

## 7.6.0: Acute Anemic Events – Overview

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### A. CSSCD Forms (collection) and Datasets (storage) Relating to Event:

<u>Form #</u>	<u>Name of Form</u>	<u>Collected</u>	<u>Patient Population</u>	<u>SAS Dataset</u>
46	Acute Anemic Episode and Splenic Sequestration Form	03/01/79- 05/31/86	All	<b>R46.SD2</b>
		06/01/86- 12/31/86	Patients entered at < 6 months of age.	
53	Comprehensive Special Event Form for Patients Entered < 6 Months of Age	01/01/87- 09/30/88	Patients entered at < 6 months of age.	<b>R53.SD2</b>
47	Acute Anemic Episode Flow Sheet	03/01/79- 12/31/86	All Acute Anemic Episodes if patient hospitalized or seen daily	<b>R47.SD2</b>
52	Acute Event Treatment Follow-up	03/01/79- 12/31/86	All Acute Anemic Episodes	<b>R52.SD2</b>

### B. Definition of the Event:

**Acute Anemic Episode:** (See Section 7.6.1)

A reduction in hemoglobin or hematocrit of at least 30% not caused by blood loss or a transfusion reaction, or reduction of hemoglobin level by 20% accompanied by acute increase in spleen size.

Acute anemic events were to be classified into one of the following three categories:

1. Splenic sequestration crisis: Increase in spleen size and firmness, reduction of hemoglobin level by at least 20%.
2. Aplastic crisis: Decrease in reticulocyte count before or concurrent with falling hemoglobin level ( $\geq$  30% reduction from usual level), fall in platelet count and white cell count in prolonged aplasia, and appearance of increased nucleated red cells and reticulocytes in peripheral blood as the marrow recovers.
3. Hyperhemolytic crisis: Normal or increased reticulocyte counts and nucleated RBC counts during an episode of falling hemoglobin and increase in indirect bilirubin level over the usual value.

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### 7.6.1: Acute Anemic Episode and Splenic Sequestration Form – Form 46

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- A. List of variables deleted    **F46DATE F46INIT F46NDATE F46LASTU F46LASTE  
F46ESTAT F46VDATE F46DFC F46FCB F46LSTDT F46PRDT  
F46MMD1-F46MMD3 F46PEB F46LABDT**
- B. List of variables modified    **NONE**
- C. List of variables modified with a name change    **NONE**
- D.    Old name
- E.    New name
- F. List of variables modified date to days since DOE
- G.    Old name    **F46DATE    F46LSTDT    F46PRDT**
- H.    New name    **JF46DATE    J46LSTDT    JF46PRDT**
- I. Collection Information:

**Form 46 (Acute Anemic Episode and Splenic Sequestration Form)** was completed each time a study patient presented at a study participant clinic, emergency room, or hospital with an acute anemic event (per definition), which was not caused by blood loss or a transfusion reaction.

- J. Data Collection Period: 03/79 – 12/86

    Form 46 was used between 03/79 and 12/86 for all cohorts and continued to be used for patients entered at < 6 months of age through 12/86.

- K. Form Version Dates: 03/01/79, 03/29/79, 09/25/80, 03/12/82

    Not all information from all form versions was retained to the final dataset. Variables considered unimportant or unusable from early forms were permanently dropped from the final dataset. Consequently the codebook coincides with the latest version of Form 46.

- L. Files Used to Store Information:

    SAS System File: **R46.SD2**

    Format File: **R46.FMT**

- M. Unique Record Identifiers: **ANONID, F46DATE**

    Records within the dataset are sorted by **ANONID** and **F46DATE**.

- N. Number of Observations (Patients) in SAS Dataset: 642 (472)

- O. Contents of SAS Dataset:

- Alphabetical Listing of Variables: See pp. 603-605

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- Listing of Variables by Position: See pp. 606-608

P. Notes About Selected Variables:

- **F46EVENT** – is a concatenated numeric variable consisting of 4 2-digit codes which identify other event forms completed in addition to the Form 46. Values are left justified, so that if fewer than 4 other forms are filled out, there will be trailing zeros. For example, a value of “32000000” means that the only form filled out in addition to the Form 46 is a Form 32 (Acute Chest Syndrome).
- **F46TYPE** – is the variable name for type of acute anemic event. Although the form was not supposed to be used for anemic events resulting from blood loss, a response choice for this cause was included on the form, and forms completed for blood loss were accepted to the database.
- **F46CBCWB** – is the CBC White Blood Cell Count variable assumed to be “uncorrected” in relation to nucleated red blood cells (RBCs). There is a question as to whether clinics uniformly adhered to this recording policy, and there is no way of knowing whether the values recorded on the form are in fact uncorrected.
- **F46NRB** – is the Nucleated Red Blood Cell variable. The field length is 2-digits. If there were more than 100 nRBCs/100 WBC, then a value of 99 was entered.
- **F46PRBC** – is the variable name for pocked RBC count. Test results for all PRBC counts completed during the study are stored in **R07.SD2** (See Section 5.2)—i.e., additional results for tests done at the time of an event may exist in this dataset.

Q. Computed Variables:

- **F46FLOWS** – is the number of follow-up hospitalization or “flow” sheets, in this case form 47 sheets, associated with a given Form 46. It was derived by linking “Record 47” with “Record 46” by date (**F47DATE** with **F46DATE**) patient first sought care.
- **F46DHOSP** – is the number of days that data was collected on hospitalized acute anemic episodes. The number was derived by linking “Record 46” with all “Record 47s” for date care was sought (**F46DATE** with **F47DATE**) and counting all the mo/day variables on Form 47 that were not missing for a given hospital stay (i.e., will equal # of days hospitalized if forms were filled in correctly).
- **F46FRM52** – is the type code associated with a Form 52 (Acute Event treatment Follow-up) with the same date as the acute anemic event (**F52DATE**, **F46DATE**).

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The **F46FRM52** variable was made equal to **F52TYPE** with the same date care was sought. If treatment and follow-up information were included on Form 31 because the event was associated with a pain event, the value of **F46FRM52=31**, and “Record 46” should be linked with “Record 31” for this information (i.e., if **F46DATE=F31DATE**). If treatment and follow-up information were included on Form 33 because the event was associated with an ACS event the value of **F46FRM52=33**, and “Record 46” should be linked by date patient first sought care for this information (i.e., if **F46DATE=F33DATE**).

### R. Inter-Relationship with Other Datasets:

1. Acute Anemic Episode data were also collected on

<b>Phase 1</b>	<b>SAS Dataset</b>
Form 53	<b>R53.SD2</b>

[See Section 7.9]

<b>Phase 2 &amp; 3 Forms</b>	<b>SAS Dataset</b>
Form “NCVA”	<b>NCVA_PST.SD2</b>

[See Section B]

Form 53, the Comprehensive Special Event Form for Patients Entered at < 6 Months of Age, stored in **R53.SD2**, was used to continue collection of acute anemic episode information on the newborn cohort from 1/1/87 through the end of Phase 1. This form was used to record information about both hospitalized and non-hospitalized acute anemic events.

2. Follow-up and treatment information were collected on

<b>Phase 1 Forms</b>	<b>SAS Dataset</b>
Form 47	<b>R47.SD2</b>
Form 52	<b>R52.SD2</b>

Both of the above mentioned records should be linked to the appropriate acute anemic event “Record 47” by the date of the anemic episode (i.e., if **F47DATE=F46DATE**, or if **F52DATE=F46DATE**).

- a. Form 47 is the Acute Anemic Episode Flow Sheet. Form 47 data are stored in **R47.SD2**. The form was completed if the patient was either hospitalized or seen on a daily basis as an outpatient for an acute anemic episode. It contains daily and summary information from day 2 of hospitalization for the event through discharge. Each “Record 47” contains 6 days of hospital

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information, so consequently, multiple “Record 47s” could exist for a given episode, dependent on length of stay.

“Record 47s” are sorted by **ANONID**, **F47DATE**, and flow sheet number **F47SHEET**. Therefore, information for hospital days 2-7 should be on **F47SHEET=1**; days 8-13 on **F47SHEET=2**, etc.

