**Background/Evidence Review**

High blood pressure or hypertension (HTN), which can lead to heart disease and/or stroke, impacts about half of American adults.[[1]](#endnote-2) However, only 16.1% of those adults have their high blood pressure under control through medication and lifestyle changes, with disparities based on race, ethnicity, education, income, living in an urban or rural setting, and other social drivers of health.[[2]](#endnote-3),[[3]](#endnote-4),[[4]](#endnote-5) Blood pressure control rates are lower for non-Hispanic (NH) Black persons, Asian American persons, and Hispanic person when compared to NH White persons, and NH Black and Hispanic individuals.[[5]](#endnote-6) Native communities in Washington state also experience significant disparities in hypertension and cardiovascular health.[[6]](#endnote-7) Social drivers of health significantly influence disparities in blood pressure control; for example, food insecurity has been associated with 14-77% increase in hypertension risk.[[7]](#endnote-8) Healthcare access including insurance coverage, influences attendance at appointments and acquiring and taking medication. Insurance coverage is associated with access to healthcare, and variation in coverage influences and worsens disparities in access and outcomes. Out-of-pocket costs, or the perception of out-of-pocket costs, may cause delays or forgoing of care.[[8]](#endnote-9) Washingtonians do not receive the same standard of care across the state (e.g., multiple medications, accurate dose titration) with variation in therapy selection and care delivery models. Improving blood pressure control quality metrics stratified by social drivers of health has promise to reduce inequities in morbidity and mortality related to hypertension.

Secondary Causes of Hypertension.

Approximately 5-10% of patients with hypertension have an underlying or potentially reversible cause.[[9]](#endnote-10) Prevalence of secondary hypertension varies by age, with the highest prevalence in young adults at 30% among those 18-40 years old. Among older adults, renal conditions such as renal failure or renal atherosclerotic renal artery stenosis, and thyroid disease are common secondary causes. Secondary causes should be considered and thoroughly evaluated only in some scenarios – resistant or severe hypertension, malignant or accelerated hypertension, acute rise after stable hypertension, or in younger ages (under 30 years old).

While this report and set of guidelines does not delineate appropriate steps for further evaluation of secondary causes of hypertension, the workgroup endorses that clinicians should recognize when evaluation for these causes is necessary and take appropriate diagnostic tests to identify and treat underlying conditions.

Race/Ethnicity

Based on national survey data, blood pressure control rates are lower for Black Americans (~40%), Asian Americans (~38%) , and Hispanic Americans (~40%) as compared to non-Hispanic White individuals (~50%).[[10]](#endnote-11) Further heterogeneity exists within these racial/ethnic groups that can further refine high-risk populations – for example, when desegrated, Asian American subgroups (e.g., Chinese, Filipino, Asian Indian, etc) experience differences in hypertension prevalence and other cardiovascular risk factors.ix

Social (Non-Medical) Drivers of Health

Healthy People 2030 determines social drivers of health as “the conditions in the environments where people are born, live, learn, work, play, worship, and age that affect a wide range of health, functioning, and quality-of-life outcomes and risks.” These are divided into 5 domains:

* Economic stability
* Education Access & Quality
* Healthcare Access & Quality
* Neighborhood and Built Environment
* Social and Community Context

Many if not all influence prevalence of hypertension, awareness of hypertension, access to care and hypertension control.

**Non-exhaustive list of non-medical drivers for which there is evidence of inequities in cardiovascular care/outcomes:**

|  |  |
| --- | --- |
| **Social Driver** | **Blood Pressure Control Outcomes** |
| Language | Reduced cardiovascular risk when providers speak the same language as their patients[[11]](#endnote-12) |
| Socioeconomic Status | Lower income independently associated with cardiovascular disease morbidity[[12]](#endnote-13) |
| Geographic Locations (rural vs urban) | Hypertension prevalence higher in rural areas, with magnitude of disparity greatest among younger adults.[[13]](#endnote-14) |
| Education Level | Adults with a college education have lower prevalence of hypertension than those with high school education or less.[[14]](#endnote-15) |
| Disability Status | Americans with disabilities are more likely to have hypertension when controlling for sociodemographic and health access indicators[[15]](#endnote-16) |

**Blood Pressure Screening**

Goals of this focus area:

* Increase healthcare professional accuracy in blood pressure screening and diagnosis for adults given based on published clinical practice guidelines (AHA/ACA)
* Eliminate disparities in blood pressure screening rates in people above the age of 18 based on race, ethnicity, primary language, disability status, socioeconomic status, education level, and geographic location.
* Increase number of people in Washington state above the age of 18 who have had their blood pressure screened in the past year

Measures Examples:

A screenshot of a computer

AI-generated content may be incorrect.

Access points where someone might get their BP screened

* Outpatient clinic
* Employer-based screening
* Dentists
* Emergency rooms
* Pharmacies (by clinician or by kiosk)
* Community Based Organizations/Health Fairs

Any site that performs blood pressure screening must:

* Train staff to take accurate blood pressure
* Ensure validated machines are available for use
* Ensure emergency protocol for unsafe blood pressure in place to direct patient to the hospital as needed (e.g., SBP>180)
* Ability to document results of blood pressure screening in secure HIPAA compliant manner that is accessible to patients
* Protocol for follow-up with patients who have elevated blood pressure to connect to care. If possible, establish direct referral pathway to primary care offices for patients without established primary care and ability to send medical record information to PCP offices.

