



HOW TO RELIABLY DIAGNOSE ARTERIAL HYPERTENSION?

LESSONS FROM 24H BLOOD PRESSURE MONITORING

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CONCLUSION:

- ▶ Blood pressure measurements in the home-setting taken during the afternoon (1 p.m. - 5 p.m.) have proven most reliable to diagnose arterial hypertension.
- ▶ Future research should indicate the precise number and dispersion of measurements needed.



▶ BACKGROUND

- Blood pressure **fluctuates** considerably **during the day** making diagnosis and therapeutic control based on a single measurement suboptimal.
- In the clinical setting blood pressure measurement could **unreliably represent mean blood pressure** due to phenomena such as **white coat** and **masked hypertension**.
- We investigated the **number** and **timing** of measurements needed in the home-setting to give a trustworthy approximation of the average blood pressure.

▶ METHODS

- In this analytic observational study, 306 valid clinically indicated **24 h ambulatory blood pressure measurements (ABPM)** were included.
- Hypertension was defined as the daytime (9 a.m. - 9 p.m.) mean blood pressure exceeding 135/85 mm Hg.
- Kappa coefficients were used to study the correlation between blood pressure measurements taken during **four-hour intervals** and the diagnosis based on the daytime ABPM average.

▶ RESULTS

- 162 (53%) patients had blood pressure values exceeding the criteria for hypertension, 132 (81%) of them already receiving treatment.
- Test statistics indicate that **age, gender, BMI** and **mean pulse pressure** significantly influence the risk of having arterial hypertension.
- Kappa coefficients state a good agreement for all time intervals, with a slightly lower value for morning (9 a.m. - 1 p.m.) and evening (5 p.m. - 9 p.m.) blood pressure measurements.

