

National Health and Nutrition Examination Survey

2005-2006 Data Documentation, Codebook, and Frequencies

Blood Pressure (BPX_D)

Data File: BPX_D.xpt

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Last Revised: NA

Component Description

Accurate measurement of blood pressure (BP) is a major public health concern; it is essential for hypertension screening, as well as for disease management. Hypertension is a powerful, consistent and independent risk factor for cardiovascular disease and renal disease.

Eligible Sample

Heart rate is measured on all children 0-7 years of age; radial pulse is measured on examinees 8 years and older; and blood pressure (BP) is measured on all examinees 8 years and older.

Exclusion criteria: presence of the following on both arms: rashes, gauze dressings, casts, edema, paralysis, tubes, open sores or wounds, withered arms, a-v shunts, or if blood has been drawn from arm within the last week.

Protocol and Procedure

After resting quietly in a sitting position for 5 minutes and determining the maximum inflation level (MIL), three consecutive blood pressure readings are obtained. If a blood pressure measurement is interrupted or incomplete, a fourth attempt may be made. All BP determinations (systolic and diastolic) are taken in the Mobile Examination Center (MEC).

Quality Assurance & Quality Control

The BP examiners are certified for blood pressure measurement through a training program from Shared Care Research and Education Consulting. Certification is achieved when physician examiners meet all requirements of the training program. The initial training includes:

- didactic instruction about BP measurement and propensity for error;
- practice listening to systolic and diastolic BP sounds using a standardized audio-video tape presentation;
- audio-video tape test;
- written exam;
- examiner and gold standard instructor simultaneously listening to BP of a minimum of 20 volunteers of all ages through a Y- stethoscope to compare measures; and
- observation of protocol technique using a checklist.

Certification requires a score of 100 per cent on the audio-video tape test. Correct answers on the audio-video tape test require the examiner's answers and the standardized test answers to be within +/- 2mm mercury (Hg) on 92 per cent of 24 measures (12 systolic, 12 diastolic), and within +/- 4mm Hg on 100 percent of 24 measures (12 systolic, 12 diastolic). For more information on quality assurance and control, see Ostchega et al. (Ostchega, 2003).

For more details on the QA/QC process for this component, please refer to the Physician Section of the MEC Operations Manual.

Data Processing and Editing

The following specifications were programmed in the computer system used to capture the blood pressure data:

- systolic blood pressure and maximum inflation level cannot be greater than 300 mmHg;
- systolic and diastolic blood pressure and maximum inflation level can be even numbers only;
- systolic blood pressure must be greater than diastolic blood pressure;
- if there is no systolic blood pressure, there can be no diastolic blood pressure;
- diastolic blood pressure can be zero

Analytic Notes

Please refer to the Analytic Guidelines for further details on the use of sample weights and other analytic issues. The Analytic Guidelines are available on the NHANES website.

References

- Ostchega Y, Prineas RJ, Paulose-Ram R, Grim CM, Willard C, Collins C. National Health and Nutrition Examination Survey (NHANES) 1999-2000: Effect of observer training and protocol standardization on reducing blood pressure measurement error. J Clinical Epidemiology. 2003 Aug; 56 (8): 768-774 .

SEQN - Respondent sequence number

Variable Name:	SEQN
SAS Label:	Respondent sequence number
English Text:	Respondent sequence number.
Target:	Both males and females 0 YEARS - 150 YEARS

PEASCST1 - Blood Pressure Status

Variable Name: PEASCST1

SAS Label: Blood Pressure Status

English Text: Blood Pressure Status

Target: Both males and females 0 YEARS - 150 YEARS

Code or Value	Value Description	Count	Cumulative	Skip to Item
1	Complete	9512	9512	
2	Partial	101	9613	
3	Not done	337	9950	
.	Missing	0	9950	

