

Home blood pressure telemonitoring improves hypertension control in general practice. The TeleBPCare study

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Background Self blood pressure monitoring at home may improve blood pressure control and patients' compliance with treatment, but its implementation in daily practice faces difficulties. Teletransmission facilities may offer a more efficient approach to long-term home blood pressure monitoring.

Methods Twelve general practitioners screened 391 consecutive uncontrolled mild-moderate hypertensive patients (80% treated), 329 of whom (58 ± 11 years, 54% men) were randomized to either usual care on the basis of office blood pressure (group A, *n* = 113) or to integrated care on the basis of teletransmitted home blood pressure (group B, *n* = 216). Twenty-four-hour ambulatory blood pressure monitoring was performed at baseline and after 6 months, during which treatment was optimized according to either office (group A) or home (group B) blood pressure values. We compared differences between groups in the rate of daytime ambulatory blood pressure normalization (<130/80 mmHg), need of treatment changes during follow-up, quality of life scores, and healthcare costs.

Results Baseline office blood pressures were 149 ± 12/89 ± 9 and 148 ± 13/89 ± 7 mmHg in groups A (*n* = 111) and B (*n* = 187) respectively, the corresponding daytime values being 140 ± 11/84 ± 8 and 139 ± 11/84 ± 8 mmHg. The percentage of daytime blood pressure normalization was higher in group B (62%) than in group A (50%) (*P* < 0.05). There were less frequent treatment changes in

group B than in group A (9 vs. 14%, *P* < 0.05). Quality of life tended to be higher and costs lower in group B.

Conclusion Patients' management based on home blood pressure teletransmission led to a better control of ambulatory blood pressure than with usual care, with a more regular treatment regimen. *J Hypertens* 27:198–203

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Journal of Hypertension 2009, 27:198–203

Keywords: ambulatory blood pressure monitoring, antihypertensive treatment, arterial hypertension, blood pressure control, home blood pressure monitoring, home blood pressure teletransmission, office blood pressure, patients' compliance, quality of life, self blood pressure monitoring at home

Abbreviations: ABP, Ambulatory Blood Pressure; DBP, Diastolic Blood Pressure; HBPM, Home Blood Pressure Monitoring; SBP, Systolic Blood Pressure

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Received 30 May 2008 Revised 11 August 2008
Accepted 21 August 2008