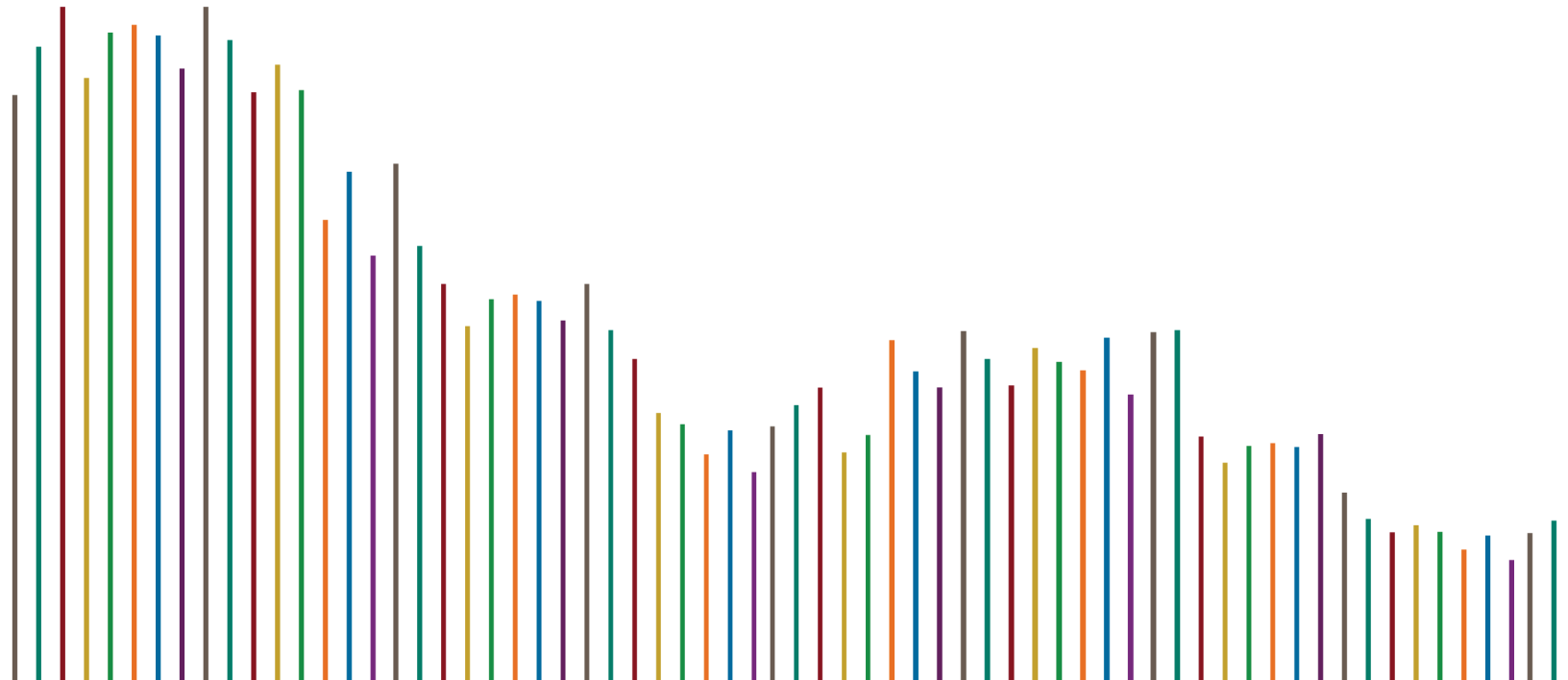
Hypertension Management Program

Implementation Toolkit



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Overview

Introduction

The Hypertension Management Program (HMP) is a team-based, patient-centered, integrated care model. The goal of the HMP is to improve the quality of patient care and decrease the number of patients with uncontrolled hypertension to improve each patient's overall health and wellbeing. It can be implemented in many organizations, including in resource-constrained contexts, to promote hypertension control among patients, including those without health insurance.

This toolkit was developed by the Centers for Disease Control and Prevention (CDC) Division for Heart Disease and Stroke Prevention (DHDSP) to provide healthcare organizations, including high-burden organizations, with the information and resources to implement the HMP and improve hypertension control among their patients. The purposes of this toolkit are to provide healthcare organizations:

- An overview of the HMP, its ten core components, and suggestions for implementing the HMP in clinical settings.
- Guidance to staff, administrators, and other healthcare professionals on how to implement and adapt the HMP for their organization.

To complement this PDF toolkit document, CDC DHDSP developed an online toolkit that consists of interactive e-learning modules that are designed to guide learners through the key features of the ten HMP components and prepare them to implement the components at their organization. Both versions of the toolkit include links to additional resources that may support HMP implementation, as well as tips for adapting each component to suit an organization's needs. This PDF toolkit includes more in-depth information about each program component.

Hypertension: An Overview

In the United States, approximately 108 million adults have hypertension[1] (commonly referred to as high blood pressure) and only about one in four have their condition under control.[1,2,3] Hypertension is known as a silent killer because individuals who have it often do not experience symptoms and it may therefore go undetected.

Hypertension can lead to heart disease or stroke, the first and fifth leading causes of death in the U.S., respectively.[4] It can also lead to chronic heart failure and kidney failure.[5] Hypertension contributes to more than 1,100 deaths per day and costs the nation $53 billion each year in direct medical expenses and lost productivity from premature death.[6,7]

Hypertension Facts

High blood pressure increases risk of:

- first heart attack.
- first stroke.
- chronic heart failure.
- kidney disease.

Hypertension disproportionately affects those with low income, those covered by public insurance, and those with no insurance. Compared to non-Hispanic whites and Hispanics, African

[1] Defined as a systolic blood pressure ≥ 130 mm Hg or a diastolic blood pressure ≥ 80 mm Hg or are taking medication for hypertension.

Americans are more likely to develop high blood pressure, and at an earlier age and with greater severity.[8] Many people with hypertension have comorbidities. About 60% of people with diabetes have hypertension. Health systems and clinics play an integral role in preventing, managing, and treating hypertension.

Challenges with Managing Hypertension

Common barriers to hypertension treatment and control include inadequate treatment or non-compliance with treatment guidelines, reluctance to change lifestyle behaviors related to hypertension, medication non-adherence, lack of access to healthcare, communication barriers between patients and healthcare providers, and therapeutic inertia, or the failure of the healthcare provider to initiate or intensify therapy when therapeutic goals are not met.[9,10] Managing hypertension also requires addressing risk factors such as diabetes, an unhealthy diet, physical inactivity, obesity, alcohol consumption, or tobacco use.[11]

Commonly reported patient-level barriers to managing hypertension, particularly among lower income and/or racial and ethnic minority patients, include schedule conflicts (e.g., taking time off from work for appointments), transportation, cost of medications, and other higher priority life and health conditions.[12] There may also be knowledge barriers with regard to understanding hypertension management techniques. Site-level barriers may include incorrect blood pressure measurement technique, non-compliance with current hypertension guidelines, and low prioritization of uncontrolled blood pressure by staff.[13]

The Hypertension Management Program

The HMP is modeled after Kaiser Permanente Colorado's (KPCO) Hypertension Management Program and packaged by CDC. The program was identified through a 2009 evaluability assessment of programs that showed promise in the area of hypertension management. The programs were reviewed and rated by an expert panel to determine the promise and readiness for a more rigorous evaluation. The KPCO HMP was determined to be well-equipped for an in-depth evaluation. The evaluation demonstrated that the program improved health system-wide blood pressure control rates from 61% in 2008 to 78% in 2010 and 83% in 2012.[14]

Based on the KPCO experience, CDC sought to replicate the HMP in high-burden healthcare environments with fewer available resources. In 2017, CDC contracted with NORC at the University of Chicago to identify two sites for replication, create an implementation toolkit and provide technical assistance to the sites during implementation, and to evaluate the implementation. Two health systems were selected: a federally qualified health center (FQHC) with a rural service area in the southeastern United States, and an integrated safety net healthcare system in an urban center in the South. This toolkit incorporates lessons learned and adaptation tips from the evaluations of the program's implementation at these two sites.

