

# Twenty-four-hour ambulatory blood pressure monitoring for clinical evaluation of hypertensive patients in primary care: which groups would most benefit?

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Guilherme B. Grezzana; Airton T. Stein; Lucia C. Pellanda [show less](#)

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## Abstract

### Background

Arterial hypertension is an important risk factor for cardiovascular outcomes. Blood pressure (BP) control levels remain largely out of target among primary healthcare (PHC) patients. Twenty-four-hour ambulatory blood pressure monitoring (ABPM) may contribute toward the identification of cardiovascular risk groups.

### Objective

To assess concordance between conventional office BP measurements and 24-h ABPM of hypertension control in cardiovascular risk groups of PHC hypertensive patients.

### Patients and methods

A cross-sectional study with 569 hypertensive patients was carried out. The evaluation of BP was performed by a PHC doctor, and the 24-h ABPM was performed by a different and blinded provider. The therapeutic targets for BP followed the guidance of The Eighth Joint National Committee, the Brazilian guideline, and the 2013 European Society of Hypertension. Considering the hypertension control therapeutic targets, the guidelines were not similar and were used to evaluate differences in BP value concordances compared with BP standard measurements.

### Results

After a multivariate logistic regression analysis, a conventional BP was used in comparison with ABPM in different cardiovascular risk groups of hypertensive patients. According to the ABPM by European Society of Hypertension guideline, the subgroup of inactive patients ( $P=0.006$ ), with altered glycemia ( $P=0.015$ ) and over 30 mg/dl albuminuria ( $P=0.001$ ), presented discordance among methods. When a conventional BP measurement in comparison with the ABPM results according to the Brazilian ABPM guideline was used, the discordance occurred significantly in inactive ( $P=0.001$ ) and microalbuminuria more than 30 mg/dl ( $P=0.022$ ) subgroups. However, in this comparison, a concordance between

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high-density lipoprotein more than 60 mg/dl (P=0.015) and obesity (P=0.035) subgroups occurred.

### **Conclusion**

Uncontrolled glucose levels, a sedentary lifestyle, and the presence of microalbuminuria correspond to some cardiovascular risk groups that would particularly benefit from 24-h ABPM as a tool for the control of BP with the PHC hypertensive patients of this study.

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