

# The Ambulatory Blood Pressure Monitoring (**ABPM**) dataset

Khalida DOUIBI<sup>a,\*</sup>, Nesma SETTOUTI<sup>a</sup>, Mohammed El Amine CHIKH<sup>a</sup>, Malik BENABID<sup>b</sup>

<sup>a</sup>Biomedical Engineering Laboratory, Tlemcen University, Algeria

<sup>b</sup>CHU SETIF Cardiology department, Algeria

\*khalouddouibi@gmail.com

## Description of the dataset

The study was performed on 270 patients (159 women and 101 men), aged between 14 and 92 years. The *ABPM* records were labeled by a cardiologist from *CHU SETIF Cardiology* department, Algeria. The Table 1 below presents the labels used by the expert, their code in the dataset, with the number of examples per label.

Code	Labels	# Examples	
		True	False
Validity	<i>Validity</i>	185	85
Circadian-Rhythm	<i>Circadian Rhythm</i>	97	173
Pulse-Pressure	<i>Pulse Pressure</i>	232	38
BP-Variability	<i>Blood Pressure Variability</i>	270	0
BP-Load	<i>Blood Pressure Load</i>	173	97
Morning-Surge	<i>Morning Surge</i>	37	233

Table 1: Description of *ABPM* labels

Table 2 presents the 40 attributes that characterize each *ABPM* data in the dataset.

Code	Attributes	Type	Min	Max
ID	<i>ID patient</i>	Numeric	1	338
HRecord	<i>Record over 24 hours</i>	Numeric	15.5	24
Perc	<i>Percentage of points ignored</i>	Numeric	0	85.5
Interrupt	<i>Interruption of recording 2h consecutive</i>	Nominal	0	1
Age	<i>Age</i>	Numeric	14	92
Gender	<i>Gender</i>	Nominal		
Weight	<i>Weight</i>	Numeric	37	130
Height	<i>Height</i>	Numeric	106	190
Medication	<i>Medication</i>	Nominal		
BPS-24	<i>All BP Systolic averages</i>	Numeric	101.8	219.9
BPD-24	<i>All BP Diastolic averages</i>	Numeric	56.3	142.9
BPS-Day24	<i>Day BP Systolic Averages</i>	Numeric	101.9	219.9
BPD-Day24	<i>Day BP Diastolic Averages</i>	Numeric	57.8	149

Code	Attributes	Type	Min	Max
BPS-Night24	<i>Night BP Systolic Averages</i>	Numeric	0	210.8
BPD-Night24	<i>Night BP Diastolic Averages</i>	Numeric	0	167.8
BPS-load-Day	<i>Day BP Systolic load valuse</i>	Numeric	0	100
BPD-load-Day	<i>Day BP Diastolic load valuse</i>	Numeric	1.5	100
BPS-load-Night	<i>Night BP Systolic load valuse</i>	Numeric	0	100
BPD-load-Night	<i>Night BP Diastolic load valuse</i>	Numeric	0	100
Max-Sys	<i>Maximum systolic</i>	Numeric	121	283
Min-Sys	<i>Minimum systolic</i>	Numeric	0	157
Max-Dia	<i>Maximum Diastolic</i>	Numeric	88	210
Min-Dia	<i>Minimum Diastolic</i>	Numeric	0	88
Sys-Night-Des	<i>Systolic Night Des.</i>	Numeric	-68.8	106
Dia-Night-Des	<i>Diastolic Night Des.</i>	Numeric	-71.5	100
BPS-CV-all	<i>BP CV all Sys</i>	Numeric	5.7	66.2
BPD-CV-all	<i>BP CV all Dia</i>	Numeric	6.2	55.3
BPS-CV-Day	<i>BP CV day Sys</i>	Numeric	5.9	34.4
BPD-CV-Day	<i>BP CV day Dia</i>	Numeric	6.3	42.8
BPS-CV-Night	<i>BP CV night Sys</i>	Numeric	0	260.3
BPD-CV-Night	<i>BP CV night Dia</i>	Numeric	0	137.5
Phys-comment	<i>Physician comments</i>	Nominal		
Path	<i>Pathologies</i>	Nominal		
BPS-wakeUp	<i>BP Systolic two hours after waking up</i>	Numeric	0	251
BPD-wakeUp	<i>BP Diastolic two hours after waking up</i>	Numeric	0	221
low-BPS-Night	<i>The lowest BP Systolic night</i>	Numeric	0	191
low-BPD-Night	<i>The lowest BP Diastolic night</i>	Numeric	0	131

Table 2: *Description of ABPM attributes*

Table 3 represents the main statistics of the *ABPM* Multi-label dataset. Figure 1 shows the distribution of labelsets occurrence.

Dataset	Domain	Instances	Attributes	Labels	Cardinality	Density	Distinct	Pmin
<i>ABPM</i>	Medical	270	40	6	4.4630	0.7438	26	0

Table 3: *ABPM* dataset statistics

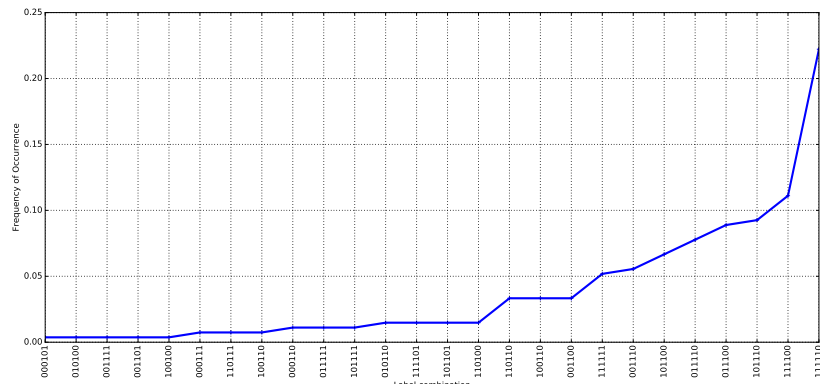


Figure 1: The distribution of label set occurrence. Labels are ordered as per Table 1. e.g., 000101 indicates the labels *Blood Pressure Variability* and *Morning Surge*.