

Turkish Journal of Medical Sciences

Turkish Journal

of

Medical Sciences

Accuracy of Sphygmomanometers

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[Keywords](#)

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Abstract: One of the factors affecting the accuracy of readings of blood pressure is the equipment used. Defects or inaccuracy of aneroid sphygmomanometers may be source of error in blood pressure measurement. We inspected 100 sphygmomanometers for physical defects and assessed their accuracy against a standard mercury manometer at four different pressure points. 46 of the 100 sphygmomanometers were determined to be intolerant (deviation from the mercury manometer by greater than ± 3 mm Hg at two or more of the test points). There were faults in the inflation-deflation system of 34 sphygmomanometers. The most common physical defects were: defective pump bulb, defective rubber tubing and indicator needles not pointing to the "zero box". There was no regular preventive maintenance program in health units. We recommend that health care providers should use mercury sphygmomanometers and have at their disposal the equipment necessary to check the accuracy of manometers.

Key Words: Sphygmomanometers, calibration, blood pressure measurement, Turkey.

Turk J Med Sci 1999; 29(4): 487-492.

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