

**PATIENT ADHERENCE TO HOME BLOOD PRESSURE MEASUREMENT AND ITS
IMPLICATIONS ON ACHIEVING TARGET BLOOD PRESSURE OF PATIENTES WITH
HYPERTENSION WITHOUT COMPLICATIONS
IN A COHORT OF THE SWEDISH POPULATION.**

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BACKGROUND

Home blood pressure measurement (HBPM) is an adequate and a reliable method of follow up of hypertension. Moreover, it is less time consuming for the care giver. However, there is no sufficient data on patient's adherence to the recommendation for follow in the Swedish population. As a follow up method, HBPM should be as effective as clinic blood pressure measurement (CBPM) and should give adequate results in achieving target blood pressure in the relevant population.

AIM

Aim of this study is to derive real time data from the Swedish population on patient adherence to HBPM and to investigate if it is effective as CBPM.

METHOD

This is a retrospective longitudinal journal examination, done on a cohort of patients with hypertension without complications. Patients are requested to do HBPM yearly from year 2022 and those who do not intend to and unable to do this are allowed to continue with CBPM. Both patient groups are given the same care according to national recommendations.

In this study it is investigated which percentage of the cohort (N=173) followed recommendation to do HBPM in 3 consecutive years. And it is also studied which percentage of the cohort achieve target blood pressure when followed up with HBPM and CBPM. More importantly, a comparison is made between mean HBPM and mean CBPM of the cohort at the start and at the end of the period to detect similarities and differences between the groups. (100 patients in each group). Changes in mean blood pressure of each group over the three years of follow up was investigated to detect the effects on HBPM and CBPM on blood pressure regulation.

RESULTS

It is only half the cohort followed up recommendation and more female patients followed up the recommendation. (2022 =35,3 % and 2024= 46,8%)

The target blood pressure was achieved by nearly half the sample in both groups. However, there is an increasing tendency to achieve target blood pressure by the group who has done HBPM over the 3-year period (2022=41 % and 2024=50,6%) in comparison to those who followed CBPM. (2022= 57,1% and 2024=45,7%)

There is no significant difference in the initial mean systolic blood pressure of the two groups ($p >0,05$) but at the end of the period there is a significant difference in means of systolic blood pressure of the groups. ($p <0,05$). Diastolic blood pressure was significantly different between the two groups both in 2022 and 2024. ($p <0,05$ and $p <0,001$ respectively)

Reduction of mean systolic blood pressure during the period is significant in the group who did HBPM ($p <0,001$) but non-significant in the group who did CBPM. ($p >0,05$) However, there was a significant reduction in diastolic blood pressure in both HBPM and CBPM groups from year 2022 to year 2024. ($p <0,001$ and $p <0,05$ respectively)

CONCLUSION

Half the patients do not follow the recommendation to do HBPM and among them males predominate.

Those who do HBPM has a rising tendency to achieve target blood pressure over the 3-year period.

Mean systolic blood pressure level became significantly different between the groups over time with HBPM patients getting better values. With regular follow up with HBPM blood pressure reduction is significant compared to CBPM.

In this respect HBPM is a valuable and effective method to be used in Swedish health care system. However, patient Adherence must be improved to achieve target levels of BP for individual patients and prevent uncontrolled hypertension in the population.

More attention should be given to improve patient adherence, specially among males, to utilize HBPM as the follow up method. It is necessary to investigate other factors that affect patient adherence in the given population. Also, promotion of HBPM and patient education is necessary to achieve blood pressure targets in the Swedish population.