PEASCTM1 - Blood Pressure Time in Seconds

Variable Name:PEASCTM1

SAS Label:Blood Pressure Time in Seconds

English Text:Blood Pressure Time in Seconds

Target:Both males and females 0 YEARS - 150 YEARS

Code or Value	Value Description	Count	Cumulative	Skip to Item
2 to 2679	Range of Values	9641	9641	
.	Missing	309	9950	

PEASCCT1 - Blood Pressure Comment

Variable Name: PEASCCT1

SAS Label: Blood Pressure Comment

English Text: Blood Pressure Comment

Target: Both males and females 0 YEARS - 150 YEARS

Code or Value	Value Description	Count	Cumulative	Skip to Item
1	Safety exclusion	4	4	
2	SP refusal	104	108	
3	No time	2	110	
4	Physical limitation	34	144	
5	Communication problem	5	149	
7	SP ill/emergency	10	159	
14	Interrupted	2	161	
56	Came late/left early	142	303	
84	SP with child	3	306	
99	Other, specify	132	438	
.	Missing	9512	9950	

BPXCHR - 60 sec HR (30 sec HR * 2)

Variable Name:BPXCHR

SAS Label:60 sec HR (30 sec HR * 2)

English Text:60 sec HR (30 sec HR * 2)

Target:Both males and females 0 YEARS - 7 YEARS

Code or Value	Value Description	Count	Cumulative	Skip to Item
0 to 288	Range of Values	2168	2168	
.	Missing	7782	9950	

BPQ150A - Had food in the past 30 minutes?

Variable Name:BPQ150A

SAS Label:Had food in the past 30 minutes?

English Text:Have you had any of the following in the past 30 minutes?: Food

English Instructions:Check each that applies

Target:Both males and females 8 YEARS - 150 YEARS

Code or Value	Value Description	Count	Cumulative	Skip to Item
1	Yes	2167	2167	
2	No	5288	7455	
.	Missing	2495	9950	

BPQ150B - Had alcohol in the past 30 minutes?

Variable Name: BPQ150B

SAS Label: Had alcohol in the past 30 minutes?

English Text: Have you had any of the following in the past 30 minutes?: Alcohol

English Instructions: Check each that applies

Target: Both males and females 8 YEARS - 150 YEARS

Code or Value	Value Description	Count	Cumulative	Skip to Item
1	Yes	4	4	
2	No	7451	7455	
.	Missing	2495	9950	

BPQ150C - Had coffee in the past 30 minutes?

Variable Name:BPQ150C

SAS Label:Had coffee in the past 30 minutes?

English Text:Have you had any of the following in the past 30 minutes?: Coffee

English Instructions:Check each that applies

Target:Both males and females 8 YEARS - 150 YEARS

Code or Value	Value Description	Count	Cumulative	Skip to Item
1	Yes	27	27	
2	No	7428	7455	
.	Missing	2495	9950	

BPQ150D - Had cigarettes in the past 30 minutes?

Variable Name: BPQ150D

SAS Label: Had cigarettes in the past 30 minutes?

English Text: Have you had any of the following in the past 30 minutes?: Cigarettes

English Instructions: Check each that applies

Target: Both males and females 8 YEARS - 150 YEARS

Code or Value	Value Description	Count	Cumulative	Skip to Item
1	Yes	90	90	
2	No	7365	7455	
.	Missing	2495	9950	

BPAARM - Arm selected:

Variable Name:BPAARM

SAS Label:Arm selected:

English Text:Arm selected:

Target:Both males and females 8 YEARS - 150 YEARS

Code or Value	Value Description	Count	Cumulative	Skip to Item
1	Right	7356	7356	
2	Left	37	7393	
8	Could not obtain	62	7455	
.	Missing	2495	9950	

BPACSZ - Coded cuff size

Variable Name:BPACSZ

SAS Label:Coded cuff size

English Text:Cuff size (cm) (width X length)

