DECEMBER 2020

Opportunities to Improve Hypertension Care Systems

Key Concepts

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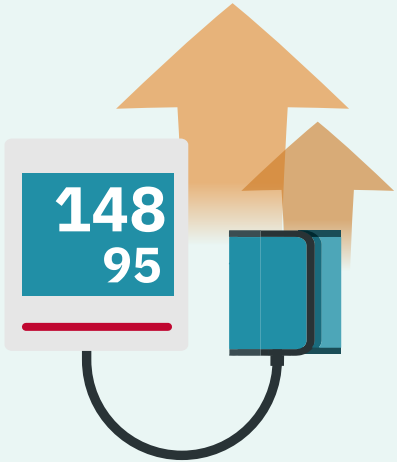

Hypertension is one of the most important modifiable causes of morbidity and mortality, with a U.S. prevalence of 30% to 50%.[1,2]

Recent evidence-based hypertension treatment guidelines emphasize processes that result in greater hypertension control. Implementing these guidelines requires resources for accurate hypertension diagnosis and monitoring; changes in care systems that empower a broader team and utilize technology to expand provider capacity; and standardized, evidence-based office treatment protocols.

This resource highlights key concepts from six selected evidence-based opportunities for innovation. To learn more about these system changes, please see the companion resource, Opportunities to Improve Hypertension Care Systems.

1. Whelton PK, Carey RM, Aronow WS, et al. 2017 ACC/AHA/AAPA/ABC/ACPM/AGS/APhA/ASH/ASPC/NMA/PCNA guideline for the prevention, detection, evaluation, and management of high blood pressure in adults. Journal of the American College of Cardiology. Published online 2017. doi:10.1016/j.jacc.2017.11.006.

2. Benjamin EJ, Blaha MJ, Chiuve SE, et al. Heart disease and stroke statistics—2017 update: a report from the American Heart Association. Circulation. 2017;135(10). doi:10.1161/CIR.0000000000000485.

Standardized Office BP Measurement Protocols with Automated Office BP Devices

Errors in BP measurement are common and usually result in overestimation of BP (up to 50 mm Hg systolic). Standard BP measurement (ausculation) is associated with operator bias, quality control challenges, and inefficiency. Single elevated office BP readings are not accurate enough to support treatment decisions. Repeated readings are often lower.

Who benefits?

- **Patients** avoid unnecessary diagnostic testing and medication.
- **Care teams** waste less time measuring blood pressure and responding to inaccurate BP readings. AOBP automates rest time and repeat BP measurement for greater accuracy.
- **Healthcare systems** experience efficiency and improved outcome measures when falsely elevated BP readings decrease. BP requires less time spent on training, quality control, and BP measurement.

Action steps and resources

Team training

- Cardi-OH - Guide To Accurate In-Office Blood Pressure Measurement

Choose a validated AOBP device

- U.S. Blood Pressure Validated Device Listing
- Hypertension Canada
- dabl Educational Trust

Visual cue at BP measurement site

- Cardi-OH - The “5 R’s” of Accurate Blood Pressure Measurement
- AMA/AHA: In-Office Measuring Blood Pressure Infographic

Incorporate two BP readings into the workflow for every patient

- At a minimum, ensure that elevated initial BP readings are repeated.

► For more information, see page 2 in *Opportunities to Improve Hypertension Care Systems*

Out-of-Office BP Measurement

Systems that rely on office BP alone will over-diagnose patients with white coat hypertension, under-diagnose those with masked hypertension, and be prone to delays in hypertension diagnosis and treatment (diagnostic and therapeutic inertia).

Who benefits?

- **Patients** rereceive fewer diagnostic errors and are more likely to be engaged in their hypertension management. Home blood pressure monitoring can reduce the number of office visits needed.
- **Care teams** can use home data to make timely diagnostic and therapeutic decisions.
- **Healthcare systems** experience improved outcome measures when diagnostic and therapeutic inertia decrease.