The program promotes frequent and accurate blood pressure checks through an electronic health record (EHR)-based blood pressure alert and the provision of discounted home blood pressure monitors. A strong focus on clinical education, particularly for the primary care team, promotes increased accuracy of every blood pressure measurement. The HMP also promotes clinical care without appointments

or copayments. The HMP is a data-driven program that collects and uses data to monitor and improve its activities. It is intended to improve hypertension care management processes across the health system for all patients with hypertension; it is not intended to be a targeted program affecting only a limited subset of hypertensive patients.

The HMP helps both patients and clinicians overcome barriers to hypertension control. The HMP improves accessibility to care and patient-level barriers through components such as no-copayment blood pressure checks, which reduce cost barriers and scheduling challenges. The HMP also addresses site-level barriers through components such as educating the care team on blood pressure measurement techniques. By doing so, the HMP can enable patients to adhere to follow-up care plans and further engage patients in the management of their blood pressure.

The table below shows how implementing the HMP can help organizations address common challenges in managing hypertension.

Challenge	How the HMP Addresses the Challenge
Non-compliance with treatment guidelines	Employing consistent practices across the organization that address compliance at every visit.
Cost and scheduling barriers	Offering no-copayment walk-in/scheduled blood pressure checks.
Gaps in knowledge or understanding	Educating patients on hypertension management, including home blood pressure measurement.
Therapeutic inertia	Allowing clinical pharmacists to titrate medications in collaboration with the primary care provider (PCP).

Using the HMP Toolkit

This toolkit provides guidance on adapting the HMP and its 10 components in organizations that may be resource-constrained, such as FQHCs, rural health systems, safety net hospitals, and other health systems that serve socioeconomically disadvantaged populations, including populations that may largely lack health insurance.

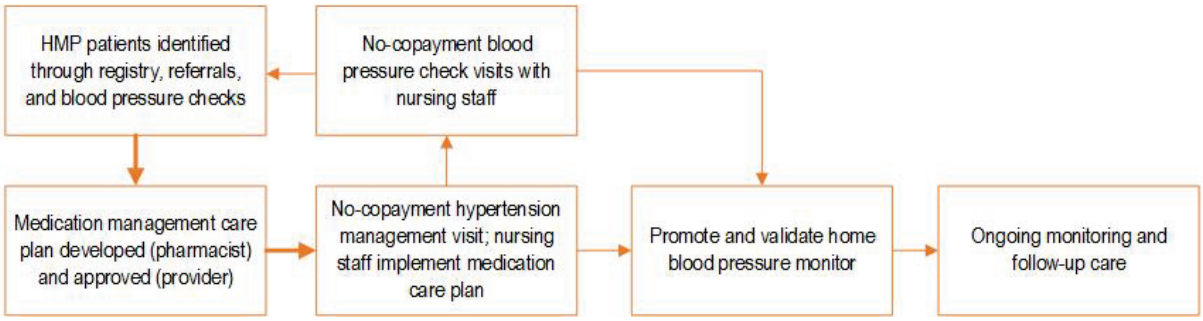
The HMP can be adapted for optimal implementation at your organization. In fact, the program is more likely to be successful if you tailor it to suit your infrastructure, staffing, and patient population. In addition, any changes that you make to your current patient practices, workflows, or clinical protocols for the HMP should be reviewed and approved by healthcare and clinical leadership in your organization.

The toolkit is organized into twelve chapters. Following the two introductory chapters about hypertension and the HMP is one chapter for each of the ten components. The components can be reviewed in any order, but it is recommended that healthcare organizations implement all of the HMP components. Supplemental resources relevant to each component are provided at the end of each chapter. Templates for training slides are also included with this toolkit.

Each chapter of this toolkit includes suggestions for adapting each component to your organization, as well as questions to consider when planning to implement and adapt the component. You may click on the titles in Exhibit I.1 below to navigate to the chapter in the toolkit for more information. Exhibit I.2 below shows the HMP clinical workflow.

Exhibit I.1 HMP Components

Exhibit I.2 HMP Clinical Workflow



HMP infrastructure supports changes in the clinical workflow that encourage all staff to work together at the top of their licenses to provide integrated and coordinated care to patients with hypertension.

What infrastructure does an organization need to implement the HMP?

Implementing the HMP may involve educating providers and making changes to your organization's staffing (e.g., clinical pharmacists may have a new role of making medication management plans and working more closely with clinical teams in outpatient settings), financial systems (e.g., providing incentives), and health information technology (IT) systems (e.g., creating registries or blood pressure alerts) .

How can an organization identify and care for patients in the HMP?

Exhibit I.2 shows the clinical workflow of the HMP. The HMP includes two types of patient appointments: 1) blood pressure checks and 2) hypertension management visits. In addition, clinical pharmacists and other providers are available to patients during regularly scheduled walk-in consultation hours to discuss their medications. Patients are recruited into the HMP through the registry and provider referrals.

What happens during blood pressure checks?

Licensed practical nurses (LPNs) and medical assistants (MAs) typically conduct blood pressure checks. During these appointments, patients have their blood pressure checked, have their home blood pressure monitor validated, and receive education about hypertension. These types of appointments should be made available on a walk-in basis with no copayment required.

What happens during hypertension management visits?

Nursing staff [which can include registered nurses (RNs), LPNs, and MAs] conduct hypertension management visits, which include the same activities as blood pressure checks as well as the ordering of lab tests and referrals to primary care if warranted. In addition, nursing staff implement medication management plans of care during the hypertension management visit. The medication management plans of care are developed by the clinical pharmacists, who create two plans of care for each patient with a scheduled appointment: one plan if the patient's blood pressure is at or below goal, and one plan if the patient's blood pressure is above goal. The PCP reviews

the plans and approves them before the patient comes in for their appointment. Hypertension management visits require an appointment but should not require a copayment.

To learn more about each of the components of the HMP, click on the titles of the components in Exhibit I.1 above. There is one chapter on each HMP component that provides activities for implementation and resources.

Hypertension Guidelines

Clinicians diagnose hypertension and make treatment decisions by comparing a patient's blood pressure readings to certain thresholds. The HMP is flexible and may be adapted for whichever blood pressure guidelines your organization uses to define high blood pressure or hypertension. The HMP provides guidance on recommended activities but allows your organization to use its own blood pressure categories and to build protocols that follow.

In 2017, the American College of Cardiology (ACC) and the American Heart Association (AHA), in collaboration with nine other organizations, published the Guideline for the Prevention, Detection, Evaluation, and Management of High Blood Pressure in Adults: A Report of the American College of Cardiology/American Heart Association Task Force on Clinical Practice Guidelines. These comprehensive hypertension guidelines include four categories of blood pressure: normal, elevated, stage 1 hypertension, and stage 2 hypertension. The cutoff for stage 1 hypertension is defined as ≥ 130/80 mm Hg. In addition, the ACC/AHA guidelines define hypertensive crisis as systolic blood pressure over 180 mm Hg and/or diastolic blood pressure over 120 mm Hg.

The ACC/AHA 2017 guidelines eliminate the prehypertension category used in the Seventh Report of the Joint National Committee on Prevention, Detection, Evaluation, and Treatment of High Blood Pressure (JNC 7) guidelines and lower the hypertension cutoff to 130/80 mm Hg. The ACC/AHA guidelines recommend only treating stage 1 hypertension (130-139/80-89 mm Hg) with medication for patients who have already had a cardiovascular event, such as a heart attack or stroke, or who are at high risk based on age, presence of diabetes mellitus or chronic kidney disease, or calculation of atherosclerotic risk.[15] (The ACC provides an online atherosclerotic cardiovascular disease risk estimator at http://tools.acc.org/ASCVD-Risk-Estimator-Plus/.) The use of a risk assessment in the ACC/AHA guidelines may require an organization to incorporate other clinical data (e.g., blood cholesterol levels, history of diabetes, medication use) to determine treatment recommendations. The use of a risk assessment has become more commonplace in guidelines, and has been recommended in recent blood pressure, blood cholesterol, and aspirin use guidelines/recommendations.[16,17] The ACC/AHA guidelines recognize that people who need two or more medications to control blood pressure may take pills more consistently if medications are combined into a single pill. The ACC/AHA guidelines also recommend that patients self-monitor their blood pressure.[18]

To view the guidelines, visit http://hyper.ahajournals.org/content/71/6/e13.

