**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**

|  |  |
| --- | --- |
| Stakeholder | Draft Guidelines |
| Clinicians | * Follow evidence-based guidelines for accurate BP screening (Target BP) * Use out of office BP measurements as part of care for patients with hypertension, including in confirming diagnosis of hypertension, titrating medication, and setting goals through shared decision-making. * 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.     - *(consider using patient decision aid as available?)*   + Involve trained interpreters whenever available for office and telehealth visits, and especially for discussions regarding goals of care and treatment decisions   + Document a clear, detailed plan of care that focuses on achievement of treatment and self-management goals, encourages effective management of comorbid conditions, prompts timely follow up with the healthcare team and adheres to guideline directed medication therapy.   + As available, refer to self-management blood pressure monitoring program (either internally in clinic or through a community based organization e.g., YMCA) * Providers: 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. Secondary causes of hypertension include, but are not limited to:   + Renal disease (e.g., renal artery stenosis)   + Conditions of the adrenal glands   + Thyroid disorders   + Obstructive sleep apnea (especially for people with overweight or obesity) |
| Primary Care Delivery Systems | * Train relevant staff on accurate BP reading annually and at time of hiring   + Take measures to consistently reinforce accuracy of readings, such as placing evidence-based educational around the clinic * Create environment to support accurate BP readings (quiet/private locations for screening, time to take multiple readings, etc.) * Screen for nonmedical needs and connect to resources at visits, at least annually. See FHCQ SNHE Report and Guidelines. * As able, stock validated BP machines for use in office and to provide for patients engaged in self-monitoring programs. * Identify populations for which screening rates are lower, and engage in targeted screening initiatives. This includes stratifying by various demographic variables and health-related social needs. * Develop trusted partnerships with community health organizations to identify and work towards shared goals including BP screening;   + Explore ways to host community-based screening for preventive measures (including blood pressure) that includes protocols for emergency readings and connection to follow-up care (e.g., identify clinic that can reserve intake appointments for participants identified with new hypertension). See Appendix A for further standards for community based screenings.   + Explore development of mobile units hosting at nontraditional locations (e.g., worksites, community gatherings, religious organizations, etc.) * Establish infrastructure to support a self-measuring blood pressure program, including:   + Registry to track and manage patients with hypertension   + Referral protocol for patients with hypertension and multiple barriers to self management (e.g., health-related social needs) to self-measurement blood pressure programs integrated into electronic health records.     - Identify community organizations that offer self-measured blood pressure (SMBP) monitoring programs (E.g., YMCA)   + Access to validated blood pressure monitors and cuffs with inclusive sizing that can be given same day to patients. If possible, provide monitors that patients can keep for themselves instead of loaner programs.   + Assign care team roles for SMBP monitoring program and adapt workflows accordingly.   + Develop a process for handling of patient-generated BP readings, whether BP cuff can communicate directly through Bluetooth or not. |
| Health Plans | * Identify member groups with lower screening and blood pressure control rates through stratifying by demographic and geographic variables   + Target continuous quality improvement initiatives with goals to improve blood pressure screening and control with and for those member groups   + Promote rewards for annual preventive screenings (including blood pressure) * Engage in value-based care arrangements for primary care that incent delivery of team-based care, self-measurement blood pressure programs (SMBP) and elimination of disparities. * Provide reimbursement for self-measured blood pressure (SMBP) across all lines of service, including providing validated blood pressure cuffs to those enrolled in the program. *Remove prior authorization?*   + - Relevant CPT codes 99473 & 99474 * Track and use following measures and metrics in quality improvement projects:   + Percentage of members >/= 18 with a blood pressure screening documented in the past year, stratified by relevant demographic factors   + Percentage of members >/= 18 with a diagnosis of hypertension, stratified by relevant demographic factors   + HEDIS Blood Pressure Control (CBP) metric, stratified by relevant demographic factors * Incent use of validated BP cuffs with inclusive sizing (e.g., XL cuffs) |
| Hospitals | * Train relevant staff on accurate BP reading annually and at time of hiring * Use validated BP machines for measuring BP * Screen for nonmedical needs and connect to resources before/upon discharge |
| Other Outpatient Care Delivery Systems | * Train relevant staff on accurate BP reading annually and at time of hiring * Use validated accurate BP machines * Establish protocols that include thresholds for referral and for hypertensive emergencies * Screen for nonmedical needs and connect to resources according to most updated guidelines. See FHCQ SNHE Report for further details |
| Community Pharmacies | * For pharmacy employees   + Train relevant staff on accurate BP reading annually and at time of hiring   + Establish protocols that include thresholds for referral and for hypertensive emergencies * Purchase and maintain blood pressure measuring kiosks (noninvasive sphygmomanometers) for public use that are validated by American National Standards Institute/Association for the Advancement of Medical Instrumentation/International Standards (ANSI/AAMI/ISO) and accommodate a range of arm circumferences to avoid inaccurate readings.   + Ensure documented instructions for follow-up based on blood pressure reading in languages relevant to the communities served (e.g., English, Spanish, etc.) |
| Employers | * Implement multicomponent workplace wellness programs inclusive of biometric screening (blood pressure) and other interventions targeted at improving blood pressure control * Consider partnering with delivery systems and other organizations to offer onsite preventive screening (including blood pressure) * Set performance guarantees with contracted vendors and/or insurance providers that specifically require improvement in controlling blood pressure using HEDIS quality measure at the aggregate level and stratified by relevant demographics   + Consider setting screening for health-related social needs annually as a performance guarantee for vendors and/or insurance providers |
| Department of Health | * Host and promote widespread campaign to Washington state residents targeted at increasing screening for blood pressure. Develop and promote widespread educational campaign for blood pressure screening * Support local public health jurisdictions in community-based screenings through reinforcing American Heart Association guidelines * Utilize Washington Tracking Network data to identify groups with lower blood pressure control rates. Partner with organizations serving those groups to support blood pressure control initiatives. |
| Washington HCA | * Identify populations with lower screening and blood pressure control rates based on claims data and other relevant information and create publicly available data visualizations (e.g., GIS maps) |
| Dentists | * Train relevant staff on accurate BP reading annually and at time of hiring * Establish protocols that include thresholds for referral and for hypertensive emergencies |