Target:Both males and females 8 YEARS - 150 YEARS

Code or Value	Value Description	Count	Cumulative	Skip to Item
1	Infant (6X12)	1	1	
2	Child (9X17)	457	458	
3	Adult (12X22)	2793	3251	
4	Large (15X32)	3291	6542	
5	Thigh (18X35)	846	7388	
.	Missing	2562	9950	

BPXPLS - 60 sec. pulse (30 sec. pulse * 2):

Variable Name:BPXPLS

SAS Label:60 sec. pulse (30 sec. pulse * 2):

English Text:60 sec. pulse (30 sec. pulse * 2):

Target:Both males and females 8 YEARS - 150 YEARS

Code or Value	Value Description	Count	Cumulative	Skip to Item
40 to 220	Range of Values	7441	7441	
.	Missing	2509	9950	

BPXDB - # of dropped beats in 30 seconds

Variable Name: BPXDB

SAS Label: # of dropped beats in 30 seconds

English Text: # of dropped beats in 30 seconds

Target: Both males and females 12 YEARS - 49 YEARS

Code or Value	Value Description	Count	Cumulative	Skip to Item
1 to 18	Range of Values	55	55	
.	Missing	9895	9950	

BPXPULS - Pulse regular or irregular?

Variable Name: BPXPULS

SAS Label: Pulse regular or irregular?

English Text: Pulse regular or irregular?

Target: Both males and females 0 YEARS - 150 YEARS

Code or Value	Value Description	Count	Cumulative	Skip to Item
1	Regular	9230	9230	
2	Irregular	208	9438	
.	Missing	512	9950	

BPXPTY - Pulse type:

Variable Name: BPXPTY
SAS Label: Pulse type:
English Text: Pulse type:
Target: Both males and females 8 YEARS - 150 YEARS

Code or Value	Value Description	Count	Cumulative	Skip to Item
1	Radial	7444	7444	
2	Brachial	5	7449	
8	Could not obtain	0	7449	
.	Missing	2501	9950	

BPXML1 - MIL: maximum inflation levels (mm Hg)

Variable Name: BPXML1

SAS Label: MIL: maximum inflation levels (mm Hg)

English Text: MIL: maximum inflation levels (mm Hg)

Target: Both males and females 8 YEARS - 150 YEARS

Hard Edits: 70.0000 to 300.0000

Code or Value	Value Description	Count	Cumulative	Skip to Item
110 to 290	Range of Values	7377	7377	
888	Could not obtain	0	7377	
.	Missing	2573	9950	

BPXSY1 - Systolic: Blood pres (1st rdg) mm Hg

Variable Name: BPXSY1

SAS Label: Systolic: Blood pres (1st rdg) mm Hg

English Text: Systolic: Blood pressure (first reading) mm Hg

Target: Both males and females 8 YEARS - 150 YEARS

Code or Value	Value Description	Count	Cumulative	Skip to Item
74 to 270	Range of Values	6668	6668	
.	Missing	3282	9950	

BPXDI1 - Diastolic: Blood pres (1st rdg) mm Hg

Variable Name: BPXDI1

SAS Label: Diastolic: Blood pres (1st rdg) mm Hg

English Text: Diastolic: Blood pressure (first reading) mm Hg

Target: Both males and females 8 YEARS - 150 YEARS

Code or Value	Value Description	Count	Cumulative	Skip to Item
0 to 124	Range of Values	6668	6668	
.	Missing	3282	9950	

BPAEN1 - Enhancement used first reading

Variable Name:BPAEN1

SAS Label:Enhancement used first reading

English Text:Enhancement used first reading

Target:Both males and females 8 YEARS - 150 YEARS

Code or Value	Value Description	Count	Cumulative	Skip to Item
1	Yes	0	0	
2	No	7388	7388	
8	Could not obtain	0	7388	
.	Missing	2562	9950	