- b. Form 52 is the Acute Event Treatment Follow-up form stored in **R52.SD2** that was used to collect information on event treatment, resolution of symptoms, and diagnosis. The form was used between 03/79 and 12/86.

In order to link a specific “Record 46” with a “Record 52,” the date patient first sought care is used (i.e., **F52DATE=F46DATE**). When the treatment information is not stored in **F52.SD2**, but rather in **F31.SD2** (**F46FRM52=31**) or **F33.SD2** (**F46FRM52=33**), “Record 46” should be linked by date to “Record 31” or “Record 33” respectively for treatment, resolution of symptoms, and diagnostic data (i.e., if **F46FRM52=31**, the **F31DATE=F46DATE**, if **F46FRM52=33**, then **F33DATE=F46DATE**).

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CONTENTS OF SAS DATASET: R46.SD2  
 DATA FROM CSSCD FORM 46 - ACUTE ANEMIC EPISODE AND SPLENIC SEQUESTRATION FORM  
 VARIABLES ARE LISTED IN ALPHABETICAL ORDER AND IN ORDER OF THEIR POSITION  
 The SAS System 16:42 Tuesday, January 30, 2007 1

The CONTENTS Procedure

Data Set Name	OUT1.R46	Observations	642
Member Type	DATA	Variables	77
Engine	V9	Indexes	0
Created	14:10 Friday, January 19, 2007	Observation Length	616
Last Modified	14:10 Friday, January 19, 2007	Deleted Observations	0
Protection		Compressed	NO
Data Set Type		Sorted	NO
Label			
Data Representation	WINDOWS		
Encoding	wlatin1 Western (Windows)		

Engine/Host Dependent Information

Data Set Page Size	16384
Number of Data Set Pages	26
First Data Page	1
Max Obs per Page	26
Obs in First Data Page	10
Number of Data Set Repairs	0
File Name	r46.sas7bdat
Release Created	9.0000M0
Host Created	XP_PRO

Alphabetic List of Variables and Attributes

#	Variable	Type	Len	Label
1	ANONID	Char	8	ANONYMIZED ID #
63	F46ANTIC	Num	8	ANTI C3
60	F46BLRBN	Num	8	INDIRECT BILIRUBIN
37	F46CBCHB	Num	8	CBC HB
38	F46CBCHC	Num	8	CBC HCT
41	F46CBCMV	Num	8	CBC MCV
39	F46BCRB	Num	8	CBC RBC
40	F46CBCWB	Num	8	CBC WBC
65	F46CELL	Num	8	ESTIMATED CELLULARITY
61	F46COMBS	Num	8	DIRECT COOMBS
59	F46DBLRB	Num	8	DIRECT BILIRUBIN
50	F46DFATC	Num	8	DIFFERENTIAL ATYPICAL CELLS
47	F46DFBAS	Num	8	DIFFERENTIAL BASOPHILS
45	F46DFBND	Num	8	DIFFERENTIAL BANDS
46	F46DFEOS	Num	8	DIFFERENTIAL EOSINOPHILS
48	F46DFLYM	Num	8	DIFFERENTIAL LYMPHOCYTES
51	F46DFMM	Num	8	DIFFERENTIAL METAMYELOCTYES MYELOCTYES
49	F46DFMON	Num	8	DIFFERENTIAL MONOCYTES
44	F46DFPMN	Num	8	DIFFERENTIAL PMN
74	F46DHOSP	Num	8	NUMBER OF DAYS HOSPITALIZED
16	F46DRGS	Num	8	DRUGS TAKEN WITHIN LAST WEEK

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2	F46EVENT	Num	8	ASSOCIATED EVENTS
57	F46FE	Num	8	FE
58	F46FERR	Num	8	FERRITIN
72	F46FLOWS	Num	8	NUMBER OF FLOW SHEETS
55	F46FOLIC	Num	8	FOLIC ACID
73	F46FRM52	Num	8	IS THERE A FORM 52 ON THE DATABASE
71	F46HBS	Num	8	HB S %
42	F46HJB	Num	8	HOWELL JOLLY BODIES
3	F46HOSP	Num	8	HOSPITALIZED
62	F46IGG	Num	8	ANTI IGG
67	F46IRON	Num	8	IRON STORES
70	F46LSC	Num	8	LIVER-SPLEEN SCAN
7	F46LSTHB	Num	8	LAST ROUTINE HB
6	F46LSTHC	Num	8	LAST ROUTINE HCT
30	F46LVRSZ	Num	8	SIZE OF LIVER
31	F46LVRTN	Num	8	LIVER TENDERNESS
24	F46MDT1	Num	8	MEDICATION DAYS TAKEN
26	F46MDT2	Num	8	MEDICATION DAYS TAKEN
28	F46MDT3	Num	8	MEDICATION DAYS TAKEN
23	F46MED1	Num	8	MEDICATION CODE
25	F46MED2	Num	8	MEDICATION CODE
27	F46MED3	Num	8	MEDICATION CODE
17	F46MEDD1	Num	8	MEDICATION TAKEN - CODE
18	F46MEDD2	Num	8	MEDICATION TAKEN - CODE
19	F46MEDD3	Num	8	MEDICATION TAKEN - CODE
20	F46MEDD4	Num	8	MEDICATION TAKEN - CODE
69	F46MMAT	Num	8	MEGALOBLASTIC MATURATION
66	F46MYEY	Num	8	MYELOID-ERYTHROID RATIO
64	F46NECR	Num	8	NECROSIS
68	F46NMAT	Num	8	NORMOBLASTIC MATURATION
52	F46NRB	Num	8	NUCLEATED RED BLOOD CELLS
36	F46OPHYS	Num	8	OTHER PHYSICAL FINDINGS
53	F46PLATE	Num	8	PLATELETS
43	F46PRBC	Num	8	POCKED RBC
9	F46PRHB	Num	8	PRESENT HB
8	F46PRHC	Num	8	PRESENT HCT
11	F46RDHB	Num	8	REDUCTION HB
10	F46RDHC	Num	8	REDUCTION HCT
54	F46RETIC	Num	8	RETICULOCYTES
34	F46SPLDI	Num	8	SPLEEN CM FROM MIDLINE
32	F46SPLP	Num	8	PALPABLE SPLEEN
35	F46SPLTN	Num	8	SPLEEN TENDERNESS
33	F46SPLTP	Num	8	SPLEEN TIP PALPATED (CM)
15	F46SYMBL	Num	8	SYMPTOMS BLEEDING
13	F46SYMFI	Num	8	SYMPTOMS FEVER-DIAGNOSED INFECTION
12	F46SYMPE	Num	8	SYMPTOMS-PAINFUL EPISODE
14	F46SYMVD	Num	8	SYMPTOMS VOMITING-DIARRHEA
56	F46TIBC	Num	8	TIBC
4	F46TRANS	Num	8	TRANSFUSED
22	F46TREVT	Num	8	TRANSFUSION FOR EVENT
21	F46TRNS	Num	8	TRANSFUSION IN LAST WEEK
5	F46TYPE	Num	8	TYPE OF DIAGNOSIS
29	F46WGT	Num	8	WEIGHT (KG)
76	J46LSTDT	Num	8	LAST ROUTINE DATE - RECODE DAYS SINCE DOE
75	F46DATE	Num	8	DATE FIRST SOUGHT CARE - RECODE DAYS SINCE DO

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77 JF46PRDT Num 8 PRESENT DATE - RECODE DAYS SINCE DOE

\*\*\*\*\*  
\* R46.FMT contains value labels for numerical codes assigned to  
categorical \*  
\* variables in the SAS dataset R46.SD2  
\*  
\*\*\*\*\*;

\* SIR/DBMS 2.2 SAS PROC STEP FROM DATABASE: CSSCD 11/14/98 11:15:07;

PROC FORMAT;

\* FORMAT NO\_YES used for the following variables: F46HOSP F46TRANS  
F46TRNS F46SPLP