Training and Staff Engagement

Training for the HMP should be developed based on the unique staffing, resources, and culture of each health system. Some strategies that may be useful are provided below. Additionally, suggestions for training on each component are provided in each chapter.

It may be useful to conduct trainings for different staff types, including an all-staff general orientation to the HMP, role-specific trainings on responsibilities under the HMP, and integrated care team trainings. Exhibit I.3 below provides some potential training approaches for the HMP.

Exhibit I.3 Approaches to Training

Training	Participants
HMP orientation This orientation should include the goals of the program, the systemic changes being implemented, and the potential that the program has for improving hypertension control rates. It should describe the risks and benefits of the HMP. Roles and responsibilities of each staff type should be clearly communicated. As part of this orientation, health system leadership should identify the program champion.	All staff from all sites.
Role-specific training Given that the HMP is a multi-component intervention, health systems implementing the HMP can identify key individuals from various departments or teams. Trainings can then be tailored to the HMP-related activities with which these staff will be most involved and conducted separately, with roles and responsibilities clearly delineated for each staff type.	Separate trainings for: ▪ Physicians ▪ Nurse practitioners (NPs) / physician assistants ▪ Pharmacists ▪ Nursing staff ▪ Front office staff ▪ Outreach staff ▪ IT staff
Integrated care team training Conducting integrated care team trainings allow members of care teams who will be working together to coordinate their different roles and responsibilities. These trainings can cover HMP components that involve different members of the care team, such as hypertension management visits, to solidify understanding of the new workflows.	Integrated care teams. May be conducted with integrated care team staff at each site, or with all staff together at the main site.

With any of these training approaches, the trainings should focus on new workflows, use of the EHR, and evidence-based protocols and clinical guidelines.

New workflows. Many elements of the HMP may require adjustments to existing workflows. Trainings on these new workflows and protocols can be tailored to different types of staff. For example, frontline staff in primary care organizations should receive training on new workflows associated with no-copayment walk-in blood pressure checks and hypertension management visits. Providers and clinical pharmacy staff should receive training on the procedure for titrating and approving

medications prior to hypertension management visits (as described in Component 7). Staff in specialty care offices should receive training on procedures for ensuring primary care follow-up for patients identified as hypertensive. When workflows involve more than one type of staff, it may be advantageous to conduct trainings with the relevant staff together. This will allow the staff to discuss how they will work together and communicate with one another, allow for consistency of messaging, and reinforce central messages across staff members.

Use of the EHR. While some health systems may use a paper-based protocol intervention, many will integrate the HMP into their EHR. Both paper-based and EHR-based protocols can be effective. Staff should receive training on using or responding to new elements of the EHR associated with the HMP. This includes blood pressure alerts (as described in Component 4), use of the registry system and outreach to high-risk patients (as described in Component 3), and referral pathways for specialty care practices (as described in Component 9). EHR-based trainings can be tailored to different types of staff. For example, members of the care team identifying high-risk patients based on the registry list should receive training on generating and managing these lists.

Evidence-based protocols and clinical guidelines. As part of the HMP, staff are encouraged to follow best practices for blood pressure measurement and management. Clinical staff should be trained on hypertension management practices and protocols that they will be responsible for under the HMP. The Million Hearts® Hypertension Control Change Package for Clinicians offers instructional resources for many aspects of hypertension management, including: taking and recording accurate blood pressure readings, implementing hypertension guidelines effectively, and facilitating patient self-management and medication adherence. Additional educational materials are available in the resources section of this toolkit.

Tips for Making Training Successful

Training should be conducted in the format and structure that makes the most sense to your organization. For example, if in-person, role-specific trainings have been successful in your organization, you may choose to conduct these types of trainings. In addition, the following strategies may help to make HMP trainings successful:

Make HMP roles and responsibilities clear from the outset. A clear understanding of each staff member's role in the HMP and how the components fit together can minimize confusion related to implementing the new program and allow staff to focus on their specific tasks and responsibilities. It may be useful to review roles and responsibilities at integrated care team trainings so clinical staff working together on workflows such as hypertension management visits understand how to coordinate their respective duties.

Break up training into smaller pieces rather than one longer training. Training on the HMP can be broken up into multiple sessions. Segmenting HMP training is not only recommended to facilitate the absorption of information among staff, but also to allow for training segments to be appropriately tailored and targeted at the staff who will be most involved with the implementation of various components.

Provide ongoing training. After all staff have completed the initial rounds of HMP training, providing ongoing training can solidify understanding of the HMP, promote staff engagement in the program, and allow staff the opportunity to ask outstanding or emerging questions.

Integrate training into existing training and meeting structures if possible. Staff implementing the HMP should deliver training via the medium that best suits their health system. For example, the health system may present the HMP during existing meetings and make training materials available on existing learning management systems, if applicable.

Develop useful and engaging training materials. To aid HMP training, health systems may use a mix of different training materials depending on what they have found to be most effective in the past. Potential training materials, methods, and resources include PowerPoint slides, tip sheets, and other visual aids. Templates for training slides are provided with this toolkit. While these slide templates contain important HMP guidance from this toolkit, they will need to be tailored for your preferred training approach and your unique organization. Adding interactive Q&A or quiz slides throughout the training can engage staff and provide regular checkpoints to ensure staff are understanding the new material. Organizations also may incorporate demonstrations and/or role playing exercises. Hands-on training activities, such as practicing proper blood pressure measurement technique, can promote staff confidence and engagement in training.

Use training to gather employee feedback on the program. The HMP is designed to be highly adaptable to the needs of the health system; thus, HMP implementers may choose to use training sessions as an opportunity to engage staff in decisions around how the HMP can be most effectively tailored and implemented in specific settings. Involving staff in these decision-making processes can help obtain buy-in from staff and ensure that all pertinent concerns have been accounted for in the implementation planning process. HMP implementers can also gather staff feedback on HMP challenges and use training sessions to brainstorm or offer solutions to identified challenges with staff.

Consider Adult Learning Theory principles to improve the success of your training. In designing training, health systems may use best practices grounded in Adult Learning Theory.[19] To engage staff during training and make training sessions more interactive, health systems may also integrate case studies to prompt active learning.

Staff Engagement

The success of the HMP depends in part on a high level of staff engagement in the program. Organizations implementing the HMP should develop strategies to engage all staff types and proactively identify potential barriers to staff engagement in order to address them.

In addition to engaging staff through the trainings described above, strategies to promote staff engagement may include:

- **Communicate the value of the HMP** through in-person meetings and written communication with staff. It is important for leadership to demonstrate support of the program and articulate the positive changes it is expected to bring.

- **Identify department or role-specific champions** in addition to the overall program champion. These champions can build momentum with their peers and collaborate with HMP leadership and other champions to promote successful program implementation.
- **Share program data with staff to show progress**, including utilization data on outreach, referrals, and appointment attendance, and health outcomes data such as blood pressure control over time. This may be shared via a dashboard, described in greater detail below under Incentives, Rewards, and Recognition (HMP Component 10).
- **Provide program information and updates on a regular basis** to remind staff of the program's importance, progress, and changes.
- **Recognize staff contributions and accomplishments** through the incentives, rewards, and recognition program described in Component 10.
- **Address staff concerns related to HMP burden**. Clinical staff who must implement new workflows may feel that the HMP is imposing new demands onto their busy schedules. HMP leadership should provide regular opportunities for staff to offer feedback and work together to develop strategies to minimize burden.
- **Consider targeted trainings or additional recognition** for certain roles or departments if engagement is low. Identifying and partnering with department-level champions and leaders may also help address low engagement or staff resistance.

  Organizations may also use quality improvement (QI) strategies to create and sustain a culture of change with the implementation of the HMP. For example, the objective of the Institute for Healthcare Improvement's Psychology of Change Framework[20] is to create conditions that enable individuals and groups across systems to exercise power and courage in order to advance and sustain improvements in health and healthcare.

