type: numeric (float) label: PERSHLM range: [1,2] units: 1 unique values: 2 coded missing: 2 / 3112 tabulation: Freq. Numeric Label 3090 1 NO 20 2 YES

PHYSICAL EXAM FORM

CSSCD INFANT COHORT PATIENTS

PELSHLM ----- 10D PAIN/MOTION LIMITATION IN L SHOULDER type: numeric (float) label: PELSHLM range: [1,2] units: 1 coded missing: 3 / 3112 unique values: 2 tabulation: Freq. Numeric Label 3096 1 NO 13 2 YES PE_NEURO ------ 11 NEUROLOGICAL EXAM PERFORMED type: numeric (float) label: PE_NEURO
 range:
 [1,2]
 units:
 1

 unique values:
 2
 coded missing:
 1814 / 3112
 tabulation: Freq. Numeric Label 129 1 NO 1169 2 YES PE NEURO: 1. Response required only if PEVERS=F. 2. See PEABNE. PETRNSC ----- DATA TRANSCRIBED FROM OLDER VERSION type: numeric (float) label: PETRNSC
 range:
 [1,2]
 units:
 1

 unique values:
 2
 coded missing:
 1800 / 3112
 tabulation: Freq. Numeric Label 1291 1 NO 21 2 YFS 2 YES PEOVERS ------ VERSION DATA TRANSCRIBED FROM type: string (str2) coded missing: 0 / 3112 unique values: 3 tabulation: Freq. Value 3091 "-7" 1 "A" 20 "E" PEOVERS:

1. Response required only if PETRNSC=2.

PHYSICAL EXAM FORM

CSSCD INFANT COHORT PATIENTS

PERKNLM ----- PAIN/MOTION LIMITATION IN R KNEE (PH 2) type: numeric (float) label: PERKNLM range: [1,2] units: 1 unique values: 2 coded missing: 1312 / 3112 tabulation: Freq. Numeric Label 1776 1 NO 24 2 YES PERKNLM: 1. Response required only if PEVERS=A, E, or G. PELKNLM ------ PAIN/MOTION LIMITATION IN L KNEE (PH 2) type: numeric (float) label: PELKNLM range: [1,2] units: 1 unique values: 2 coded missing: 1312 / 3112 tabulation: Freq. Numeric Label 1789 1 NO 2 YES 11 PELKNLM: 1. Response required only if PEVERS=A, E, or G. PERANLM ------ PAIN/MOTION LIMITATION IN R ANKLE (PH 2) type: numeric (float) label: PERANLM range: [1,2] units: 1 unique values: 2 coded missing: 1313 / 3112 tabulation: Freq. Numeric Label 1790 1 NO 9 2 YES PERANLM: 1. Response required only if PEVERS=A, E, or G.

PHYSICAL EXAM FORM

CSSCD INFANT COHORT PATIENTS

PELANLM		PA	IN/MOTION	LIMITATION	IN L ANKLE (PH 2)
type:	numeric	(float)			
label:	PELANLM				
range:	[1,2]			units:	1
unique values:	2		coded	missing:	1313 / 3112
tabulation:	Freq.	Numeric	Label		
	1796	1	NO		
	3	2	YES		
PELANLM:					
1. Response required	only if	PEVERS=A,	E, or G.		
PEOTHLM			- OTHER SI	TE OF PAIN	/LIMITATION (PH 2)
		(float)			
label:	PEOTHLM				
range:	[1,2]			units:	1
unique values:			aadad		1017 / 0110
			coueu	missing:	1317 / 3112
,	-		coded	missing:	1317 / 3112
tabulation:		Numeric		missing:	1317 / 3112
•	Freq.	Numeric 1	Label	missing:	1317 / 3112
•	Freq. 1758		Label NO	missing:	1317 / 3112
•	Freq. 1758	1	Label NO	missing:	1317 / 3112
•	Freq. 1758	1	Label NO	missing:	1317 / 3112

1. Response required only if PEVERS=A, E, or G.

PHYSICAL EXAM FORM

CSSCD INFANT COHORT PATIENTS

PEEXLM ------ LOCATION OF PAIN/LIMITATION (PH 2) type: string (str8) unique values: 35 coded missing: 1312 / 3112 tabulation: Freq. Freq. Value Value 1763 "-7" 1 "LOM 2DG" 1 "ABD PAIN" 1 "LOW BACK" 1 "ABDOMEN" 1 "LOWER BK" 1 "BIL.FEET" 1 "LW BK BI" 1 "BOTH_ARM" 1 "PAIN LEG" 1 "CHEST/HA" 1 "R ARM HD" 1 "COCCYX" 1 "R ELBOW" 1 "FINGER" 1 "R FACE" 1 "L ARM" 1 "R FOOT" 2 "L ELBOW" 1 "R HEMI" 2 "L LEG" 1 "R THIGH" 1 "L WRIST" 1 "R. HAND" 1 "L WRST P" 1 "R.FA/HND" 1 "L. HAND" 1 "RARMPAIN" 1 "L.ELBOW" 2 "RFARM+HD" 1 "LEFT ARM" 1 "STERNUM" 1 "LEYEDROP" 1 "THROAT" 1 "LIMP RLG" PEEXLM: 1. Response required only if PEVERS=A, E, or G. 2. Response required only if PEOTHLM=2. PEABNE ------ ABNORMAL NEUROLOGICAL EXAM (PH 2) type: numeric (float) label: PEABNE range: [1,3] units. . values: 3 coded missing: 1529 / 3112 unique values: 3 tabulation: Freq. Numeric Label 1 NO 1443 136 2 YES 4 3 PEABNE: 1. Response required only if PEVERS=A, E, or G. 2. Also see PE NEURO.

_dta:

1. Created 01/19/00.