

ABSTRACT

The accuracy of blood pressure measurements is the main element in the diagnosis and prevention of cardiovascular disease and stroke. Manual mercury tensimeters have been used for more than 100 years and have also been considered the "gold standard" of blood pressure gauges in which treatment guidelines were developed.

In this study the author will compare the accuracy of the Non-Invasive Automatic Sphygmomanometer with the Manual Air Mercury Testimeter against the arm and NIBP simulator based on the position of the tool, and the size of the cuff.

During measurement of error and Uncertainty Type A (UA) know that Sphygmomanometer Automatic Non-Invasive type of Homecare had error number bigger than the professional Type. Accurately the Non-Invasive and Patient Sphygmomanometer Monitor has no difference with the Mercury Manual Tensimeter with the smallest difference of 0.06 mmHg. there were differences in the results of systole and dystol using adult size cuffs with large adult size masks with the highest difference of 3.80 mmhg. There was a difference in the results of systole and dystole when the instrument was positioned 10 cm above the arm with the position of the tool 10 cm below the arm with the highest difference of -1.50 mmhg. It can be concluded that the Sphygmomanometer Non-Invasive and Patient Monitor has no difference with the Mercury Manual Tensimeter

Keywords: Mercury Manual Tensimeter, Non-Invasive Sphygmomanometer, Patient Monitor, Cuff Size, Position Of Instrument.