

A pilot of home blood pressure monitoring in a resident clinic: The patient and PCP-resident experience

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Background

Introduction:

- Nearly **1 in 2** adults in the U.S. has HTN
- Only **1 in 4** adults with HTN has blood pressures within target range
- HTN increases risk for future heart disease, stroke, and kidney disease
- Compared to BP readings measured in the clinical setting, elevated home BP readings confer a greater risk of future cardiovascular events and are more predictive of progression of renal disease and mortality
- Home BP monitoring programs have been shown to improve treatment adherence and BP control

Many patients at the CPC with HTN lack access to a properly functioning and validated home BP cuff, leaving PCP-residents with sporadic clinic readings alone to guide management.

Methods

Study Design:

- 25 patients with HTN were identified by their PCP resident
- Home BP cuffs distributed during one-one-one patient education sessions at baseline
- BP recordings collected over telephone at 1, 2, and 3 months and routed to PCP General/Resident via telephone encounter
- **Data Collection:**
 - PCP residents completed surveys at baseline
 - Patients completed surveys at baseline and 3 months
- **Patient Education at Baseline:**
 - Discussed importance of good BP control
 - Counseled on healthy lifestyle interventions
 - Taught how to use their new home BP cuff
 - Provided with a paper log for recording their BP

Survey Results

Baseline Characteristic

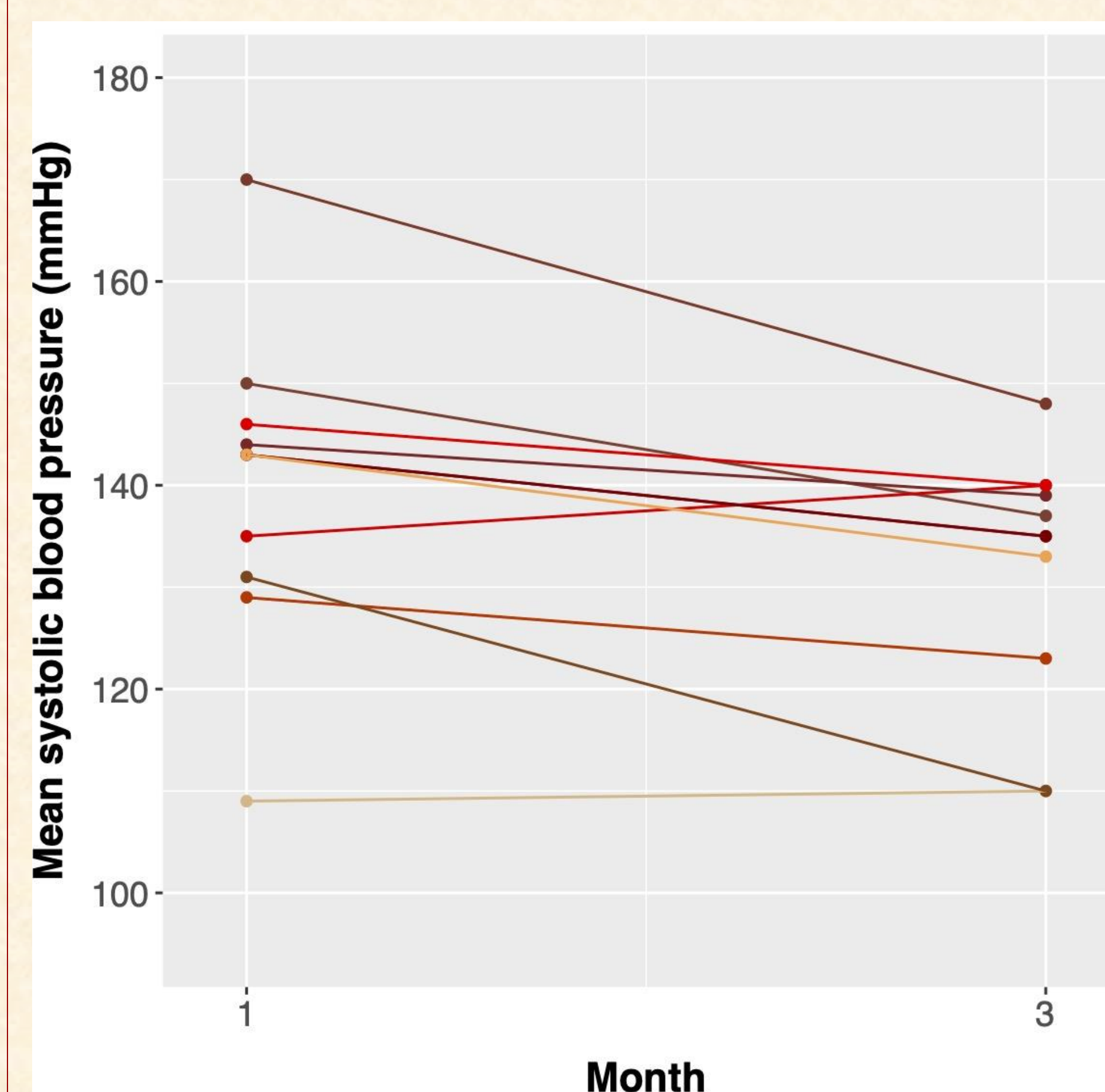
Age in years, mean (SD)	59 (13)
Female, n (%)	7, 28%
Language, n (%)	
English	13 (52%)
Spanish	9 (36%)
Other	3 (12%)

Table 1: Patient baseline characteristics

At 3 months:

- 94% of patients reported they were measuring their BP outside of the doctor's office at least two days per week compared to 31% at baseline
- 69% of patients reported having a very strong understanding of how their daily routines including exercise and diet affect their BP compared to 15% at baseline
- 94% of patients reported having a lot of control to complete control over keeping their BP at a healthy level compared to 54% at baseline.

Home BP Results



There was a significant decrease in mean reported home systolic BP from one to three months (mean difference **-8.5 mmHg** (95% CI -13.9, -3.0), $p < 0.01$))

Figure 3: Patients' mean home SBP at 1 and 3 months (n=11)

Survey Results

- 75% of PCP residents felt that home BP readings are fairly-to-completely representative of actual day-to-day BP
- 67% felt equally-to-more confident making clinical management decisions based on home BP readings alone vs. in-office readings alone

100% of PCP-residents felt more comfortable titrating their patients' anti-hypertensive medications when home BP readings were available to supplement in-office readings.

Conclusions

- Patients measured their BP at home more frequently
- Patients' understanding of what affects their BP improved
- Patients felt more in control of their own BP
- **A home BP monitoring program can work in a resident clinic**

Selected References

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