F46OPHYS;

VALUE NO\_YES

1 = 'NO'  
2 = 'YES';

VALUE F46TYPE

1 = 'SPLENIC SEQUESTRATION'  
2 = 'APLASTIC CRISIS'  
3 = 'HYPERHEMOLYTIC CRISIS'  
4 = 'BLOOD LOSS';

\* FORMAT NODKYES used for the following variables: F46SYMPE F46SYMFI  
F46SYMVD

F46SYMBL F46DRGS;

VALUE NODKYES

1 = 'NO'  
2 = 'DK'  
3 = 'YES';

VALUE F46TREV

1 = 'NO'  
2 = 'YES'  
3 = 'DK';

\* FORMAT ABS\_PRES is used for the following variables: F46LVRTN  
F46SPLTN F46HJB;

VALUE ABS\_PRES

1 = 'ABSENT'  
2 = 'PRESENT';



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\* FORMAT RESULT is used for the following variables: F46COMBS F46IGG F46ANTIC;

VALUE RESULT  
1 = 'POSITIVE'  
2 = 'NEGATIVE';

\* FORMAT YES\_NO is used for the following variables: F46NECR F46MMAT;

VALUE YES\_NO  
1 = 'YES'  
2 = 'NO';

VALUE F46IRON  
1 = 'PRESENT'  
2 = 'ABSENT';

VALUE F46NMAT  
1 = 'NORMAL'  
2 = 'ABNORMAL';

VALUE F46LSC  
1 = 'DONE'  
2 = 'NOT DONE';

\* FORMAT  
F46HOSP F46TRANS F46TRNS F46SPLP F46OPHYS NO\_YES.  
F46TYPE F46TYPE.  
F46SYMPE F46SYMFI F46SYMVD F46SYMBL F46DRGS NODKYES.  
F46TREVT F46TREVT.  
F46LVRTN F46SPLTN F46HJB ABS\_PRES.  
F46COMBS F46IGG F46ANTIC RESULT.  
F46NECR F46MMAT YES\_NO.  
F46IRON F46IRON.  
  
F46NMAT F46NMAT.  
F46LSC F46LSC.;

RUN;  
QUIT;

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F46VDATE ----- VERSION DATE **DELETED**

type: numeric daily date (int)  
 label: datelab

range: [6999,8106] units: 1  
 or equivalently: [01mar1979,12mar1982] units: days  
 unique values: 4 coded missing: 0 / 642

tabulation:	Freq.	Numeric	Label
	59	6999	03/01/79
	1	7027	03/29/79
	568	7573	09/25/80
	14	8106	03/12/81

F46EVNT1 ----- ASSOCIATED EVENT CODE 1

type: numeric (float)

range: [0,91] units: 1  
 unique values: 21 coded missing: 81 / 642

tabulation:	Freq.	Value
	1	0
	74	30
	1	31
	59	32
	1	33
	6	34
	3	36
	1	38
	3	40
	2	44
	44	47
	70	48
	1	49
	1	52
	68	54
	6	62
	1	71
	5	83
	202	84
	10	90
	2	91

F46EVNT1:

1. Computed variable: F46EVNT1=int(F46EVENT/1000000), not stored in the .SD2 file.

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F46EVNT2 ----- ASSOCIATED EVENT CODE 2

type: numeric (float)

range: [0,91]   units: 1

unique values: 25   coded missing: 81 / 642

tabulation:

Freq.	Value	Freq.	Value
217	0	10	47
1	13	50	48
5	30	11	49
12	31	13	52
36	32	29	54
5	33	1	58
8	34	3	62
1	35	7	83
11	36	125	84
2	38	2	89
1	40	3	90
1	45	2	91
5	46		

F46EVNT2:

1. Computed variable: F46EVNT2=int((F46EVENT-F46EVNT1\*1000000)/10000), not stored in the .SD2 file.

F46EVNT3 ----- ASSOCIATED EVENT CODE 3

type: numeric (float)

range: [0,90]   units: 1

unique values: 25   coded missing: 81 / 642

tabulation:

Freq.	Value	Freq.	Value
391	0	13	47
1	12	15	48
1	23	7	49
2	30	1	50
1	31	12	52
8	32	12	54
5	33	3	62
5	34	1	71
3	36	2	83
1	39	70	84
2	40	1	89
1	43	2	90
1	46		

F46EVNT3:

1. Computed variable: F46EVNT3=int((F46EVENT-F46EVNT1\*1000000-F46EVNT2\*10000)/100), not stored in the .SD2 file.

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F46EVNT4 ----- ASSOCIATED EVENT CODE 4

type: numeric (float)  
range: [0,96] units: 1  
unique values: 15 coded missing: 81 / 642

tabulation:	Freq.	Value
	483	0
	2	4
	1	20
	1	28
	6	32
	1	36
	3	44
	19	48
	6	52
	2	54
	3	56
	29	84
	1	88
	1	92
	3	96

F46EVNT4:

1. Computed variable: F46EVNT4=(F46EVENT-F46EVNT1\*1000000-F46EVNT2\*10000-F46EVNT3\*100), not stored in the .SD2 file.

F46HOSP ----- HOSPITALIZED

type: numeric (float)  
label: F46HOSP  
range: [1,2] units: 1  
unique values: 2 coded missing: 0 / 642

tabulation:	Freq.	Numeric	Label
	22	1	NO
	620	2	YES

F46TRANS ----- TRANSFUSED

type: numeric (float)  
label: F46TRANS  
range: [1,2] units: 1  
unique values: 2 coded missing: 61 / 642

tabulation:	Freq.	Numeric	Label
	362	1	NO
	219	2	YES

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F46TYPE ----- TYPE OF DIAGNOSIS

type: numeric (float)  
label: F46TYPE

range: [1,4] units: 1  
unique values: 4 coded missing: 105 / 642

tabulation:	Freq.	Numeric	Label
	132	1	SPLENIC SEQUESTRATION
	266	2	APLASTIC CRISIS
	130	3	HYPERHEMOLYTIC CRISIS
	9	4	BLOOD LOSS

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F46LSTHC ----- LAST ROUTINE HCT

type: numeric (float)

range: [13,45] units: .1  
 unique values: 150 coded missing: 19 / 642

mean: 24.8295  
 std. dev: 4.98648

percentiles:	10%	25%	50%	75%	90%
	19	21	24	27.2	31.9

F46LSTHB ----- LAST ROUTINE HB

type: numeric (float)

range: [4.8,14.1] units: .1  
 unique values: 79 coded missing: 19 / 642

mean: 8.40562  
 std. dev: 1.53473

percentiles:	10%	25%	50%	75%	90%
	6.7	7.3	8.2	9.2	10.6

F46PRHC ----- PRESENT HCT

type: numeric (float)

range: [6,36] units: .1  
 unique values: 132 coded missing: 10 / 642

mean: 15.4332  
 std. dev: 4.09056

percentiles:	10%	25%	50%	75%	90%
	10.5	13	15	17.45	20

F46PRHB ----- PRESENT HB

type: numeric (float)

range: [1.7,11.7] units: .1  
 unique values: 69 coded missing: 8 / 642

mean: 5.24574  
 std. dev: 1.30917

percentiles:	10%	25%	50%	75%	90%
	3.6	4.4	5.2	5.9	6.9

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F46RDHC ----- REDUCTION HCT

type: numeric (float)

range: [-19,79] units: 1

unique values: 74 coded missing: 25 / 642

mean: 37.0746

std. dev: 13.8917

percentiles:	10%	25%	50%	75%	90%
	21	29	36	45	57

F46RDHB ----- REDUCTION HB

type: numeric (float)

range: [-21,82] units: 1

unique values: 74 coded missing: 22 / 642

mean: 36.8694

std. dev: 13.7917

percentiles:	10%	25%	50%	75%	90%
	22	29	36	45	56

F46SYMPE ----- SYMPTOMS-PAINFUL EPISODE

type: numeric (float)