**Team-Based Care**

Team-based care is critical to improving care for patinets with hypertension, epseically among populations with higher burden of hypertension. When team members identify with the groups they are serving, team-based care is likely to improve health equity; It is also cost-effective, costing less than $50,000 per quality-adjusted life year. Team-based care improves blood pressure control by providing more patient follow-up through regular communication through technology, and facilitating use of self-management plan, medication management through nonphysician care team members such as pharmacists engaging monitoring and recommendations to the prescribing provider or through direct titration through a collaborative practice agreement.

There is strong evidence behind team-based care for improving outcomes. When comparing implementation strategies for blood pressure control in patients with hypertension, team-based care with medication titration from a nonphysician is more effective at reducing systolic blood pressure than physician titration or multilevel strategies without team-based care.[[16]](#endnote-17) When looking specifically at team-based care as a strategy to improve blood pressure control for people with many barriers to care, community health workers and pharmacists are effective when integrated in care workflows.[[17]](#endnote-18)

The American Heart Association and other national guidelines endorse the use of team-based care to support patients with hypertension. The following is a description of Responsibilities and Roles of the team drawn from the AHA/ACA 2017 guidelines.

|  |  |
| --- | --- |
| This table was adapted from the AHA/ACA 2017 High Blood Pressure Guidelines Supplemental Material on team-based care. The team members indicated by an \* are from the guidelines. | |
| **Hypertension Team Responsibilities[[18]](#endnote-19)** | |
| * Communication and care coordination among various team members, the patient and family members or other support persons. * Effective use of evidence-based diagnosis and management guidelines * Regular, structured follow-up mechanisms and reminder systems to monitor patient progress * Engage patients in their care by shared decision making * Medication adherence support and appropriate education about hypertension medication * Medication addition and titration using evidence-based treatment algorithms * Use of evidence-based tools and resources designed to maximize self-management (including health behavior change, lifestyle modification, etc.) * Follow a single, personalized plan of care based upon patient characteristics and needs | |
| **Individual Hypertension Team Members** | **Roles (examples)** |
| Patient & Caregivers | *Driver and decision-maker of care.* |
| Primary Care Physician, Physician Assistant, Advanced Practice Nurse\* | Routine and complex hypertension care, managing primary care issues. |
| Cardiologist\* | Routine and complex hypertension care, especially for patient with  cardiac disease or high risk for major cardiovascular events. |
| Nephrologist, Endocrinologist, Hypertension Specialist\* | Management of complex hypertension care, especially due to secondary causes, and/or resistant hypertension. |
| Nurse (including in-office, home care, internal and external population health personnel)\* | Accurate assessment of BP, medication reconciliation, patient education, self-management, lifestyle modification and adherence. |
| Clinical Pharmacist\* | Comprehensive medication management, which involves identification and documentation of medication-related problems, initiating, modifying, and discontinuing medication to address identified problems, and educating patients on their medication regimen. |
| Dietician\* | Ongoing patient-centered counseling to assess dietary habits and preferences, set and monitor goals for healthy lifestyle |
| Social Worker\* | Assess for psychosocial, cultural and financial barriers, find solutions to overcome these barriers. |
| Community Health Providers\* | Assess for psychosocial, cultural and financial barriers, identify and promote acceptable community-based resources to overcome these barriers. |
| Behavioral Health Providers | *Address mental health, stress, and lifestyle factors; support adoption of sustainable habits.* |