Stakeholder Specific Guidelines

Healthcare Professionals

* When screening for blood pressure, ensure accuracy of reading by following standardized protocol (TargetBP):
  + Before coming to clinic, instruct patients to avoid caffeine, smoking and exercise for 30 minutes. Wait at least 30 minutes after a meal. Empty bladder beforehand.
  + Ask patient to rest 3-5 minutes without talking
  + Sit in a quite space without distraction.
  + Put cuff on bare arm above elbow, at midarm. Position the cuff so it is at heart level. Keep the arm supported, palm up with muscles relaxed. Sit with legs uncrossed and keep feet flat on the floor. Keep your back supported by the chair.
  + Obtain the BP reading. If elevated or too low, recheck after 1-2 minutes of rest:
    - SBP>/= 130mmHg and/or DBP >/= 80mmHg
    - SBP <90mmHg and/or DBP <60mmHg
* For diagnosing hypertension, follow most updated American Heart Association guidelines around measurement of blood pressure, including taking out-of-office measurements to confirm diagnosis. See Measurement of BP [here](https://www.ahajournals.org/doi/10.1161/HYP.0000000000000065#T8).
* Teach patients and support system when appropriate how to accurately take a blood pressure at home.
* To confirm diagnosis of hypertension…
* Once a diagnosis of hypertension is confirmed
  + Engage in a conversation with the patient and their support system around appropriate goals of treatment, available options, and risks and benefits to those options.
  + Use trained interpreters for discussions regarding goals of care and treatment decisions as necessary and with consent from the patient
  + Consider self-monitoring blood pressure programs
* Consider and evaluate for secondary causes of hypertension for those who experience severe or resistant hypertension, accelerated onset, acute rise in blood pressure or for those younger than 30 years old.[[16]](#endnote-17) Secondary causes of hypertension include:
  + Renal disease (e.g., renal artery stenosis)
  + Conditions of the adrenal glands
    - Hyperaldosteronism
    - Cushing syndrome
    - Pheochromocytoma
  + Thyroid disorders
  + Obstructive sleep apnea (especially for people with overweight or obesity)

Healthcare Delivery Systems

* Develop partnerships with trusted community health organizations and build shared goals for improving community health.
* Consider developing mobile units/other community based screening opportunities to reach underserved areas of the community, with the ability to make close follow up appointments for patients identified with elevated blood pressure.
  + Institute protocol for follow up/warm handoff to continuing primary care
* Train new staff and periodically retrain all staff in accurate BP measurement.
* As able, establish or partner with community organizations (such as the YMCA) offering self-monitoring blood pressure program
  + Consider all patients with diagnosed hypertension for SMBP program

Health Plans

* Provide culturally and linguistically appropriate information to members at least annually on primary care benefits and risks/benefits for screening for BP control.
* Track percentage of members >18 with documented BP readings, stratified by REaL data and other relevant SDOH factors.

Employers

* Set performance guarantees with contracted vendors and/or insurance providers that specifically require improvement in controlling blood pressure using HEDIS quality measure, stratified to incent high quality care for all employees.
  + Incorporate percentage of members screened for BP stratified by at least REaL data and other SDOH factors as able
* Consider providing blood pressure screenings onsite at work by contracting with vendors trained in protocol for blood pressure screening and with a protocol for connection to follow-up care

State Agencies: HCA

* ACHs to establish blood pressure screening programs and connection to care pathway for people screened for high blood pressure.
* Consider developing a patient decision aid (PDA) for primary hypertension for use with all patients.

State Agencies: DOH

* Establish a central database to record blood pressure screenings accessible to delivery systems, health plans and community based organizations (similar to vaccine registry)??

Dental Clinics

* Screen patients’ blood pressure at initial visit and with history of hypertension using validated arm cuff

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Current State** | **Intermediate Steps** | **Ideal State** |
| **Blood Pressure Screening and Awareness** | *Many people do not know their blood pressure or their risk for hypertension. There are too many competing priorities to get blood pressure screened at the clinic, and going to the doctor costs too much money.* |  | *People know their blood pressure status within the past year and know if they are higher risk or have high blood pressure. They are able to take steps to reduce their cardiovascular risk and receive care in time and place that works for them, individualized to their needs and preferences.* |

Principles of Community-Based Screenings

Resources Used: [Principles for Community Engagement – Centers for Disease Control and Prevention](https://www.aamchealthjustice.org/media/8061/download?attachment)

* Principle 1: Be clear about the purposes or goals of the engagement effort and the populations and/or communities you want to engage
* Principle 2: Become knowledgeable about the community’s culture, economic conditions, social networks, political and power structures, norms and values, demographic trends, history, and experiences with efforts by outside groups. Be aware of each other’s perceptions of past engagement activities
* Principle 3: Build and maintain relationships and trust by working with individuals and/or community leaders
* Principle 4: remember and accept that collective self determination is the responsibility and right of all people in a community. No external entity should assume it can bestow on a community the power to act in its own self-interest
* Principle 5: Establish partnership with the community to create change and improve health
* Principle 6: Recognize and respect the diversity within the community.
* Principle 7: Identify and mobilize community assets and strengths through developing the community’s capacity and resources to make decisions and take actions
* Principle 8: Recognize that individuals and institutions must be prepared to release control and be successfully flexible to meet changing needs
* Principle 9: Foster community collaboration and strengthen long-term commitment among the partners
* Principle 10: Demonstrating trustworthiness is fundamental to sustaining successful community engagement

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