label: F46SYMPE

range: [1,3] units: 1

unique values: 3 coded missing: 4 / 642

tabulation:	Freq.	Numeric	Label
	304	1	NO
	11	2	DK
	323	3	YES

F46SYMFI ----- SYMPTOMS FEVER-DIAGNOSED INFECTION

type: numeric (float)

label: F46SYMFI

range: [1,3] units: 1

unique values: 3 coded missing: 1 / 642

tabulation:	Freq.	Numeric	Label
	256	1	NO
	19	2	DK
	366	3	YES

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F46SYMVD ----- SYMPTOMS VOMITING-DIARRHEA

type: numeric (float)  
label: F46SYMVD

range: [1,3] units: 1  
unique values: 3 coded missing: 11 / 642

tabulation:	Freq.	Numeric	Label
	500	1	NO
	4	2	DK
	127	3	YES

F46SYMBL ----- SYMPTOMS BLEEDING

type: numeric (float)  
label: F46SYMBL

range: [1,3] units: 1  
unique values: 3 coded missing: 7 / 642

tabulation:	Freq.	Numeric	Label
	603	1	NO
	5	2	DK
	27	3	YES

F46DRGS ----- DRUGS TAKEN WITHIN LAST WEEK

type: numeric (float)  
label: F46DRGS

range: [1,3] units: 1  
unique values: 3 coded missing: 4 / 642

tabulation:	Freq.	Numeric	Label
	259	1	NO
	4	2	DK
	375	3	YES



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F46MEDD1 ----- MEDICATION TAKEN - CODE

type: numeric (float)

range: [3,999]

units: 1

unique values: 79

coded missing: 285 / 642

tabulation:

Freq.	Value	Freq.	Value
5	3	1	335
5	6	8	337
3	7	2	338
1	11	1	361
1	21	2	367
1	23	6	369
6	25	3	370
1	26	30	371
31	28	2	374
2	29	4	375
1	37	1	391
1	41	1	420
3	44	1	431
3	56	1	443
2	57	1	449
1	59	1	452
1	67	1	462
1	94	1	471
2	102	42	480
4	126	26	481
37	171	1	484
4	190	1	490
4	191	3	512
4	192	3	515
1	230	1	519
6	231	1	528
1	237	1	530
2	239	2	536
1	240	1	537
1	248	1	539
36	249	1	540
1	259	2	541
1	279	1	545
1	280	3	552
1	284	2	554
1	289	1	562
2	290	2	564
1	299	1	599
2	304	11	999
1	306		

F46MEDD1:

1. Required only if F46DRGS=3.
2. See Appendix D for medication codes.

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F46MEDD2 ----- MEDICATION TAKEN - CODE

type: numeric (float)

range: [3,999]

units: 1

unique values: 50

coded missing: 454 / 642

tabulation:

Freq.	Value	Freq.	Value
4	3	4	337
1	6	2	338
1	20	1	369
1	21	1	370
2	25	7	371
10	28	1	372
2	44	3	375
1	59	6	382
3	126	1	417
1	152	3	420
16	171	1	423
1	181	1	441
3	190	1	443
3	231	2	448
1	248	20	480
36	249	8	481
1	269	2	484
1	275	3	512
3	279	1	515
1	280	10	519
1	298	1	540
2	299	2	541
3	306	1	550
1	322	1	554
1	328	5	999

F46MEDD2:

1. Required only if F46DRGS=3 and >1 medication taken.
2. See Appendix D for medication codes.

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F46MEDD3 ----- MEDICATION TAKEN - CODE

type: numeric (float)

range: [6,999]

units: 1

unique values: 44

coded missing: 534 / 642

tabulation:

Freq.	Value	Freq.	Value
2	6	1	342
1	7	1	344
2	25	2	369
9	28	2	370
1	59	3	371
2	126	1	374
1	156	2	375
1	160	1	382
6	171	1	417
2	190	1	420
1	191	2	436
1	196	1	448
1	230	1	467
6	231	12	480
1	240	10	481
13	249	1	515
1	275	1	519
1	298	1	538
2	304	1	545
1	328	1	562
1	335	1	564
3	337	2	999

F46MEDD3:

1. Required only if F46DRGS=3 and >2 medications taken.
2. See Appendix D for medication codes.

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F46MEDD4 ----- MEDICATION TAKEN - CODE  
 type: numeric (float)  
 range: [3,998] units: 1  
 unique values: 28 coded missing: 590 / 642

tabulation:

Freq.	Value	Freq.	Value
1	3	1	306
1	25	4	337
4	28	1	342
1	56	1	349
1	157	1	361
2	171	1	367
1	192	1	374
7	249	1	375
1	270	1	382
2	279	1	441
2	285	6	480
1	286	4	481
1	290	2	484
1	296	1	998

F46MEDD4:

1. Required only if F46DRGS=3 and >3 medications taken.
2. See Appendix D for medication codes.

F46TRNS ----- TRANSFUSION IN LAST WEEK  
 type: numeric (float)  
 label: F46TRNS  
 range: [1,2] units: 1  
 unique values: 2 coded missing: 2 / 642

tabulation:	Freq.	Numeric	Label
	494	1	NO
	146	2	YES

F46TREVTV ----- TRANSFUSION FOR EVENT  
 type: numeric (float)  
 label: F46TREVTV  
 range: [1,3] units: 1  
 unique values: 3 coded missing: 277 / 642

tabulation:	Freq.	Numeric	Label
	202	1	NO
	161	2	YES
	2	3	DK

F46TREVTV:

1. Required only if F46TRNS=2.

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F46MED1 ----- MEDICATION CODE

type: numeric (float)

range: [3,999] units: 1  
 unique values: 42 coded missing: 417 / 642

tabulation:

Freq.	Value	Freq.	Value
7	3	1	239
5	6	12	249
5	7	1	285
1	20	1	337
3	25	2	369
12	28	1	370
1	29	7	371
1	33	1	374
3	44	3	375
1	94	1	396
1	102	2	420
1	126	1	449
1	138	1	465
2	160	1	471
1	170	76	480
14	171	29	481
1	189	1	484
2	190	1	536
5	192	1	539
1	211	1	562
2	231	11	999

F46MED1:

1. See Appendix D for medication codes.

F46MDT1 ----- MEDICATION DAYS TAKEN

type: numeric (float)

range: [0,9] units: 1  
 unique values: 10 coded missing: 442 / 642

tabulation:

Freq.	Value
2	0
70	1
53	2
26	3
14	4
10	5
6	6
7	7
1	8
11	9

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F46MED2 ----- MEDICATION CODE  
                  type: numeric (float)

                  range: [1,999]                                units: 1  
                  unique values: 29                              coded missing: 564 / 642

tabulation:

Freq.	Value	Freq.	Value
2	1	1	369
1	3	5	371
1	6	2	382
1	11	1	391
1	21	1	410
3	25	1	420
7	28	1	423
1	44	11	480
1	59	5	481
10	126	2	484
1	171	1	515
1	191	1	519
1	231	2	562
10	249	2	999
1	274		

F46MED2:

1. See Appendix D for medication codes.

F46MDT2 ----- MEDICATION DAYS TAKEN  
                  type: numeric (float)

                  range: [1,9]                                  units: 1  
                  unique values: 8                              coded missing: 583 / 642

tabulation:

Freq.	Value
25	1
8	2
4	3
4	4
5	5
2	6
3	7
8	9

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F46MED3 ----- MEDICATION CODE

type: numeric (float)

range: [3,999]

units: 1

unique values: 17

coded missing: 617 / 642

tabulation:	Freq.	Value
	1	3
	2	28
	1	59
	1	99
	1	137
	2	190
	1	196
	1	209
	1	230
	2	249
	1	311
	1	316
	1	370
	1	372
	1	420
	6	480
	1	999

F46MED3:

1. See Appendix D for medication codes.

F46MDT3 ----- MEDICATION DAYS TAKEN

type: numeric (float)

range: [1,8]

units: 1

unique values: 6

coded missing: 623 / 642

tabulation:	Freq.	Value
	6	1
	5	2
	4	3
	2	4
	1	6
	1	8

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F46WGT ----- WEIGHT (KG)

type: numeric (float)

range: [4.99,81.65]                      units: .01

unique values: 289                      coded missing: 247 / 642

mean: 26.8823

std. dev: 17.6306

percentiles:            10%            25%            50%            75%            90%