Payment for Team-based Care

A variety of reimbursement models are used in primary care, mostly moving towards alternative, value-based models of care. Some services are billable to the team from fee-for-service models, such as RN billing for chronic care management, or licensed social workers or psychologists billing for some of their visits. However, alternative models offer ways to incent team-based care as a quality improvement intervention. Pay for performance models link payment incentives to metrics, such as the HEDIS Controlling Blood Pressure (CBP). Capitated alternative payment models incent practices through a per member per month payment to deliver care that will keep the patient well, paying less attention to whether a service is billable or not. Teams can extend the empanelment size which can increase payment with more members per month.

Regardless of the payment model being used, reducing variation in blood pressure control between groups based on demographic variables, geographic location and health related social needs is critical to incentivizing high quality blood pressure control team-based care.

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| This is a matrix of professionals that the workgroup recommends be included in team-based care for hypertension management in different settings. Team members may vary site to site but should perform the same essential functions that are aligned with their credentials and experience. This list was adapted from the [2017 AHA/ACA Hypertension Guidelines](https://www.ahajournals.org/doi/10.1161/HYP.0000000000000065#sec-1)\* | | | | | | | | | | | |
| Org Type | **Ideal Team Members** | **FHCQs** (e.g., ICHS, Family Health Centers) | **Small family practice** | **Large Health System** (e.g., UW, KP) | **Rural Health Clinics** | **Membership/Pay per visit clinic** (e.g., OneMedical) | **Telehealth only providers** | **Pharmacy Clinics** (e.g., Minute Clinic) | **CBOs** (e.g., YMCA) | **Public health/free clinic** | **Mobile units** |
| Professionals | Patient & Caregivers | Necessary | Necessary | Necessary | Necessary | Necessary | Necessary | Necessary | Necessary | Necessary | Necessary |
|  | Primary Care Physician, Physician Assistant, Advanced Practice Nurse\* | Necessary | Necessary | Necessary | Necessary | Necessary | Necessary | Referral capacity | Referral capacity? | Necessary |  |
|  | Cardiologist\* | Referral capacity | Referral capacity | Necessary | Referral capacity | Referral capacity | Referral capacity | Referral capacity |  | Referral capacity |  |
|  | Nephrologist, Endocrinologist, Hypertension Specialist\* | Referral capacity | Referral capacity | Necessary | Referral capacity | Referral capacity | Referral capacity | Referral capacity |  | Referral capacity |  |
|  | Nurse (including in-office, home care, internal and external population health personnel)\* | Necessary | Preferred | Necessary | Preferred | Necessary | Preferred |  |  | Sometimes necessary | Sometimes necessary |
|  | Clinical Pharmacist\* | Necessary | Preferred | Necessary | Preferred | Necessary | Preferred | Necessary |  | Preferred | Necessary |
|  | Dietician\* | Necessary | Preferred | Necessary | Preferred | Preferred | Preferred |  |  | Preferred |  |
|  | Social Worker\* | Necessary | Preferred | Necessary | Preferred | Preferred | Preferred |  |  | Preferred |  |
|  | Community Health Providers\* | Necessary | Preferred | Necessary | Preferred | Preferred |  |  |  | Preferred | Preferred |
|  | Behavioral Health Providers | Necessary | Preferred | Necessary | Preferred | Preferred | Referral capacity |  |  | Preferred/Referral capacity? |  |