Program Component 1: Integrated Care Team

In the box below, we summarize the highlights for implementing **HMP Component 1: Integrated Care Team.** By the end of this chapter, you will have the knowledge, skills, and tools to understand the roles of the integrated care team; follow the activities in building an HMP integrated care team; and generate ideas for instituting an integrated care team for your clinic.

Component 1 Highlights	
Summary of HMP component:	Use an integrated care team to educate patients, identify risk factors for disease, prescribe and modify treatments, and maintain an ongoing dialog with patients about their health and care.
Activities to Implement:	1. Establish the hypertension management council. 2. Create an HMP staffing plan and establish the integrated care team. 3. Identify an HMP champion.
Key staff involved:	Clinical pharmacists, nurses, PCPs, and program leadership.

The first component of the HMP is the development of an integrated care team for patients with hypertension. To implement this component, your health system will need the key members of the care team, including clinical pharmacists, nurses, and PCPs, to perform their respective HMP duties and to collaborate to provide integrated care. Your system will also need to establish a hypertension management council to govern the HMP.

Background

Integrated Care Team

A multidisciplinary team working in collaboration to educate patients, identify risk factors for disease, prescribe and modify treatments, and maintain an ongoing dialog with patients about their health and care.[21]

The integrated care team includes nurses (RNs and LPNs), clinical pharmacists, PCPs (physicians and/or advanced care providers such as NPs or physician assistants), and other clinicians according to your health system's preference (e.g., dietitians, social workers, community health workers). Scope-of-practice laws and organizational policies that allow nurses, physician assistants, pharmacists, and other healthcare providers to practice to the full extent of their license and training can facilitate team-based care.

A motivated integrated care team and the consistent identification of hypertension as a priority area by health system leaders, will facilitate the successful implementation of the HMP. Programs are more likely to succeed if there is a culture of accountability among staff in which everyone across all care departments is responsible for providing quality care related to hypertension management. This chapter describes the staff involved in the HMP and how they may work together as an integrated care team.

Activities for Implementing Component 1: Integrated Care Team

There are three activities involved in implementing Component 1:

1. Establish the hypertension management council.
2. Create an HMP staffing plan and establish the integrated care team.
3. Identify an HMP champion.

Activity 1: Establish the hypertension management council

Program governance is important for enhancing the efficiency of hypertension-related workflows and improving hypertension-related outcomes. Health systems should form a multidisciplinary hypertension management council to guide the HMP. This hypertension management council may include:

- HMP leadership, program manager, and program champion.
- Regional health system leadership.
- Clinical staff from each level (e.g., MDs, RNs, nurse managers, MAs) from multiple medical offices.
- Clinical pharmacists.
- Patient advocates.
- Representatives from specialty care departments.

Periodic meetings of the hypertension management council (e.g., every two months) can ensure proper program oversight and help make adjustments to the program, as needed. Depending on the goals of your health system, the hypertension management council may perform the following functions:

1. **Discuss HMP goals and expectations.** This will ensure buy-in from all council members and increase their commitment to program success.
2. **Establish protocols, policies, and procedures.** These are critically important for successful program implementation. They can include, but are not limited to, clinical workflows, combination medication therapy protocols [described in greater detail in Promote Use of Combination Medications to Treat High Blood Pressure (HMP Component 6)], program staffing, and how to structure incentives [described in greater detail in Incentives, Rewards, and Recognition (HMP Component 10)].
3. **Guide implementation decisions.** Use data, staff feedback, and information from the literature to guide decisions related to the implementation of the HMP.
4. **Communicate with other health system leaders.** Throughout program implementation, communicate with other health system leaders to keep them informed of your program developments. They may be able to provide insights on their program experience you can adapt for your own use.
5. **Set annual quality goals for your program.** Consider setting annual goals at three levels: a minimum goal for all sites (for example, a target control rate for the year), a desired goal for all sites, and a goal for well-performing sites that have already attained the target goal.

Activity 2: Create an HMP staffing plan and establish the integrated care team

The second activity in establishing the integrated care team for the HMP is to create an HMP staffing plan and establish the integrated care team. Having high-level support for the integrated care team is critical for ensuring needed resources and backing from decision-makers to mobilize staff to participate in the integrated care team.

Leadership should be mindful of the following characteristics of the team in identifying the right fit for the HMP:

- Number and types of providers needed for the team.
- Prior experience of providers working together on QI initiatives.
- Competing priorities of team members.
- Who is capable of leading the team.

As described below, PCPs, clinical pharmacists, nurses, and specialists all have important roles in the HMP. However, your health system leadership and the hypertension management council can adapt staffing for each clinic. Leadership may consider how staff can leverage existing care coordination activities, such as morning huddle meetings, for the purpose of facilitating collaboration and communication among staff from multiple disciplines. Organizations that are recognized as Primary Care Medical Homes may build on existing integrated team-based structures for the purposes of the HMP.

The staffing of the HMP is designed to allow professionals to work at the top of their licenses. The staffing model involves a range of clinical staff, including nursing staff and clinical pharmacists, so tasks can be redistributed among the care team to reduce the burden on PCPs. However, the roles of certain staff types (e.g., clinical pharmacists, nurses, physicians) can be adapted to fit your clinic's needs and preferred staffing structure. Below, we provide brief descriptions of the different roles of each provider type and how they work with other providers.

Clinical Pharmacists

Clinical pharmacists are valuable members of the HMP care team. They develop medication management plans of care that are approved by the PCP ahead of a patient's scheduled hypertension management visit. These plans of care can be implemented by an RN at the hypertension management visit based on the patient's blood pressure measurement. The clinical pharmacist's role shifts responsibility for developing these plans from the PCP to the pharmacist, therefore allowing the PCP to review the plans, rather than having to develop the plans themselves.

Nursing Staff (RNs, LPNs, MAs)

The nursing staff review the registry and conduct outreach; take blood pressure at blood pressure checks, hypertension management visits, and specialty visits; and facilitate the hypertension management visits, including implementing the medication management plan developed by the clinical pharmacist and approved by the PCP. They should also be represented on the hypertension management council.

Front Office Staff

Some health systems may find it more appropriate to utilize front office staff for conducting registry-based outreach since these staff may already play a prominent role in contacting and scheduling patients. Front office staff can also play an instrumental role in adapting new workflows; for example, office staff can help direct patients who arrive for no-copayment blood pressure checks and assist with connecting patients contacted through the registry to open appointments.

Physicians and Advanced Care Providers

The physicians or advanced care providers (such as NPs, depending on scope of practice laws in each state) approve the medication management plans developed by the clinical pharmacist and monitor overall performance of the HMP. They also develop procedures and clinical evidence-based guidelines for hypertension management. These procedures and clinical evidence-based guidelines help standardize care for patients with hypertension. Along with these important roles, physicians and advanced care providers help prepare educational materials and conduct trainings for providers, primary care team members, and site-level leaders. They also support site leaders when needed and may facilitate the hypertension management council.

Specialists

Specialists, such as obstetricians/gynecologists and behavioral health specialists, refer patients to PCPs after a high blood pressure reading during a specialty care visit. They should also be represented on the hypertension management council.

Activity 3: Identify an HMP champion

The primary responsibilities of the program champion are to:

- Promote hypertension control and encourage the adoption of the HMP in a health system.
- Motivate staff to participate by communicating how the HMP will contribute to their shared goal of improving patients' health.
- Link the perspectives of frontline clinical staff with the broader perspectives of program leadership.

Identifying an HMP program champion is closely related to Activities 1 and 2, but focuses on finding an individual who will ensure ongoing successful implementation. The program champion plays a key role in the consistent promotion of hypertension control and is critical for ensuring the adoption of the HMP. Effectively leading clinical practice improvement requires not only the clear communication of vision, but also linking the "in-the trenches" perspective of clinical staff with the broader perspective of program leadership.[22]

The role of a program champion is to:

- Motivate clinical staff by engaging them in a shared purpose.[23] In promoting the HMP, program champions may appeal to a common goal held by clinical staff: improving patient health.