                          9.6            13.7            21            33.5            58.06

F46WGT:

1. Required only if age  $\leq$  15 years.

F46LVRSZ ----- SIZE OF LIVER

type: numeric (float)

range: [0,18]                              units: 1

unique values: 18                      coded missing: 50 / 642

tabulation: Freq. Value

261	0
45	1
85	2
45	3
50	4
32	5
22	6
10	7
14	8
9	9
7	10
1	11
5	12
1	13
1	14
2	16
1	17
1	18

F46LVRTN ----- LIVER TENDERNESS

type: numeric (float)

label: F46LVRTN

range: [1,2]                              units: 1

unique values: 2                      coded missing: 11 / 642

tabulation: Freq. Numeric Label

544	1	ABSENT
87	2	PRESENT



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F46SPLP ----- PALPABLE SPLEEN

type: numeric (float)  
 label: F46SPLP

range: [1,2]                                  units: 1  
 unique values: 2                              coded missing: 4 / 642

tabulation:	Freq.	Numeric	Label
	418	1	NO
	220	2	YES

F46SPLTP ----- SPLEEN TIP PALPATED (CM)

type: numeric (float)

range: [0,20]                                  units: 1  
 unique values: 16                              coded missing: 427 / 642

tabulation:	Freq.	Value
	2	0
	12	1
	23	2
	35	3
	26	4
	30	5
	23	6
	16	7
	17	8
	10	9
	11	10
	3	11
	2	12
	3	13
	1	14
	1	20

F46SPLTP:

1. Required only if F46SPLP=2.

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F46SPLDI ----- SPLEEN CM FROM MIDLINE

type: numeric (float)  
range: [0,13] units: 1  
unique values: 14 coded missing: 520 / 642

tabulation:	Freq.	Value
	7	0
	2	1
	19	2
	21	3
	15	4
	12	5
	18	6
	7	7
	4	8
	2	9
	9	10
	2	11
	3	12
	1	13

F46SPLDI:

1. Required only if F46SPLTP=2.

F46SPLTN ----- SPLEEN TENDERNESS

type: numeric (float)  
label: F46SPLTN  
range: [1,2] units: 1  
unique values: 2 coded missing: 26 / 642

tabulation:	Freq.	Numeric	Label
	542	1	ABSENT
	74	2	PRESENT

F46OPHYS ----- OTHER PHYSICAL FINDINGS

type: numeric (float)  
label: F46OPHYS  
range: [1,2] units: 1  
unique values: 2 coded missing: 39 / 642

tabulation:	Freq.	Numeric	Label
	299	1	NO
	304	2	YES

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F46BCCHB ----- CBC HB

type: numeric (float)

range: [1.7,13.3] units: .1  
 unique values: 76 coded missing: 6 / 642

mean: 5.41525  
 std. dev: 1.50715

percentiles:	10%	25%	50%	75%	90%
	3.7	4.5	5.3	6.1	7.2

F46BCCHC ----- CBC HCT

type: numeric (float)

range: [6.5,40.2] units: .1  
 unique values: 182 coded missing: 5 / 642

mean: 15.9719  
 std. dev: 4.66967

percentiles:	10%	25%	50%	75%	90%
	10.5	13.1	15.5	18.2	21.6

F46BCCRB ----- CBC RBC

type: numeric (float)

range: [.82,4.68] units: .01  
 unique values: 215 coded missing: 50 / 642

mean: 1.88579  
 std. dev: .640183

percentiles:	10%	25%	50%	75%	90%
	1.15	1.475	1.78	2.15	2.63

F46CBCWB ----- CBC WBC

type: numeric (float)

range: [1.7,97.8] units: .1  
 unique values: 281 coded missing: 12 / 642

mean: 17.4233  
 std. dev: 10.5754

percentiles:	10%	25%	50%	75%	90%
	6.7	9.8	15.2	22.6	30.6

F46CBCWB:

1. WBC should be uncorrected for nRBC's.

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F46BCMV ----- CBC MCV

type: numeric (float)

range: [32,121] units: 1

unique values: 64 coded missing: 35 / 642

mean: 87.7578

std. dev: 10.6369

percentiles:        10%        25%        50%        75%        90%

                      75        82        88        94        100

F46HJB ----- HOWELL JOLLY BODIES

type: numeric (float)

label: F46HJB

range: [1,2] units: 1

unique values: 2 coded missing: 204 / 642

tabulation: Freq.    Numeric    Label

                  239            1    ABSENT

                  199            2    PRESENT

F46PRBC ----- POKED RBC

type: numeric (float)

range: [0,20.4] units: .1

unique values: 25 coded missing: 586 / 642

mean: 3.38571

std. dev: 5.32184

percentiles:        10%        25%        50%        75%        90%

                      0            0            .2        5.55        13.2

F46DFPMN ----- DIFFERENTIAL PMN

type: numeric (float)

range: [0,90] units: 1

unique values: 78 coded missing: 58 / 642

mean: 53.6404

std. dev: 17.5279

percentiles:        10%        25%        50%        75%        90%

                      29        43        55        67        75

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F46DFBND ----- DIFFERENTIAL BANDS

type: numeric (float)

range: [0,80] units: 1  
 unique values: 34 coded missing: 115 / 642

mean: 5.00759  
 std. dev: 7.75332

percentiles:	10%	25%	50%	75%	90%
	0	0	3	6	12

F46DFEOS ----- DIFFERENTIAL EOSINOPHILS

type: numeric (float)

range: [0,19] units: 1  
 unique values: 17 coded missing: 74 / 642

mean: 1.69014  
 std. dev: 2.57565

percentiles:	10%	25%	50%	75%	90%
	0	0	1	2	5

F46DFBAS ----- DIFFERENTIAL BASOPHILS

type: numeric (float)

range: [0,27] units: 1  
 unique values: 11 coded missing: 86 / 642

mean: .534173  
 std. dev: 1.785

percentiles:	10%	25%	50%	75%	90%
	0	0	0	1	1

F46DFLYM ----- DIFFERENTIAL LYMPHOCYTES

type: numeric (float)

range: [0,88] units: 1  
 unique values: 79 coded missing: 57 / 642

mean: 31.6889  
 std. dev: 16.6409

percentiles:	10%	25%	50%	75%	90%
	13	19	30	41	56

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F46DFMON ----- DIFFERENTIAL MONOCYTES

type: numeric (float)

range: [0,31] units: 1  
 unique values: 27 coded missing: 61 / 642

mean: 6.51807  
 std. dev: 4.93912

percentiles:	10%	25%	50%	75%	90%
	1	3	6	9	13

F46DFATC ----- DIFFERENTIAL ATYPICAL CELLS

type: numeric (float)

range: [0,16] units: 1  
 unique values: 14 coded missing: 92 / 642

mean: .716364  
 std. dev: 1.92375

percentiles:	10%	25%	50%	75%	90%
	0	0	0	0	2

F46DFMM ----- DIFFERENTIAL METAMYELOCTYES|MYELOCYTES

type: numeric (float)

range: [0,15] units: 1  
 unique values: 10 coded missing: 93 / 642

mean: .484517  
 std. dev: 1.53613

percentiles:	10%	25%	50%	75%	90%
	0	0	0	0	2

F46NRB ----- NUCLEATED RED BLOOD CELLS

type: numeric (float)

range: [0,99] units: 1  
 unique values: 67 coded missing: 85 / 642

mean: 11.3932  
 std. dev: 21.9369

percentiles:	10%	25%	50%	75%	90%
	0	0	2	10	38

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F46PLATE ----- PLATELETS

type: numeric (float)

range: [17,1186] units: 1  
unique values: 330 coded missing: 123 / 642

mean: 294.461  
std. dev: 184.021

percentiles:	10%	25%	50%	75%	90%
	100	158	251	399	540

F46RETIC ----- RETICULOCYTES

type: numeric (float)

range: [0,57.4] units: .1  
unique values: 247 coded missing: 46 / 642

mean: 11.9185  
std. dev: 11.1

percentiles:	10%	25%	50%	75%	90%
	.3	1.95	10	18.6	28

F46FOLIC ----- FOLIC ACID

type: numeric (float)

range: [0,9.99] units: .01  
unique values: 17 coded missing: 624 / 642

mean: 5.84  
std. dev: 2.85886

percentiles:	10%	25%	50%	75%	90%
	1.23	4.8	6.25	7.2	9.9

F46FOLIC:

