Improvement of in-office Blood Pressure targets in an Academic primary care setting

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Background: Accurate blood pressure (BP) measurement in an office-based setting is essential for diagnosis and management of hypertension. Staff education on proper blood pressure measurement technique and recording is a focus of recent hypertension guidelines. Compared with other methods, unattended Automated Office Blood Pressure (AOBP) devices reduce measurement errors and improve BP Management. The addition of AOBP to staff education needs to be assessed objectively.

Objectives: To determine the effect of staff education on proper BP measurement and addition of AOBP devices on BP targets in an academic general internal medicine clinic.

Methods: Education was provided to the medical staff on how to appropriately check BP in general and on the proper use of the AOBP devices. Education was repeated in several intervals to ensure consistency in practice. Six AOBP Hillrom (Welch Allyn spot 4400) devices were deployed for the clinic. Devices allowed for three automated readings 1 minute apart eliminating the first reading and keeping the other 2 readings. Staff were instructed to document two blood pressure readings into the electronic medical record. The number of patients who completed two BP measurements documented in the EMR over time.

Results: Our results showed timely education with refresher, increased BP measurement protocol and improved BP recordings. Adherence to 2 BP checks increased from 40% in Dec-2021 to 99% in Jun-2023. The percentage of patients with improved BP increased from 40% to 76% after staff education and addition of AOBP.

Conclusion: Timely education of medical staff and the addition of AOBP could increase the accuracy of in-office BP measurement.

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