- Use data or cases/vignettes to demonstrate the potential that the HMP has to improve patients' health.
- Clearly communicate that group action is needed to reach the goal of improving hypertension management.
- Help obtain buy-in from clinical staff.
- Develop, coordinate, and/or lead staff training on the HMP.

The program champion should be enthusiastic about achieving hypertension control and knowledgeable about hypertension management; the program champion should have appropriate clinical experience. [24] They should have institutional knowledge, including broad knowledge of organizational culture and structure.[25] The program champion should be a good communicator who has strong credibility with other clinical staff. [26] The program champion should be able to build intra-organizational relationships.[27] Finally, they should be able and willing to commit the time and energy toward promoting hypertension control, providing direction, and carrying out the responsibilities described below. [28]

Program champion responsibilities may include mobilizing the resources to actualize HMP-related initiatives[29] and leveraging knowledge of clinic environments to advocate for "local" approaches to QI and the implementation of workflows, tools, and guidelines.[30] They can provide training to staff through the development of frequently asked questions (FAQs), based on questions commonly asked by staff during the implementation period.

Tips for ensuring the success of the program champion:[31]

1. **Clear communication of the program champion role.** The health system leadership should clearly communicate the role of the program champion. The role may be informal or associated with a formal title.
2. **Provide the champion with proper support.** Because clinical staff may lack formal leadership training, leadership should ensure that the champion has support from the administration, including a mentor or point of contact that they can work with to ascertain next steps.
3. **Support the champion in balancing their leadership responsibilities with their clinical workload.** Many champions take on responsibilities in addition to their roles as full-time clinicians. To the extent that healthcare organizations are able, they should adjust the champion's other clinical duties or compensate the champion for the additional time that they spend leading the HMP.
4. **Include the champion in decision-making processes.** The champion should not only have a role in communicating information between different levels of a healthcare organization, but also have a seat at the table when decisions about HMP guidelines and workflows are made.
5. **Reinforce champion's messaging to staff.** Disseminate HMP information and training materials to staff to reduce the burden on the program champion and ensure that information is consistently communicated to staff.

As the implementation of the HMP progresses, additional program champions may emerge naturally at the clinic level. Program leadership should identify high-performing, respected, enthusiastic staff that have the potential to serve as program champions. These additional program champions may not only help ensure the success of integrated care teams, but also help sustain the HMP over time.

Suggestions for Adapting Component 1: Integrated Care Team

- Develop an implementation action plan with key tasks, responsible staff, and due dates to facilitate program implementation and continuous QI.
- Consider how to clearly communicate new or expanded roles and responsibilities to staff. For example, incorporate the information into existing staff training materials.
- When developing the HMP staffing plan, consider staff bandwidth for program-related tasks given existing roles, such as assigning outreach to staff who have time to conduct the outreach on top of their other job responsibilities. Allow clinical staff to work to the top of their licenses, as applicable.
- Consider identifying multiple program champions, such as one champion per clinical department to promote staff buy-in, as well as different leadership champions.
- Adapt team roles to reflect different staff members' training, knowledge, and capacity to participate. For example:
  - LPNs or MAs can conduct accurate blood pressure checks.
  - If your organization employs community health workers, incorporate these staff members into the integrated care team as appropriate, based on their ability to perform program tasks such as outreach, their level of training, and the oversight required to manage their program tasks.
- Incorporate HMP activities, such as care planning, into existing meetings and daily huddles, and then revise protocols and internal resources accordingly.

You may also want to consider the following questions as you think about implementing this component. Space has been provided in the table below to record your responses to each question.

1	Who should be on your HMP's integrated care team?
2	What existing efforts (e.g., care coordination initiatives) within your organization related to integrated care can be built upon?
3	What resources, such as staff time or equipment, do you need to implement the HMP? Who do you need to ask to access those resources?

Resources

Improving the Screening, Prevention, and Management of Hypertension—An Implementation Tool for Clinic Practice Teams [PDF-2.79MB]

This publication is for healthcare professionals and specifically clinic practice teams. It is meant to serve as a QI guide and a compilation of resources to support practices in their efforts to improve blood pressure control. Pages 45-47 in this tool provide guidance on expanding roles for primary care team members in working with patients with hypertension through team-based care. (*Washington State Department of Health*, August 2013)

The Community Guide. Cardiovascular Disease: Team-based Care to Improve Blood Pressure Control

This guide provides evidence supporting the use of team-based care to improve blood pressure control, in addition to considerations for implementation.

Provider Toolkit to Improve Hypertension Control. All Team Members Trained in Importance of BP Goals and Metrics [PDF-136.19KB]

This toolkit provides tips on encouraging team-based care for hypertension management. (*American Medical Group Foundation*, 2013)

Million Hearts® Success Story. New York Develops Clinical Pathway to Identify and Manage Adult Hypertension [PDF-552.35KB]

This Million Hearts® story describes the steps taken and results achieved by a FQHC that sought to improve hypertension control rates. (*Association of State and Territorial Health Officials*, 2014)

Promoting Team-Based Care to Improve High Blood Pressure Control

This CDC online guide provides information on the evidence supporting team-based care, as well as considerations for implementation.

The Kinds of Teams Health Care Needs

This article shows steps that healthcare leaders can take when seeking to facilitate effective team-based care. (*Harvard Business Review*, December 2015)

The Joint Commission Primary Care Medical Home Certification Program

This webpage provides information on the Joint Commission Primary Care Medical Home Certification Program.

National Committee for Quality Assurance (NCQA) Patient-Centered Medical Home (PCMH)

This webpage provides information on NCQA's PCMH program.

URAC Patient-Centered Medical Home Certification

This webpage provides information on URAC's PCMH certification process.

Accreditation of Association for Ambulatory Care, Inc. (AAAHC) Medical Home

This webpage provides information on AAAHC's medical home on-site certification process.

Program Component 2: Patient Registries and Outreach Lists in the EHR

In the box below, we summarize the highlights for implementing **HMP Component 2: Patient Registries and Outreach Lists in the EHR.** By the end of this chapter, you will have the knowledge, skills, and tools to understand patient registries and their use for outreach in the HMP; identify activities for creating a patient registry and conducting outreach for the HMP; and generate ideas for creating a registry and conducting outreach in your health system.

Component 2 Highlights	
Summary of HMP component:	Create a patient registry and conduct outreach for the HMP.
Activities to Implement:	1. Create the HMP registry. 2. Develop a process for conducting outreach.
Infrastructure required:	EHR, staffing, outreach materials (e.g., email, phone, fliers, etc.).
Key staff involved:	IT/EHR staff, nurses, and other members of the primary care team who are involved in outreach.

Successful outreach is key to driving patient participation in the HMP. Outreach leads to increased scheduling of necessary appointments and fosters the development of medication management plans of care. To implement this component, your health system will need staff who will create or activate the registries (which may be housed within the EHR), staff who will use the registries to conduct outreach, and outreach materials.

Background

Registries allow staff to identify patients who are eligible for participation in the HMP. As described below, health systems should develop criteria for identifying and prioritizing patients in need of hypertension management based on a consensus definition of high blood pressure used across primary and specialty care departments. It may be helpful to use two sets of registry criteria to identify patients, which for example, could include the following.[32]

Registry 1: All patients 18–85 years of age with a known diagnosis of hypertension:

- who are on two or fewer antihypertensive medications,
- whose previous two blood pressure readings have been above a goal determined by their medical history and a cardiovascular risk assessment,
- and whose last office visit was greater than nine weeks ago.

Registry 2: Patients with a diagnosis of hypertension:

- who have not had documented blood pressure and not been seen by their PCP in the past 12 months,
- or who require a hypertension medication refill or hypertension-related lab tests.

Organizations may exclude patients last seen before a certain cutoff date (e.g., two years ago or longer) from the registries in order to filter out patients who are no longer active (e.g., moved out of the service area) so the outreach team can focus efforts on current patients. When patients are identified by the registries (or referred by PCPs or specialists), nurses on the integrated care team conduct outreach to them to encourage participation in the hypertension management visits and the blood pressure checks. Outreach leads to increased scheduling of necessary appointments and fosters the development of medication management plans of care. This chapter describes how to develop the registries and use the registry lists to conduct outreach to patients.