1. Required only if reticulocytes are decreased or there are signs of marrow recovery (DIAGNOSIS: Aplastic Crisis).

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F46TIBC ----- TIBC

type: numeric (float)

range: [72,654] units: 1

unique values: 39 coded missing: 594 / 642

mean: 239.917

std. dev: 91.09

percentiles:        10%        25%        50%        75%        90%

                         156        190        225        284.5        330

F46TIBC:

1. Required only if reticulocytes are decreased or there are signs of marrow recovery (DIAGNOSIS: Aplastic Crisis).

F46FE ----- FE

type: numeric (float)

range: [18,340] units: 1

unique values: 55 coded missing: 579 / 642

mean: 128.746

std. dev: 88.6608

percentiles:        10%        25%        50%        75%        90%

                         35        51        93        203        253

F46FE:

1. Required only if reticulocytes are decreased or there are signs of marrow recovery (DIAGNOSIS: Aplastic Crisis).

F46FERR ----- FERRITIN

type: numeric (float)

range: [7,18026] units: 1

unique values: 48 coded missing: 593 / 642

mean: 1557.14

std. dev: 2791.24

percentiles:        10%        25%        50%        75%        90%

                         65        290        708        1670        3810

F46FERR:

1. Required only if reticulocytes are decreased or there are signs of marrow recovery (DIAGNOSIS: Aplastic Crisis).



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F46DBLRB ----- DIRECT BILIRUBIN

type: numeric (float)  
range: [0,33.1] units: .1  
unique values: 61 coded missing: 479 / 642  
mean: 2.67239  
std. dev: 4.28215  
percentiles: 10% 25% 50% 75% 90%  
.2 .4 1.1 2.9 6.9

F46DBLRB:

1. Required only if reticulocytes are increased and there is a drop in hemoglobin (DIAGNOSIS: Hyperhemolytic Crisis).

F46BLRBN ----- INDIRECT BILIRUBIN

type: numeric (float)  
range: [.1,31.5] units: .1  
unique values: 64 coded missing: 510 / 642  
mean: 3.42045  
std. dev: 3.83746  
percentiles: 10% 25% 50% 75% 90%  
.7 1.3 2.4 4.15 6.8

F46BLRBN:

1. Required only if reticulocytes are increased and there is a drop in hemoglobin (DIAGNOSIS: Hyperhemolytic Crisis).

F46COMBS ----- DIRECT COOMBS

type: numeric (float)  
label: F46COMBS  
range: [1,2] units: 1  
unique values: 2 coded missing: 514 / 642  
tabulation: Freq. Numeric Label  
15 1 POSITIVE  
113 2 NEGATIVE

F46COMBS:

1. Required only if reticulocytes are increased and there is a drop in hemoglobin (DIAGNOSIS: Hyperhemolytic Crisis).

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F46IGG ----- ANTI IGG

type: numeric (float)  
label: F46IGG

range: [1,2] units: 1  
unique values: 2 coded missing: 539 / 642

tabulation: Freq. Numeric Label  
10 1 POSITIVE  
93 2 NEGATIVE

F46IGG:

1. Required only if reticulocytes are increased and there is a drop in hemoglobin (DIAGNOSIS: Hyperhemolytic Crisis).

F46ANTIC ----- ANTI C3

type: numeric (float)  
label: F46ANTIC

range: [1,2] units: 1  
unique values: 2 coded missing: 542 / 642

tabulation: Freq. Numeric Label  
7 1 POSITIVE  
93 2 NEGATIVE

F46ANTIC:

1. Required only if reticulocytes are increased and there is a drop in hemoglobin (DIAGNOSIS: Hyperhemolytic Crisis).

F46NECR ----- NECROSIS

type: numeric (float)  
label: F46NECR

range: [1,2] units: 1  
unique values: 2 coded missing: 607 / 642

tabulation: Freq. Numeric Label  
1 1 YES  
34 2 NO

F46NECR:

1. Bone marrow aspiration required only if (1) there was a drop in Hb $\geq$ 50% (2) Reticulocytes $\leq$ 3% and (3) Nucleated RBC's $\leq$ 5.

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F46CELL ----- ESTIMATED CELLULARITY

type: numeric (float)

range: [20,99] units: 1

unique values: 8 coded missing: 622 / 642

mean: 82

std. dev: 19.8016

percentiles:	10%	25%	50%	75%	90%
	55	80	90	97	99

F46CELL:

1. Bone marrow aspiration required only if (1) there was a drop in Hb $\geq$ 50% (2) Reticulocytes $\leq$ 3% and (3) Nucleated RBC's $\leq$ 5.

F46MYEY ----- MYELOID-ERYTHROID RATIO

type: numeric (float)

range: [1,99] units: 1

unique values: 13 coded missing: 618 / 642

mean: 15.625

std. dev: 23.4183

percentiles:	10%	25%	50%	75%	90%
	1	5	8.5	13.5	50

F46MYEY:

1. Bone marrow aspiration required only if (1) there was a drop in Hb $\geq$ 50% (2) Reticulocytes $\leq$ 3% and (3) Nucleated RBC's $\leq$ 5.

F46IRON ----- IRON STORES

type: numeric (float)

label: F46IRON

range: [1,2] units: 1

unique values: 2 coded missing: 618 / 642

tabulation:	Freq.	Numeric	Label
	23	1	PRESENT
	1	2	ABSENT

F46IRON:

1. Bone marrow aspiration required only if (1) there was a drop in Hb $\geq$ 50% (2) Reticulocytes $\leq$ 3% and (3) Nucleated RBC's $\leq$ 5.

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F46NMAT ----- NORMOBLASTIC MATURATION

type: numeric (float)  
label: F46NMAT

range: [1,2] units: 1  
unique values: 2 coded missing: 615 / 642

tabulation: Freq. Numeric Label  
9 1 NORMAL  
18 2 ABNORMAL

F46NMAT:

1. Bone marrow aspiration required only if (1) there was a drop in Hb $\geq$ 50% (2) Reticulocytes $\leq$ 3% and (3) Nucleated RBC's $\leq$ 5.

F46MMAT ----- MEGALOBLASTIC MATURATION

type: numeric (float)  
label: F46MMAT

range: [1,2] units: 1  
unique values: 2 coded missing: 612 / 642

tabulation: Freq. Numeric Label  
11 1 YES  
19 2 NO

F46MMAT:

1. Bone marrow aspiration required only if (1) there was a drop in Hb $\geq$ 50% (2) Reticulocytes $\leq$ 3% and (3) Nucleated RBC's $\leq$ 5.