**Appendix A. Community-based Screening through Delivery Systems** (based off [Cancer Commission Standards for Cancer Screening](https://www.facs.org/quality-programs/cancer-programs/commission-on-cancer/standards-and-resources/2020/))

Definition and Requirements

Blood pressure screening, as part of other preventive screening events or independently, detects increased blood pressure which offers opportunity to intervene early on to address blood pressure and It is recommended that each health system organization, through partnering with community organizations, host events focused on preventive screening including but not limited to blood pressure. Examples of community organizations include, but are not limited to, religious institutions, schools, health districts, local gyms, and others.

The event should be based on evidence-based national guidelines and interventions, where applicable, and have a formal process for follow up on all positive screening. Resources for evidence-based national guidelines and interventions include but are not limited to:

* American Heart Association
* American Medical Association
* Agency for Healthcare Research and Quality
* United States Preventive Task Force

Examples of non-compliant programs/events include, but are not limited to:

* Screening programs performed in the regular course of business
* Events or programs that educate about blood pressure screening or lifestyle interventions for heart disease but that do not provide an actual screening

Report

An event summary must be presented to and discussed with …. The summary must include the following information: the event site, the focus of screening activities (e.g., blood pressure only, blood pressure and diabetes, etc.), the partnering community organizations where applicable, data-driven identification of target audience for screening based on groups with lower than average blood pressure screening or blood pressure control rates, guidelines used in planning the screening event, the detailed process for follow up based on screened blood pressure based on guidelines (e.g., protocols for emergency level blood pressure screening) While it is encouraged that cancer programs hold as many screening events as appropriate for their needs, only one event is submitted for purposes of this standard.

**Suggested Measures of Compliance**

Each calendar year, the organization fulfills all of the compliance criteria:

1. The organization offers at least one screening event annually.
2. Blood pressure screening programs use validated blood pressure measuring devices
3. Where applicable, the screening event is consistent with evidence-based national guidelines and interventions.
4. The screening event has a process for follow up on all positive screening findings.
5. A summary of the screening event is presented to the … and documentation is submitted.

**Accurate Blood Pressure Screening**

Accurate blood pressure measurement is a critical to accurately identifying patients with elevated blood pressure or hypertension, and informing clinicians and patients for treatment planning and setting goals of care. Clinicians should adhere to standardized protocols to minimize errors and obtain reliable readings. The following steps provide a detailed guide for ensuring accuracy during blood pressure screening:

Step 1: Preparation

Instruct patients to avoid consuming caffeine, smoking, or engaging in physical exercise for at least 30 minutes before appointments. Recommend not eating a heavy meal and emptying their bladder before reading.

Step 2: Positioning

The patient should be seated in a quiet room, free from distractions, and instructed to rest for 3 to 5 minutes without engaging in conversation. Their back should be supported by the chair, with legs uncrossed and feet flat on the floor. The arm used for measurement should be bare, supported at heart level, with the palm facing upward and muscles fully relaxed.

Step 3: Applying and Using the Cuff

Place the blood pressure cuff on the upper arm, ensuring it is secured above the elbow at mid-arm level. Confirm that the cuff fits snugly but is not overly tight, and position it so the inflatable bladder lies over the brachial artery. The arm should remain stable and supported throughout measurement.

Step 4: Taking the Measurement

Once the cuff is properly positioned, obtain the blood pressure reading. Encourage the patient to remain still and silent during the process. If the reading is elevated (systolic blood pressure ≥130 mmHg or diastolic blood pressure ≥80 mmHg) or abnormally low (systolic ≤90 mmHg or diastolic ≤60 mmHg), allow the patient to rest for 1 to 2 minutes and then repeat the measurement. Multiple readings can help confirm the accuracy of the result.

Confirming a Diagnosis of Hypertension

For patients with consistently elevated readings, clinicians should follow the most updated guidelines from the American Heart Association. This includes taking out-of-office measurements to confirm the diagnosis of hypertension or to titrate medications as needed. Home blood pressure monitoring or 24-hour ambulatory blood pressure monitoring may provide additional data for more precise evaluation. International Consensus Guidelines on Hypertension recommend 2-3 office visits of a blood pressure >/= 140/90 mmHg indicates hypertension.