Activities for Implementing Component 2: Patient Registries and Outreach Lists in the EHR

There are two activities involved in implementing Component 2:

1. Create the HMP registry.
2. Develop a process for conducting outreach.

Each of these activities consists of several sub-steps, outlined below. To implement this component, you may carry out some of these activities in parallel or implement using a step-wise approach, first setting up the system and then conducting outreach once the system is functional.

Activity 1: Create the HMP registry

The integrated care team and EHR/IT team should work together to create a registry. This toolkit provides resources for creating a registry at the end of this chapter, including steps provided by the Million Hearts® Hiding in Plain Sight resources. As an example of how to set up a registry, a summary of the American Medical Association (AMA)'s STEPS Forward toolkit called Implementing a Point-of-Care Registry is provided below. The following three steps for creating the registry are adapted from the AMA's STEPS Forward toolkit.

1. Determine the criteria for your registry and build the registry framework.
2. Develop workflows and train the team to use the registry.
3. Put your registry into action.

In the paragraphs below, we provide more detail about each of these steps. We also encourage you to visit the website for more information, including details on STEPS Forward's final step, *Evaluate and apply registry findings*, and to review other resources listed at the end of this chapter.

1A. Determine the criteria for your registry and build the registry framework

The AMA STEPS Forward toolkit suggests engaging relevant staff to discuss what an effective registry will look like (a brainstorming guide is provided in the AMA's

toolkit linked above). Include staff members who will be running reports so that the format makes sense with their workflow, and so that they are familiar with the design.

Along with determining what the registry will look like, you will need to establish a predefined set of criteria to automatically create registry lists in the EHR system. Your organization's hypertension management council should consider using the criteria for Registries 1 and 2 described above, but make sure that the criteria are based on your organization's EHR and clinical goals.

To build the registry framework, choose a registry system that works with your current EHR. It is possible that your EHR will have a generic registry template. The template or modules may be available but not activated, and they may be under "population health management" or "data analytics." If these templates or modules do not exist, you may need to work with a programmer or your EHR vendor to create the registry. The STEPS Forward toolkit includes snapshots of what the patient registries may look like, as well as a downloadable example registry.

1B. Develop workflows and train the team to use the registry

The AMA STEPS Forward toolkit suggests that you train a few staff who will be using the registry, and then those staff can train the others on the care team. If you use the EHR vendor to set up the registry, they may be able to provide your registry staff with the initial training. It is important that an outreach tracking system or document is developed and that all staff are trained in how to use the document. Tracking no-shows and failed outreach attempts helps staff better understand and address the barriers to contact and engagement.

1C. Put your registry into action

Once the staff are trained on the registry function, the next step is to begin using the registry. The AMA STEPS Forward toolkit suggests using a phased approach to ease staff into the use of the registry.

There is another step to the AMA STEPS Forward toolkit, evaluating and using the registry data. For the HMP, the registry data are used to conduct outreach to encourage patients to attend hypertension management visits and blood pressure checks. This outreach is discussed in Activity 2.

For additional resources on developing registries, you can use the Registries Made Simple resource from the American Academy for Family Physicians. This resource includes registry screenshots and a video that explains how registries work.

Activity 2: Develop a process for conducting outreach

Once the registries are established, nurses or other outreach staff use the registry lists to conduct patient outreach. The purpose of the outreach is to inform patients about the HMP and encourage participation in the blood pressure checks and hypertension management visits. Developing procedures for conducting outreach should include four steps: develop the criteria for outreach, develop frequency and staffing for outreach, determine outreach methods, and train staff to conduct outreach.

2A. Develop criteria for outreach

Staff who will use the registries should have buy-in on the design and the processes for doing outreach. Though the outreach processes and pathways can be adapted; the suggested pathways for the HMP include:[33]

- If the identified patient has been seen by a PCP in the past 12 months but has uncontrolled hypertension, send the patient's medical record to the clinical pharmacist to create a plan of care and also to the integrated care team for outreach.
- If the identified patient has not been seen in the previous 12-month period, pass the patient's information to the integrated care team for outreach.
- To identify other patients who may be eligible for the HMP, cross-reference the registries with outstanding hypertension-related laboratory work, records for recent patient visits in which the patient had elevated blood pressure, or other prevention or chronic disease-related care gaps that your organization monitors.

2B. Determine frequency and staffing for outreach

Registry review and outreach should take place on a regular schedule (e.g., monthly). Nurses or other members of the integrated care team or office staff may conduct outreach. You may assign outreach lists to different staff based on patients' level of engagement in care or staff capacity to conduct outreach.

2C. Determine outreach methods

Consider using processes that are already in place to contact patients. Outreach methods include phone calls, email, patient portal messaging, automated phone calls, text messaging, and/or letters or postcards. Outreach by phone can be very time intensive, but also effective. It is important that staff who are assigned to do outreach have time to conduct outreach in addition to their other duties.

Tips for Conducting Outreach

- Talk to the patient about their day and then shift gears into talking about their health.
- Verify their last four social security number digits and introduce yourself and the clinic in a manner that confirms the call is not a "robo call."

The process for patient outreach should be developed in consideration of the patient population and existing outreach processes in place in the health system. For example, if the patient population responds well to paper letters sent in the mail, letters should be incorporated into the outreach process. Outreach can also be tailored to individuals.

2D. Train staff to conduct outreach

Train staff on the new outreach processes, the information that needs to be communicated to the patient during the outreach (e.g., a script) if relevant, how to use any new EHR features, and what to do when a patient cannot be reached (e.g., returned mail or inactive phone number). For the latter, you should develop a process for the outreach team or other office staff to obtain updated contact information.

Suggestions for Adapting Component 2: Patient Registries and Outreach Lists in the EHR

- Tailor the method of conducting outreach based on existing activities at your organization. For example, if your organization has existing outreach protocols related to care coordination activities, you can model your registry outreach approaches from those workflows. Combine HMP outreach activities with other ongoing outreach when possible.
- Adapt which staff perform outreach based on your organization's needs and resources. For example, if your organization employs community health workers, these staff can support the outreach team or serve as the primary outreach staff, with training and oversight provided as needed. Outreach can also be conducted by pharmacy students during downtime, if applicable at your organization. Assign more than one staff member to conduct outreach to improve staff engagement.
- Choose a platform for tracking outreach based on your organization's needs. The platform can be integrated with the EHR or external to the EHR (e.g., an Excel spreadsheet).
- Develop a coding system to categorize the outcomes of outreach attempts. For example, codes may include "spoke with patient and scheduled appointment," "left voicemail," or "patient declined."
- Monitor and report outreach progress to HMP leadership. For example, hold monthly meetings with the staff who are conducting outreach to discuss the metrics being tracked (e.g., the number of patients contacted) and set future outreach targets. You can also use the monthly meetings to troubleshoot any issues that arise. For example, staff can discuss alternate outreach strategies to use for patients with inaccurate contact information, such as sending mailings to patients who cannot be reached by phone.

You may also want to consider the following questions as you think about implementing this component. Space has been provided in the table below to record your responses to each question.

1	Which staff will be responsible for the different tasks related to managing the registry and conducting outreach?
2	Does your EHR have a registry template or module available, or will a custom registry need to be created?
3	If you already have a registry, which registry functions work best with your current staff, and can those functions be used for the HMP?
4	What outreach methods are most effective with your patient population?
5	What types of outreach are your organization already doing that could be leveraged for the HMP?

6	How will you track outreach? (e.g., which patients have been contacted?)
7	How will you collect ongoing feedback from outreach staff on the process and make improvements?

Resources

STEPS Forward: Point-of Care Registries

This AMA online module provides steps to take to implement a point-of-care registry.

Million Hearts®: Undiagnosed Hypertension

This Million Hearts® tool provides guidance on identifying patients with undiagnosed hypertension who are "hiding in plain sight."