F46LSC ----- LIVER-SPLEEN SCAN

type: numeric (float)  
label: F46LSC

range: [1,2] units: 1  
unique values: 2 coded missing: 222 / 642

tabulation: Freq. Numeric Label  
33 1 DONE  
387 2 NOT DONE

F46LSC:

1. Required if Splenic Sequestration.

**CODEBOOK FOR CSSCD FORM 46**  
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F46HBS ----- HB S %

type: numeric (float)

range: [10,99]

units: 1

unique values: 15

coded missing: 618 / 642

mean: 67.2917

std. dev: 31.3417

percentiles:	10%	25%	50%	75%	90%
	29	37.5	80	99	99

F46HBS:

1. Required if Hb electrophoresis performed.

**CODEBOOK FOR CSSCD FORM 47**  
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F46FLOWS ----- NUMBER OF FLOW SHEETS

type: numeric (float)  
 range: [0,7] units: 1  
 unique values: 7 coded missing: 0 / 642

tabulation:	Freq.	Value
	75	0
	394	1
	131	2
	30	3
	9	4
	2	5
	1	7

F46FRM52 ----- IS THERE A FORM 52 ON THE DATABASE

type: numeric (float)  
 range: [0,48] units: 1  
 unique values: 10 coded missing: 0 / 642

tabulation:	Freq.	Value
	153	0
	5	30
	11	31
	5	32
	17	33
	2	34
	2	36
	3	44
	411	46
	33	48

F46FRM52:

1. See Appendix N for list of CSSCD forms.

F46DHOSP ----- NUMBER OF DAYS HOSPITALIZED

type: numeric (float)  
 range: [0,40] units: 1  
 unique values: 27 coded missing: 61 / 642

mean: 6.21343  
 std. dev: 4.58813

percentiles:	10%	25%	50%	75%	90%
	2	3	5	8	12

\_dta:

1. Created 06/26/00.

A. List of variables deleted **F47DATE F47INIT F47NDATE F47LASTU F47LASTE**  
**F47ESTAT F47VDATE F47FCB F47DTE1-F47DTE6**

CODEBOOK FOR CSSCD FORM 47  
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- B. List of variables modified    **NONE**
- C. List of variables modified with a name change    **NONE**
- D.    Old name
- E.    New name
- F. List of variables modified date to days since DOE
- G.    Old name    **F47DATE**
- H.    New name    **JF47DATE**
- I. Collection Information:

**Form 47 (Acute Anemic Episode Flow Sheet)** was completed each time a Form 46 was completed if a patient was hospitalized or seen daily as an outpatient for an acute anemic event.

The form collects daily and laboratory information from day 2 of hospitalization for the event through discharge. Each Form 47 contains 6 days of hospital information. Consequently, multiple Form 47s can exist for a given event, dependent on length of stay or outpatient follow-up. Laboratory data are recorded every third hospital day (i.e., days 4, 7, 10, 13, etc.).

- J. Data Collection Period: 03/79 – 12/86

Form 47 was used between 03/79 and 06/86 for all patients and continued to be used for patients < 6 months of age through 12/86.

- K. Form Version Dates: 02/01/79, 03/01/79, 03/12/82

The codebook coincides with the most recent version of Form 47.

- L. Files Used to Store Information:

SAS System File: **R47.SD2**

Format File: **R47.FMT**

- M. Unique Record Identifiers: **ANONID, F47DATE, F47SHEET**

Records within the dataset are sorted by **ANONID, F47DATE, F47SHEET** (flow sheet number)

- N. Number of Observations (Patients) in SAS Dataset: 801 (417)

- O. Contents of SAS Dataset:

- Alphabetical Listing of Variables: See pp. 642-643

**CODEBOOK FOR CSSCD FORM 47**  
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- Listing of Variables by Position: See p. 644

P. Notes About Selected Variables:

- **F47DTE1-F47DTE6** – These date variables are four-digit integers composed of 2-digit month, 2-digit day of follow-up.
- **F47CBWB, F47CBWB2** – are the CBC White Blood Cell Count variables assumed to be “uncorrected” in relation to nucleated red blood cells (nRBCs).

Q. Computed Variables: None

R. Inter-Relationship with Other Datasets:

“Record 47” contains daily follow-up data for acute anemic events stored in **R46.SD2**. “Record 47” is linked to “Record 46” by **ANONID** and date patient sought care (if **F46DATE=F47DATE**).

The number of “Record 47s” which will link with any given “Record 46” is dependent on the length of the hospitalization or days followed as an outpatient. If a patient was hospitalized (or seen daily as an outpatient) for 7 days or less, then only one “Record 47” should be on the database for the event (**F47SHEET=1**). If a patient was hospitalized for 8-13 days, two “Record 47s” should be on the database, (**F47SHEET=2** for days 8-13), etc.

The value for the variable **F46FLOWS** in **R46.SD2** is the number of Record 47s” in **R47.SD2** which link by date with the “Record 46.” The value for the variable **F46DHOSP** in **R46.SD2** is the number of days hospitalized (i.e., the number of days information was collected on “Record 47s” which linked by date with the “Record 46”).

CONTENTS OF SAS DATASET: R47.SD2

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**CODEBOOK FOR CSSCD FORM 47**  
**ACUTE ANEMIC EPISODE FLOW SHEET**

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DATA FROM CSSCD FORM 47 - ACUTE ANEMIC EPISODE FLOW SHEET  
 VARIABLES ARE LISTED IN ALPHABETICAL ORDER AND IN ORDER OF THEIR POSITION  
 IN THE SAS DATASET AND ON FORM 47

The SAS System 16:42 Tuesday, January 30, 2007 3

The CONTENTS Procedure

Data Set Name	OUT1.R47	Observations	801
Member Type	DATA	Variables	26
Engine	V9	Indexes	0
Created	15:48 Friday, January 19, 2007	Observation Length	208
Last Modified	15:48 Friday, January 19, 2007	Deleted Observations	0
Protection		Compressed	NO
Data Set Type		Sorted	NO
Label			
Data Representation	WINDOWS		
Encoding	wlatin1 Western (Windows)		

Engine/Host Dependent Information

Data Set Page Size	16384
Number of Data Set Pages	11
First Data Page	1
Max Obs per Page	78
Obs in First Data Page	59
Number of Data Set Repairs	0
File Name	r47.sas7bdat
Release Created	9.0000M0
Host Created	XP_PRO

Alphabetic List of Variables and Attributes

#	Variable	Type	Len	Label
1	ANONID	Char	8	ANONYMIZED ID #
16	F47CBHB1	Num	8	CBC HB G DL
17	F47CBHB2	Num	8	CBC HB G DL
18	F47CBHC1	Num	8	CBC HCT %
19	F47CBHC2	Num	8	CBC HCT %
20	F47CBWB1	Num	8	CBC WBC X10NINTH L
21	F47CBWB2	Num	8	CBC WBC X10NINTH L
3	F47HOSP	Num	8	HOSPITALIZED OR OUTPATIENT
10	F47LVR1	Num	8	LIVER SIZE (CMS)
11	F47LVR2	Num	8	LIVER SIZE (CMS)
12	F47LVR3	Num	8	LIVER SIZE (CMS)
13	F47LVR4	Num	8	LIVER SIZE (CMS)
14	F47LVR5	Num	8	LIVER SIZE (CMS)
15	F47LVR6	Num	8	LIVER SIZE (CMS)
22	F47NRB1	Num	8	NUCLEATED RED BLOOD CELLS
23	F47NRB2	Num	8	NUCLEATED RED BLOOD CELLS
24	F47PLATE	Num	8	PLATELET COUNT
25	F47RETIC	Num	8	RETICULOCYTES
2	F47SHEET	Num	8	SHEET NUMBER
4	F47SPLZ1	Num	8	SPLEEN TIPS PALPATED (CM)

ACUTE ANEMIC EPISODE AND SPLENIC SEQUESTRATION FORM

FORM 46

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**CODEBOOK FOR CSSCD FORM 47**  
**ACUTE ANEMIC EPISODE FLOW SHEET**  
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5	F47SPLZ2	Num	8	SPLEEN TIPS PALPATED (CM)
6	F47SPLZ3	Num	8	SPLEEN TIPS PALPATED (CM)
7	F47SPLZ4	Num	8	SPLEEN TIPS PALPATED (CM)
8	F47SPLZ5	Num	8	SPLEEN TIPS PALPATED (CM)
9	F47SPLZ6	Num	8	SPLEEN TIPS PALPATED (CM)
26	JF47DATE	Num	8	DATE FIRST SOUGHT CARE - RECODE DAYS SINCE DOE