Resources for Accurate Blood Pressure Reading

[Target BP Graphic](https://targetbp.org/wp-content/uploads/2016/10/MAPHypertension_7StepsInOfficeInfographic_Landscape_English_NoCropsNoBleeds-12.pdf)

**Applying SDOH Health Equity Framework for Hypertension Care**

|  |  |  |  |
| --- | --- | --- | --- |
| Focus Area | Action Steps: Social Determinants of Health | Action Steps: Health Equity | *Hypertension Specific Examples* |
| Planning | Develop buy-in and educate staff about upstream factors, trauma informed care, being mindful of stigma and bias, and the importance of screening to support whole-person health independent of ability to meet that need.    Adopt existing or develop communication tools to discuss social determinants of health screening and intervention with patients (e.g., do not use jargon, explain how life situation impacts health)   * Clarify that screening for social needs does not necessarily mean that the provider, health, or site will be able to meet that need.   Identify how patient demographics, your location, and/or other assessments done in your region may inform the social needs of your patients.  Prioritize a subset of your population (e.g., pediatrics, diabetes management) prior to rolling out universal screening  Develop a data collection strategy that will protect patient safety and inform best care for patients.  Identify roles and responsibilities for staff in the SDoH workflow including how to keep the person’s provider and care team informed of | Embed equity principles into organizational mission, vision, values and programming. Follow guidelines from the Institute for Healthcare Improvement or the American Hospital Association for achieving health equity.  Educate staff about health equity, health disparities, and the legacy of historical trauma on a person’s health.  Facilitate organizational culture of destigmatizing talking about bias including from race through level setting and fostering staff buy-in; uncomfortable conversations that reduce barriers to empathy and understanding  Provide implicit bias training and/or cultural competence training for all staff and board members  Provide training on data collection best practices to staff who will collect demographic data  Understand the stages of change when designing health equity interventions that address provider bias | *Identify populations/areas with higher hypertension burden and/or lower hypertension control in your region to inform population needs.*  *Prioritize a subset of your population and tailor hypertension interventions to meet specific needs of that population (e.g., educational materials in Spanish)*  *Identify roles and responsibilities for care teams in hypertension care, including in implementation of self blood pressure monitoring programs. Consider outlines such as through the American Heart Association’s example.* |
| Identification | Solicit informed consent and emphasize relationship-building with patients prior to screening.  Screen for social determinants of health using a tool adopted from the SIREN and KP Systematic Review of Social Risk Screening Tools, prioritizing at least four domains: housing security, food security, transportation need, and one other high priority/common need identified by the community.   * Make sure the tool is reliable and valid when possible. * Screening can be integrated in both inpatient and outpatient settings to inform care plans, discharge planning, and follow-up care. * Follow-up screening should occur every time a person interacts with the health system, with a minimum of annual screening updates.   Develop predictive analytics to help gauge social need, especially for those enrolled in health plans and benefits programs but do not access health care services.  Communicate patient screening results across their care spectrum, including behavioral and physical health settings.  Ensure that screening for social determinants of health is free of liability for providers and clinicians  Integrate SDoH questions into pre-screen workflows (e.g. depression, alcohol use) if using written forms. Train staff on handling sensitive conversations (e.g. trauma-informed discussions, motivational interviewing, or “empathic inquiry”) if using a verbal screener. | Collect patient demographic information that includes race, ethnicity and language (REaL). When possible, use the 1997 Office of Management and Budget (OMB) standard categories.  Encourage collection of granular race, ethnicity, and nationality data that roll up into the OMB categories  Allow people to select more than one race category, but avoid the category “multiracial” which is not possible to disaggregate and leads to vanishing data  Develop data collection strategies for demographic data on other underserved communities, including sexual orientation and gender identity (SOGI) as well as disability status.  Collect demographic data using self-report best practices to ensure data completeness. Update demographic data at least annually, as personal identities may change.  Ensure that predictive modeling and data analytics processes are free of racial bias. | *Integrate SDoH screening data into care planning for patients with hypertension. Adjust treatment plan with the patient taking into account identified health-related social needs.* |