Registries Made Simple

This article provides steps to develop a registry, including registry screenshots and a video that can be used for training purposes. (*Family Practice Management*, May-June 2011)

Provider Toolkit to Improve Hypertension Control. Registry Used to Track Hypertension Patients [PDF-136.73KB]

This registry description within the toolkit provides an overview of key registry characteristics. (*American Medical Group Foundation*, 2013)

Hypertension Control Change Package (HCCP) for Clinicians [PDF-1.84MB]

The HCCP presents a list of process improvements that outpatient clinical organizations can implement as they seek optimal hypertension control. Appendix B (Page 14) provides example registry criteria and outreach procedures. (*Centers for Disease Control and Prevention*, 2020)

Program Component 3: No-Copayment Walk-in/Scheduled Blood Pressure Checks

In the box below, we summarize the highlights for implementing **HMP Component 3: No-Copayment Walk-in/Scheduled Blood Pressure Checks**. By the end of this chapter, you will have the knowledge, skills, and tools to understand blood pressure checks; identify activities in implementing no-copayment walk-in/scheduled blood pressure checks; and generate ideas for instituting these blood pressure checks at your organization.

Component 3 Highlights	
Summary of HMP component:	Implement blood pressures checks that do not require a copayment or appointment.
Activities to Implement:	1. Establish protocols, clinical processes, and billing modifications to allow for no-copayment walk-in/scheduled blood pressure checks. 2. Train staff on no-copayment walk-in/scheduled blood pressure checks. 3. Advertise the no-copayment walk-in/scheduled blood pressure checks.
Infrastructure required:	Blood pressure equipment, educational materials, advertising materials, and clinic space.
Key staff involved:	LPNs, MAs, or any staff who will conduct the blood pressure checks.

In order to implement this component, your health system will need to have staff members who will conduct the blood pressure checks, such as LPNs and MAs. You will need to develop educational materials to use for training these staff. Blood pressure equipment and clinic space are required for implementation. Finally, you may need to develop advertising materials to promote the opportunity to patients. These materials should be prominently placed throughout your facility and pointed out to patients when they come in for regularly scheduled appointments.

Background

Blood pressure check visits occur when patients come into the clinic to have their blood pressure checked. Some patients may prefer scheduling appointments in advance, so you may want to offer scheduled blood pressure checks as an option. Others prefer walk-in blood pressure checks, which are blood pressure checks that do not require an appointment. The checks may also occur during appointments that patients have scheduled to receive other care. During blood pressure checks, an LPN or MA may conduct the following activities:

1. Check the patient's blood pressure.
2. Validate the patient's home blood pressure monitor.
3. Educate the patient about hypertension.

4. Refer the patient to their RN or PCP if they have an elevated blood pressure or voice any symptoms or concerns that cannot be addressed during the blood pressure check. The protocol for responding to elevated blood pressure, including provider referral, is described in the chapters EHR Alerts for Blood Pressure Re-check (HMP Component 4) and Specialty Department Blood Pressure Measurements with Referral to Primary Care When Needed (HMP Component 9).

Offering walk-in blood pressure checks (i.e., blood pressure checks that do not require an appointment) removes a barrier to care. These no-copayment blood pressure checks also remove a cost barrier which may facilitate better hypertension management. No-copayment blood pressure checks will enable practices to:

- Identify hypertensive patients.
- Improve access to services for patients.
- Support patient care by involving the whole primary care team in hypertension management.

Health Resources and Services Administration (HRSA) Health Center Program awardees, including FQHCs, may be able to offer patients a no-copayment or a reduced-cost visit with the use of a sliding fee scale.[34]

Activities for Implementing Component 3: No-Copayment Walk-in/Scheduled Blood Pressure Checks

There are three activities involved in implementing Component 3:

1. Establish protocols, clinical processes, and billing modifications to allow for no-copayment walk-in/scheduled blood pressure checks.
2. Train staff on no-copayment walk-in/scheduled blood pressure checks.
3. Advertise the no-copayment walk-in/scheduled blood pressure checks.

Activity 1: Establish protocols, clinical processes, and billing modifications to allow for no-copayment walk-in/scheduled blood pressure checks

In the HMP, LPNs and MAs conduct blood pressure checks (though you can modify staffing based on your needs). As described earlier, LPNs and MAs check a patient's blood pressure and validate their home blood pressure monitors. To develop protocols for these activities, please see guidance in Education for Nurses and Other Staff on Blood Pressure Measurement Technique (HMP Component 5) for educating staff on blood pressure measurement, and Promotion of Self-Measured Blood Pressure Monitoring (HMP Component 8) for validation guidance.

LPNs and MAs also provide education on hypertension to the patient. Blood pressure checks are an important opportunity for providing educational materials to patients. A member of the care team can review the materials with the patients and give them the opportunity to ask questions about the materials. The HMP does not prescribe specific patient education materials. You can develop patient materials and ensure they are readily accessible in clinical settings and targeted to your patient

population, or you may refer to the examples provided in the resources section of this chapter.

Finally, if clinically indicated (e.g., patient has an elevated blood pressure or voices any symptoms/concerns) the LPN or MA refers the patient to their RN/PCP to address the symptoms or conditions that cannot be addressed during the blood pressure checks. The PCP will receive notification that their patient has attended a blood pressure check and can review blood pressure measurements and vital signs to determine if medication titration/modification is needed. For guidance on referring patients to their PCP, please see Hypertension Management Visits (HMP Component 7). There should also be action steps in place to direct patients who need immediate medication attention for high blood pressure.

Along with developing a protocol for blood pressure checks, it is important to work with financial leadership in your health system to develop a process by which copayments can be waived. The no-copayment aspect of this component is important for reducing financial barriers to hypertension management, though for some health systems it can be challenging to implement, particularly for those in a claims-based model. Along with working with your financial leadership, it is important to work with legal professionals when developing no-copayment policies as there are some restrictions in waiving copayments. In some cases, it may be possible to use strategies such as engaging insurance companies to provide financial assistance to support these efforts. Health systems will likely need to create a new unique internal billing code or tracking code in the EHR in order to track these visits.

Activity 2: Train staff on no-copayment walk-in/scheduled blood pressure checks

Once the no-copayment blood pressure check workflows and billing procedures are developed, conduct staff training on the new workflows and any new EHR features that will be used. Tailor trainings on these new workflows to different types of staff. For example, front office staff will need to be trained to answer questions about the visits, and nursing staff will need to be trained to conduct the visits. Nursing staff should be taught how to obtain the most accurate blood pressure measurement and about combination medications; to learn more, refer to Education for Nurses and Other Staff on Blood Pressure Measurement Technique (HMP Component 5) and Promote Use of Combination Medications to Treat High Blood Pressure (HMP Component 6). To ensure that staff are aware of these workflow changes, the program champion could coordinate with program leadership to develop and disseminate a memo describing the walk-in/scheduled blood pressure checks.

When the HMP is launched, program leadership should monitor staff use of new billing codes to track the provision of free blood pressure checks. Utilizing new billing codes may be a difficult transition for staff to make amid a busy clinical environment. Follow-up reminders about new billing codes could be useful to ensure staff are properly utilizing these codes.

Activity 3: Advertise the no-copayment walk-in/scheduled blood pressure checks

Advertisements for a no-copayment walk-in blood pressure visit may be targeted to individuals identified through the registries or a broader audience. The following approaches may be taken to advertise no-copayment walk-in blood pressure checks:

- Members of the care team monitoring the registry list and conducting outreach to patients, as described in Patient Registries and Outreach Lists in the EHR (HMP Component 2), should advertise the opportunity for no-copayment walk-in blood pressure checks.
- You can create a flier that describes the walk-in blood pressure checks and give it to patients during hypertension management visits.
- You may opt to reach out to the entire hypertension registry or even your full patient population. A broad outreach effort may include a flier, email, letter, newspaper ad, or phone call.
- You may also place materials in clinic waiting areas and exam rooms.

Advertisement materials should define high blood pressure, why it is important to monitor, groups for whom blood pressure testing is recommended, that the checks are free, and days and hours when patients can walk-in to have their blood pressure checked. If a patient's typical clinic has regular walk-in hours, be sure to highlight this availability in these materials as well.