\*\*\*\*\*

**CODEBOOK FOR CSSCD FORM 47**  
**ACUTE ANEMIC EPISODE FLOW SHEET**  
CSSCS FULL COHORT PATIENTS

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---

```
* R47.FMT contains value labels for numerical codes assigned to
categorical*
* variables in the SAS dataset R47.SD2
*
*****;

* SIR/DBMS 2.2 SAS PROC STEP FROM DATABASE: CSSCD    04/25/99 11:49:29;

PROC FORMAT;

*   FORMAT F47HOSP IS DEFINED FOR VARIABLE F47HOSP;

VALUE F47HOSP
  1          = 'HOSPITALIZED'
  2          = 'OUTPATIENT';

*   FORMAT
      F47HOSP F47HOSP.;

RUN;
QUIT;
```

**CODEBOOK FOR CSSCD FORM 47**  
**ACUTE ANEMIC EPISODE FLOW SHEET - PAGE 1**  
CSSCS FULL COHORT PATIENTS

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---

F47SHEET ----- SHEET NUMBER

type: numeric (float)  
range: [1,7] units: 1  
unique values: 7 coded missing: 0 / 801

tabulation:	Freq.	Value
	569	1
	173	2
	42	3
	12	4
	3	5
	1	6
	1	7

F47VDATE ----- VERSION DATE **DELETED**

type: numeric (int)  
label: datelab  
range: [6971,8106] units: 1  
unique values: 3 coded missing: 0 / 801

tabulation:	Freq.	Numeric	Label
	125	6971	02/01/79
	518	6999	03/01/79
	158	8106	03/12/82

F47HOSP ----- HOSPITALIZED OR OUTPATIENT

type: numeric (float)  
label: F47HOSP  
range: [1,2] units: 1  
unique values: 2 coded missing: 12 / 801

tabulation:	Freq.	Numeric	Label
	782	1	HOSPITALIZED
	7	2	OUTPATIENT



**CODEBOOK FOR CSSCD FORM 47**  
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F47SPLZ4 ----- SPLEEN TIPS PALPATED (CM)

type: numeric (float)  
 range: [0,12] units: 1  
 unique values: 13 coded missing: 333 / 801

tabulation:	Freq.	Value	tabulation:	Freq.	Value
	324	0		6	7
	13	1		8	8
	24	2		4	9
	20	3		9	10
	15	4		6	11
	24	5		6	12
	9	6			

F47SPLZ5 ----- SPLEEN TIPS PALPATED (CM)

type: numeric (float)  
 range: [0,12] units: 1  
 unique values: 13 coded missing: 428 / 801

tabulation:	Freq.	Value	tabulation:	Freq.	Value
	267	0		7	7
	7	1		7	8
	21	2		3	9
	13	3		7	10
	11	4		6	11
	15	5		2	12
	7	6			

F47SPLZ6 ----- SPLEEN TIPS PALPATED (CM)

type: numeric (float)  
 range: [0,12] units: 1  
 unique values: 13 coded missing: 507 / 801

tabulation:	Freq.	Value	tabulation:	Freq.	Value
	209	0		3	7
	5	1		7	8
	14	2		2	9
	12	3		7	10
	9	4		5	11
	9	5		2	12
	10	6			



**CODEBOOK FOR CSSCD FORM 47**  
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F47LVR4 ----- LIVER SIZE (CMS)

type: numeric (float)  
 range: [0,18] units: 1  
 unique values: 19 coded missing: 341 / 801

tabulation:	Freq.	Value	tabulation:	Freq.	Value
	210	0		14	10
	22	1		8	11
	34	2		4	12
	44	3		3	13
	26	4		4	14
	23	5		3	15
	14	6		5	16
	9	7		1	17
	20	8		1	18
	15	9			

F47LVR5 ----- LIVER SIZE (CMS)

type: numeric (float)  
 range: [0,18] units: 1  
 unique values: 18 coded missing: 438 / 801

tabulation:	Freq.	Value	tabulation:	Freq.	Value
	171	0		12	9
	18	1		12	10
	21	2		8	11
	36	3		6	12
	21	4		1	13
	14	5		3	14
	9	6		2	15
	8	7		4	16
	15	8		2	18

F47LVR6 ----- LIVER SIZE (CMS)

type: numeric (float)  
 range: [0,20] units: 1  
 unique values: 19 coded missing: 513 / 801

tabulation:	Freq.	Value	tabulation:	Freq.	Value
	133	0		4	12
	15	1		1	13
	20	2		1	14
	27	3		2	15
	16	4		4	16
	10	5		1	18
	7	6		1	20
	6	7			
	10	8			
	15	9			
	8	10			
	7	11			



## 7.6.0: Acute Anemic Events – Overview

---

F47CBHB1 ----- CBC HB G|DL  
type: numeric (float)

range: [2.5,16] units: .1  
unique values: 108 coded missing: 134 / 801

mean: 8.08141  
std. dev: 2.32235

percentiles:	10%	25%	50%	75%	90%
	5.3	6.4	7.9	9.6	11.2

F47CBHB2 ----- CBC HB G|DL  
type: numeric (float)

range: [3,15.9] units: .1  
unique values: 90 coded missing: 469 / 801

mean: 8.36355  
std. dev: 2.20505

percentiles:	10%	25%	50%	75%	90%
	5.6	6.8	8.2	9.85	11.2

F47CBHC1 ----- CBC HCT %  
type: numeric (float)

range: [8,47] units: .1  
unique values: 256 coded missing: 133 / 801

mean: 23.9424  
std. dev: 7.06104

percentiles:	10%	25%	50%	75%	90%
	15.2	18.7	23.3	28.35	34

F47CBHC2 ----- CBC HCT %  
type: numeric (float)

range: [9,43.8] units: .1  
unique values: 181 coded missing: 469 / 801

mean: 24.8497  
std. dev: 6.59078

percentiles:	10%	25%	50%	75%	90%
	16.8	19.95	24.15	29.5	33.8

## 7.6.0: Acute Anemic Events – Overview

F47CBWB1 ----- CBC WBC X10INTH|L  
type: numeric (float)  
range: [2.5,59.5] units: .1  
unique values: 228 coded missing: 267 / 801  
mean: 14.3908  
std. dev: 7.54783  
percentiles: 10% 25% 50% 75% 90%  
6.5 9 13 17.8 24.4

F47CBWB1:  
1. WBC should be uncorrected for nRBC's.

F47CBWB2 ----- CBC WBC X10INTH|L  
type: numeric (float)  
range: [2.6,81.1] units: .1  
unique values: 137 coded missing: 542 / 801  
mean: 14.1166  
std. dev: 8.24284  
percentiles: 10% 25% 50% 75% 90%  
7.2 9.1 12.1 16.9 21.6

F47CBWB2:  
1. WBC should be uncorrected for nRBC's.

F47NRB1 ----- NUCLEATED RED BLOOD CELLS  
type: numeric (float)  
range: [0,686] units: 1  
unique values: 90 coded missing: 330 / 801  
mean: 26.4183  
std. dev: 80.023  
percentiles: 10% 25% 50% 75% 90%  
0 0 2 12 64

F47NRB2 ----- NUCLEATED RED BLOOD CELLS  
type: numeric (float)  
range: [0,664] units: 1  
unique values: 49 coded missing: 579 / 801  
mean: 19.464  
std. dev: 65.7415  
percentiles: 10% 25% 50% 75% 90%  
0 0 0 8 52

## 7.6.0: Acute Anemic Events – Overview

---

F47PLATE ----- PLATELET COUNT

```
      type: numeric (float)

      range: [43,1540]           units: 1
unique values: 316             coded missing: 333 / 801

      mean: 363.489
      std. dev: 228.34

percentiles:    10%    25%    50%    75%    90%
                115    184.5  315.5  480    666
```

F47PLATE:

1. Required only for the first 3 days.

F47RETIC ----- RETICULOCYTES

```
      type: numeric (float)

      range: [0,71]           units: .1
unique values: 203           coded missing: 255 / 801

      mean: 10.6738
      std. dev: 10.6113

percentiles:    10%    25%    50%    75%    90%
                .3     2.1    7.8    16     25
```

F47RETIC:

1. Required only for the first 3 days.

\_dta:

1. Run on 08/16/99.