| Follow-Up | For patients with relatively lower risks or barriers: Provide a resource list that is clinic-specific or region-specific. In absence of such a list, partner with an existing community information exchange (CIE) or social service resource locator (SSRL) that is patient-friendly, timely, and updated frequently.  For patients with relatively high risks or barriers: If available, documentation of identified need and notification of relevant team members occurs that same day or within 7 days of positive screen by a community health worker, social worker, or patient navigator who can provide care coordination, case management, or warm handoffs to known services.  Integrate intervention workflows into the EHR, through auto-populated referral lists or flagging patients with identified social risk for follow-up.  Participate/invest in a CIE or SSRL that follows Human Services Data Specifications standards and is inclusive of referral management across key stakeholders to facilitate communication and closed loop referrals  Build relationships with local community-based organizations and understand capacity and eligibility requirements.  In the absence of a closed-loop referral system, follow-up with patients who screened positive for social need at least annually.  Co-locate social and healthcare services to ensure closed loop referrals and integrated health/social service delivery. | Perform the four-stage iterative process Plan-Do Study-Act (PDSA) to intervene where racial disparities are identified.  Build relationships and engage with communities that are affected by health disparities to develop interventions to close the gap. | *Integrate intervention workflows for blood pressure medication management and referral to self blood pressure monitoring program either internally or externally*  *Perform iterative quality improvement cycles (PDSA) to intervene for disparities in hypertension control when identified*  *Build relationships and engage with communities disproportionately impacted by hypertension* |
| Incentives and Investments | Incent screening for and collecting data on SDoH along the continuum from fee-for-service (FFS) to value-based reimbursement models, aligning with community movement toward VBP   * Reimburse directly for SDOH activities like screening and EHR data collection * Use “pay for success” or provide risk-adjusted capitation and quality payments to free up funds for SDOH interventions. * Reimburse for social determinant conversations and case management/community health workers in clinical care. * Federal programs like the Health Homes model can provide a framework for reimbursing care coordination as a social determinant intervention * Include SDOH reporting requirements in contracts but do NOT include cost- or gain-sharing reimbursements for sites based on ability to meet social need. | Enforce collection and reporting of race and ethnicity by  providing resources, training, and incentives  Incorporate REaL, SOGI, and disability status demographic data collection requirements in purchasing contracts.  Require stratification of key measures by race, ethnicity,  and language categories for accreditation and reporting  on state-wide measures.  Invest in data convening collaboratives that publicly  report out health disparities on a state-wide level  Invest in antiracism training and education for health  care professionals  Provide funding for community-based organizations that are working toward health equity. | *Use “pay for success” or provide risk-adjusted capitation and quality payments to support funds for team-based care in primary care*  *Include models that support framework for reimbursing care coordination support and frequent monitoring visits for blood pressure control management*  *For purchasing contracts for primary healthcare, incorporate data requirements that facilitate identification of groups that have higher burden of hypertension*  *Require stratification of key measures for hypertension screening and control by demographic information, including for accreditation and reporting on state-wide measures* |