Action steps and resources

Care team preparation

- Million Hearts: Self Measured Blood Pressure Monitoring

Patient education and support

- Cardi-OH - Guide to Accurate Home Blood Pressure Monitoring
- Ohio Department of Medicaid - Checking Your Blood Pressure at Home

Validated, upper arm device (preferred over wrist/finger devices)

- U.S. Blood Pressure Validated Device Listing

A plan to respond to out-of-office BP readings (clinical support)

- Cardi-OH - Implementing Home Blood Pressure Monitoring: Pearls for Clinicians

► For more information, see page 3 in *Opportunities to Improve Hypertension Care Systems*

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Team-Based Care

The acute, chronic, and preventative care of a 2,500 patient panel demands an estimated 18.7 hours out of five days of work. Using trained team members with specialized roles increases clinician capacity and improves outcomes.

Who benefits?

- **Patients** are more likely to receive recommended care.
- **Care teams** enjoy increased satisfaction with their work.
- **Healthcare systems** experience improved outcomes and employee engagement.

Action steps and resources

Guides on implementing team-based care:

- Steps forward: Team-Based Care
- Primary Care Team Guide
- The Practice Facilitation Handbook

▸ For more information, see page 4 in *Opportunities to Improve Hypertension Care Systems*

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Leveraging Technology

Improvements in hypertension care such as home blood pressure monitoring (HBPM) can come with increased administrative burdens on patients and care teams. Technology, such as Bluetooth-enabled transmission of HBPM data directly to the electronic health record, decreases this burden.

Who benefits?

- **Patients** are more likely to benefit from HBPM as care teams are better able to receive HBPM data.
- **Care teams** avoid the time inefficiency that comes with manual retrieval and processing of HBPM data.
- **Healthcare systems** experience improved outcomes in a cost-effective manner.

Action steps and resources

- Work with EHR/telemedicine staff to implement HBPM-EHR integration.
- Equip patients with validated automated cuffs with wireless capability.
- Train patients to use smart devices, such as phones and tablets that can receive wireless HBPM data and transmit it to the EHR.

► For more information, see page 5 in *Opportunities to Improve Hypertension Care Systems*

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Self-Management Support

Unaddressed lifestyle factors contribute to hypertension. Objective measures show incomplete medication adherence in half of patients and no drug being taken in one third of patients. Self-management support, which includes lifestyle behaviors and medication adherence, improves blood pressure control.

Who benefits?

- **Patients** have lower blood pressure with less reliance on medication.
- **Care team** efforts are more effective in engaged patients.
- **Healthcare systems** experience improved outcomes and potentially decreased utilization costs.

Action steps and resources

Diet

- Cardi-OH - Diet: Guidelines and Recommendations for Improving Cardiovascular Health

Exercise

- Cardi-OH - Taking Steps: Exercising to Promote Heart Health

Medication adherence

- Cardi-OH - One Simple Step to Improve Medication Adherence for Blood Pressure Control

► For more information, see page 6 in *Opportunities to Improve Hypertension Care Systems*

Evidence-Based Treatment Algorithms

Only 50% of patients diagnosed with resistant hypertension are receiving optimal medication regimens. Evidence-based treatment algorithms provide clinicians with antihypertensive drug choices proven to be longer acting, better tolerated, and more potent.

Who benefits?

- **Patients** are more likely to reach BP targets.
- **Care teams** have an evidence-based guide to support treatment decisions.
- **Healthcare systems** experience improved outcomes and less variability in performance through standardization.

Action steps and resources

Cardi-OH treatment algorithms

- Hypertension Drug Treatment Algorithm
- Hypertension Change Package Algorithm

Utilizing more effective medications

- Long-Acting, Low-Cost Medications to Achieve Blood Pressure Targets: Evidence for Chlorthalidone, Amlodipine, and Spironolactone

▸ For more information, see page 6 in *Opportunities to Improve Hypertension Care Systems*