BPXSY2 - Systolic: Blood pres (2nd rdg) mm Hg

Variable Name: BPXSY2

SAS Label: Systolic: Blood pres (2nd rdg) mm Hg

English Text: Systolic: Blood pressure (second reading) mm Hg

Target: Both males and females 8 YEARS - 150 YEARS

Code or Value	Value Description	Count	Cumulative	Skip to Item
72 to 232	Range of Values	6265	6265	
.	Missing	3685	9950	

BPXDI2 - Diastolic: Blood pres (2nd rdg) mm Hg

Variable Name: BPXDI2

SAS Label: Diastolic: Blood pres (2nd rdg) mm Hg

English Text: Diastolic: Blood pressure (second reading) mm Hg

Target: Both males and females 8 YEARS - 150 YEARS

Code or Value	Value Description	Count	Cumulative	Skip to Item
0 to 124	Range of Values	6265	6265	
.	Missing	3685	9950	

BPAEN2 - Enhancement used second reading

Variable Name: BPAEN2

SAS Label: Enhancement used second reading

English Text: Enhancement used second reading

Target: Both males and females 8 YEARS - 150 YEARS

Code or Value	Value Description	Count	Cumulative	Skip to Item
1	Yes	138	138	
2	No	7246	7384	
8	Could not obtain	0	7384	
.	Missing	2566	9950	

BPXSY3 - Systolic: Blood pres (3rd rdg) mm Hg

Variable Name: BPXSY3

SAS Label: Systolic: Blood pres (3rd rdg) mm Hg

English Text: Systolic: Blood pressure (third reading) mm Hg

Target: Both males and females 8 YEARS - 150 YEARS

Code or Value	Value Description	Count	Cumulative	Skip to Item
78 to 234	Range of Values	6091	6091	
.	Missing	3859	9950	

BPXDI3 - Diastolic: Blood pres (3rd rdg) mm Hg

Variable Name: BPXDI3

SAS Label: Diastolic: Blood pres (3rd rdg) mm Hg

English Text: Diastolic: Blood pressure (third reading) mm Hg

Target: Both males and females 8 YEARS - 150 YEARS

Code or Value	Value Description	Count	Cumulative	Skip to Item
0 to 122	Range of Values	6091	6091	
.	Missing	3859	9950	

BPAEN3 - Enhancement used third reading

Variable Name:BPAEN3

SAS Label:Enhancement used third reading

English Text:Enhancement used third reading

Target:Both males and females 8 YEARS - 150 YEARS

Code or Value	Value Description	Count	Cumulative	Skip to Item
1	Yes	137	137	
2	No	7247	7384	
8	Could not obtain	0	7384	
.	Missing	2566	9950	

BPXSY4 - Systolic: Blood pres (4th rdg) mm Hg

Variable Name: BPXSY4

SAS Label: Systolic: Blood pres (4th rdg) mm Hg

English Text: Systolic: Blood pressure (fourth reading if necessary) mm Hg

Target: Both males and females 8 YEARS - 150 YEARS

Code or Value	Value Description	Count	Cumulative	Skip to Item
76 to 222	Range of Values	1179	1179	
.	Missing	8771	9950	

BPXDI4 - Diastolic: Blood pres (4th rdg) mm Hg

Variable Name:BPXDI4

SAS Label:Diastolic: Blood pres (4th rdg) mm Hg

English Text:Diastolic: Blood pressure (fourth reading if necessary) mm Hg

Target:Both males and females 8 YEARS - 150 YEARS

Code or Value	Value Description	Count	Cumulative	Skip to Item
0 to 124	Range of Values	1179	1179	
.	Missing	8771	9950	

BPAEN4 - Enhancement used fourth reading

Variable Name:BPAEN4

SAS Label:Enhancement used fourth reading

English Text:Enhancement used fourth reading

Target:Both males and females 8 YEARS - 150 YEARS

Code or Value	Value Description	Count	Cumulative	Skip to Item
1	Yes	112	112	
2	No	2086	2198	
8	Could not obtain	0	2198	
.	Missing	7752	9950	