1. Centers for Disease Control and Prevention. (2025, January 3). High blood pressure facts. https://www.cdc.gov/high-blood-pressure/data-research/facts-stats/index.html [↑](#endnote-ref-2)
2. https://odphp.health.gov/healthypeople/objectives-and-data/browse-objectives/heart-disease-and-stroke/increase-control-high-blood-pressure-adults-hds-05/data?group=Obesity%20status%20(20%20years%20and%20over)&from=2017&to=2020&state=United%20States&populations=#edit-submit [↑](#endnote-ref-3)
3. Vogel MT, Petrescu-Prahova M, Steinman L, et al. Partnerships for Blood Pressure Control in Washington State, December 2016-July 2017. Health Promot Pract. 2021;22(1):52-62. doi:10.1177/1524839919853819 [↑](#endnote-ref-4)
4. Fryar CD, Ostchega Y, Hales CM, Zhang G, Kruszon-Moran D. Hypertension Prevalence and Control Among Adults: United States, 2015-2016. *NCHS Data Brief*. 2017;(289):1-8. [↑](#endnote-ref-5)
5. Abrahamowicz, A. A., Ebinger, J., & Whelton, S. P. (2023). Racial and ethnic disparities in hypertension: Barriers and opportunities to improve blood pressure control. Current Cardiology Reports, 25(1), 1–10. <https://doi.org/10.1007/s11886-022-01826-x> [↑](#endnote-ref-6)
6. Parker T, Kelley A, Cooeyate N, Tsosie N. Tribal Perspectives on Hypertension: Results From the Center for Native American Health Native-CHART Needs Assessment. J Prim Care Community Health. 2022 Jan-Dec;13:21501319221144269. doi: 10.1177/21501319221144269. PMID: 36524696; PMCID: PMC9761798. [↑](#endnote-ref-7)
7. Te Vazquez J, Feng SN, Orr CJ, Berkowitz SA. Food insecurity and cardiometabolic conditions: a review of recent research. Curr Nutr Rep. 2021;10(4):243–54. https://doi.org/10.1007/s13668-021-00364-2. [↑](#endnote-ref-8)
8. Office of Disease Prevention and Health Promotion. (n.d.). Access to health services. Healthy People 2030. U.S. Department of Health and Human Services. Retrieved from [https://odphp.health.gov/healthypeople/priority-areas/social-determinants-health/literature-summaries/access-health-services] [↑](#endnote-ref-9)
9. <https://www.aafp.org/pubs/afp/issues/2017/1001/p453.html> [↑](#endnote-ref-10)
10. Aggarwal, R., Chiu, N., Wadhera, R. K., Moran, A. E., Raber, I., Shen, C., Yeh, R. W., & Kazi, D. S. (2021). Racial/Ethnic Disparities in Hypertension Prevalence, Awareness, Treatment, and Control in the United States, 2013 to 2018. *Hypertension*, 78(6), 1719-1726. https://doi.org/10.1161/HYPERTENSIONAHA.121.17570[1] [↑](#endnote-ref-11)
11. Reaume M, Labossière MN, Batista R, et al. Patient-Physician Language Concordance and Cardiovascular Outcomes Among Patients With Hypertension. *JAMA Netw Open.* 2025;8(2):e2460551. doi:10.1001/jamanetworkopen.2024.60551 [↑](#endnote-ref-12)
12. Centers for Disease Control and Prevention. (2023). Excess burden of poverty and hypertension, by race and ethnicity, on the prevalence of cardiovascular disease. *Preventing Chronic Disease*, 20, E65. Retrieved from https://www.cdc.gov/pcd/issues/2023/23\_0065.htm [↑](#endnote-ref-13)
13. Liu M, Marinacci LX, Joynt Maddox KE, Wadhera RK. Cardiovascular Health Among Rural and Urban US Adults—Healthcare, Lifestyle, and Social Factors. JAMA Cardiol. Published online March 31, 2025. doi:10.1001/jamacardio.2025.0538 [↑](#endnote-ref-14)
14. Centers for Disease Control and Prevention. (2020). Hypertension prevalence and control among adults: United States, 2015-2016. NCHS Data Brief, (364). Retrieved from [https://www.cdc.gov/nchs/data/databriefs/db364-h.pdf[1](https://www.cdc.gov/nchs/data/databriefs/db364-h.pdf%5B1)] [↑](#endnote-ref-15)
15. Centers for Disease Control and Prevention. (2014). Excess burden of poverty and hypertension, by race and ethnicity, on the prevalence of cardiovascular disease. Preventing Chronic Disease, 11, E65. Retrieved from [https://www.cdc.gov/pcd/issues/2014/14\_0162.html] [↑](#endnote-ref-16)
16. Mills KT, Obst KM, Shen W, Molina S, Zhang HJ, He H, Cooper LA, He J. Comparative Effectiveness of Implementation Strategies for Blood Pressure Control in Hypertensive Patients: A Systematic Review and Meta-analysis. Ann Intern Med. 2018 Jan 16;168(2):110-120. doi: 10.7326/M17-1805. Epub 2017 Dec 26. PMID: 29277852; PMCID: PMC5788021. [↑](#endnote-ref-17)
17. Pasha M, Brewer LC, Sennhauser S, Alsawas M, Murad MH. Health Care Delivery Interventions for Hypertension Management in Underserved Populations in the United States: A Systematic Review. Hypertension. 2021 Sep;78(4):955-965. doi: 10.1161/HYPERTENSIONAHA.120.15946. Epub 2021 Aug 15. PMID: 34397275. [↑](#endnote-ref-18)
18. https://www.cdnetwork.org/wp-content/uploads/2017/12/2017-Hypertension-Team-Statements.pdf [↑](#endnote-ref-19)