Welch Allyn One-Piece Cuff Evaluation
Durable and Disposable (SPU) Styles
Electronic NIBP Monitors*

Critikon DINAMAP® Plus

Test Protocol

36 healthy adult test subjects (12 male, 24 female) were recruited. Four blood pressure readings were taken using the Critikon DINAMAP Plus: The first and the last readings were both with the Critikon cuff; these would serve as the controls. The second and third readings were with the Welch Allyn Durable and Disposable One Piece Cuffs (their order was alternated among the test subjects). If the two control readings of systolic or diastolic blood pressure differed by more than 15 mm Hg, that series of four readings was rejected and taken over.

Analysis

The data was analyzed by comparing the readings from each Welch Allyn cuff with the average of the two control readings from the Critikon cuff. The mean differences and standard deviations of the 36 systolic readings and 36 diastolic readings, compared against the average control readings, were calculated. Cuffs passed the test if the mean difference of the 36 readings was not greater than 3 mm Hg and the standard deviation was not greater than 8 mm Hg.

Results and Conclusions

The results showed that the Welch Allyn Durable and Disposable One Piece Cuffs met the preset criteria for passage.

The conclusions from this study are that both Welch Allyn Durable and Disposable One Piece Cuffs provided blood pressure readings equivalent to those of the Critikon cuffs.

* Complete independent testing data on file, Welch Allyn, Inc.

Welch Allyn®

Critikon DINAMAP® Plus

(Test Cuff Reading) - (Average Control Reading), mm Hg

	DURABLE TEST CUFF		SPU TEST CUFF	
Subject	Systolic	Diastolic	Systolic	Diastolic
1	-1.0	0.0	3.0	-1.0
2	-4.0	-0.5	-11.0	-0.5
3	8.0	3.5	-4.0	1.5
4	-0.5	-1.5	-1.5	-1.5
5	-8.0	7.0	-8.0	-4.0
6	-2.5	-4.5	-11.5	-9.5
7	11.0	5.0	11.0	0.0
8	-4.5	0.0	5.5	-3.0
9	-4.5	2.0	-4.5	-1.0
10	-7.0	-1.5	5.0	-1.5
11	0.5	2.0	-6.5	0.0
12	-1.0	0.5	3.0	-1.5
13	-3.0	4.5	3.0	6.5
14	-3.0	2.5	-4.0	1.5
15	-13.0	2.5	-15.0	-1.5
16	-2.5	-2.5	-4.5	-3.5
17	8.5	4.5	-0.5	3.5
18	-2.0	0.0	-2.0	-2.0
19	8.0	-4.5	0.0	-4.5
20	19.0	5.5	9.0	7.5
21	-15.5	-1.5	-13.5	-2.5
22	-3.0	0.5	-3.0	1.5
23	-3.5	-2.5	-0.5	3.5
24	0.0	0.5	0.0	1.5
25	7.5	5.5	6.5	-1.5
26	0.5	5.0	0.5	2.0
27	1.5	0.5	-2.5	0.5
28	4.5	4.0	0.5	0.0
29	0.0	0.5	-4.0	-1.5
30	-1.0	-4.5	0.0	0.5
31	-2.0	7.5	-1.0	-1.5
32	0.5	1.0	-2.5	-5.0
33	-4.5	-7.0	-1.5	-4.0
34	-1.5	8.5	-4.5	-4.5
35	2.5	7.0	12.5	3.0
36	0.0	0.0	-3.0	-1.0
Mean:	-0.43	1.38	-1.38	-0.65
Std Dev:	6.29	3.69	6.08	3.20

Welch Allyn®