Suggestions for Adapting Component 3: No-Copayment Walk-in/Scheduled Blood Pressure Checks

- Adapt the staff that conduct no-copayment walk-in/scheduled blood pressure checks to suit your organization's needs.
- Create a non-billable code to capture staff time spent on blood pressure checks for the HMP (e.g., in ten minute increments).
- Develop and post billing code cheat sheets near computer stations to facilitate staff training on new codes.
- If a patient is scheduled for a follow-up appointment on the same day, the appointment may be billable. It is important to communicate if the appointment is billable to the patient before the visit happens.
- Adapt the existing clinical workflow to accommodate patients who are identified as having uncontrolled blood pressure during a blood pressure check. For example, care teams can schedule the patient for a follow-up appointment as soon as possible or try to work the patient into their provider's schedule on the same day.
- Allow staff to distribute and validate the monitors during free blood pressure checks (in addition to the hypertension management visits).
- Integrate these visits into any established walk-in hours that your organization offers. If you do not already provide no-copayment visits, work with your financial and legal teams to understand the laws that govern waiving copayments at your organization.

You may also want to consider the following questions as you think about implementing this component. Space has been provided in the table below to record your responses to each question.

1	What are the legal and financial considerations for implementing no-copayment visits at your organization?
2	Which staff will conduct the blood pressure checks?
3	How can the blood pressure checks be made most accessible to your patient population? (e.g., where should they be held? What types of signage are needed?)
4	What educational resources will be most useful for your patient population?
5	Are there criteria that your organization would like to set to determine which patients are eligible to receive the free blood pressure checks? (e.g., age, prior primary care visit)

Resources

Provider Toolkit to Improve Hypertension Control. Walk-in Medical Assistant Blood Pressure Check Protocol [PDF-525.20KB]

This Kaiser Permanente blood pressure check protocol within the toolkit provides a suggested procedure for blood pressure checks and may be helpful when considering the clinical processes associated with blood pressure re-checks. (*American Medical Group Foundation*, 2013)

Provider Toolkit to Improve Hypertension Control. Correct Blood Pressure Measurement Technique Handout [PDF-231.61KB]

This Colorado Springs Health Partners handout within the toolkit may be useful in training staff on proper blood pressure measurement technique. (*American Medical Group Foundation*, 2013)

Provider Toolkit to Improve Hypertension Control. Standard Work Form, Blood Pressure Measurement in the Clinic [PDF-173.45KB]

This Park Nicollet form within the toolkit may be useful in training staff on proper blood pressure measurement technique. (*American Medical Group Foundation*, 2013)

Provider Toolkit to Improve Hypertension Control. Standard Work Form, Automatic Omron Blood Pressure Measurement [PDF-157.70KB]

This Park Nicollet form within the toolkit may be useful in training staff on proper blood pressure measurement technique. (*American Medical Group Foundation*, 2013)

Provider Toolkit to Improve Hypertension Control. Blood Pressure Accuracy and Variability Quick Reference [PDF-221.65KB]

This HealthPartners reference guide within the toolkit may be useful in training staff on proper blood pressure measurement technique. (*American Medical Group Foundation*, 2013)

Provider Toolkit to Improve Hypertension Control. Checking Blood Pressures Nursing Competency [PDF-156.55KB]

This Sharp Rees-Stealy Medical Group competency list within the toolkit provides an example of competency exams for assessing staff adherence to proper blood pressure measurement technique. (*American Medical Group Foundation*, 2013)

Provider Toolkit to Improve Hypertension Control. Competency Checklist Blood Pressure Measurement [PDF-99.04KB]

This Cleveland Clinic competency checklist within the toolkit provides an example of competency exams for assessing staff adherence to proper blood pressure measurement technique. (*American Medical Group Foundation*, 2013)

Provider Toolkit to Improve Hypertension Control. Blood Pressure Spot Check [PDF-306.66KB]

This Kaiser Permanente spot check form within the toolkit provides an example of competency exams for assessing staff adherence to proper blood pressure measurement technique. (*American Medical Group Foundation*, 2013)

Provider Toolkit to Improve Hypertension Control. New Employee Blood Pressure Measurement Initial Competency Checklist [PDF-214.34KB]

This HealthPartners competency checklist within the toolkit provides an example of competency exams for assessing staff adherence to proper blood pressure measurement technique. (*American Medical Group Foundation*, 2013)

Provider Toolkit to Improve Hypertension Control. Quarterly Blood Pressure Auditing Tool [PDF-127.92KB]

This HealthPartners audit tool within the toolkit provides an example of an auditing tool for assessing staff adherence to proper blood pressure measurement technique. (*American Medical Group Foundation*, 2013)

Partnering in Self-Management Support: A Toolkit for Clinicians

This Institute for Healthcare Improvement toolkit provides on engaging patients in general self-management.

Improving the Screening, Prevention, and Management of Hypertension—An Implementation Tool for Clinic Practice Teams [PDF-2.79MB]

This publication is for healthcare professionals and specifically clinic practice teams. It is meant to serve as a QI guide and a compilation of resources to support practices in their efforts to improve blood pressure control. Appendix 6 in this tool provides several patient education resources in English and Spanish that can be used to talk to patients about the importance of blood pressure monitoring. (*Washington State Department of Health*, August 2013)

Help Patients Take Blood Pressure Medicine - English Video

This video provides information on how to help patient take blood pressure medication. (*Centers for Disease Control and Prevention*, February 2017)

Help Patients Take Blood Pressure Medicine - Spanish Video

This video provides information on how to help patient take blood pressure medication. (*Centers for Disease Control and Prevention*, April 2017)

How You Can Team Up with Patients - English Video

This video provides information on a pharmacist can team up with patients to keep their blood pressure under control. (*Centers for Disease Control and Prevention*, September 2012)

Your Guide to Lower Blood Pressure [PDF-268.56KB]

This guide provides an overview of high blood pressure and key strategies for lifestyle change. (*National Institutes of Health*, May 2003)

Hypertension Medications [PDF-405.96KB]

This patient education handout provides information on hypertension medications. (*Kaiser Permanente*, 2005)

Physical Activity – Every Move Matters [PDF-230.30KB]

This patient education handout provides tips for increasing physical activity, including how to start and maintain lifestyle changes. (*Kaiser Permanente*, 2007)

DASH Diet [PDF-134.87KB]

This patient handout provides dietary approaches to stop hypertension. (*Kaiser Permanente*, 2007)

Program Component 4: EHR Alerts for Blood Pressure Re-check

In the box below, we summarize the highlights for implementing **HMP Component 4: EHR Alerts for Blood Pressure Re-check**. By the end of this chapter, you will have the knowledge, skills, and tools to define EHR alerts; identify activities in creating the blood pressure alerts for re-check; and generate ideas for creating EHR alerts for blood pressure re-check at your organization.

Component 4 Highlights	
Summary of HMP component:	Implement EHR alerts when blood pressure readings are high.
Activities to Implement:	1. Determine how the blood pressure alerts will function in your EHR. 2. Program the blood pressure alerts into your EHR. 3. Train staff on how to respond to blood pressure alerts.
Infrastructure required:	EHR.
Key staff involved:	IT/EHR staff, staff who take blood pressure measurements.

In order to implement this component, your health system will need staff who will create the alerts within the EHR (IT or EHR staff) and the clinical staff who will use the EHR alerts. Your health system also will also need to have an EHR with the capacity to build alerts.

Background

Setting up blood pressure alerts can identify undiagnosed hypertension. Clinicians diagnose hypertension and make treatment decisions by comparing a patient's blood pressure readings to certain thresholds. Patients with systolic blood pressure between 120 and 129 mm Hg and diastolic blood pressure under 80 mm Hg are considered to have elevated blood pressure.[35] Healthcare professionals diagnose patients with hypertension if their blood pressure is consistently at or above 130/80 mm Hg.

Blood Pressure Alert

An alert window that appears on the computer screen of a patient's EHR when the patient's blood pressure is recorded as "high" when measured by a MA, LPN, or RN during vital sign assessment.

The blood pressure alerts ensure that the most accurate blood pressure measurements are obtained and documented by prompting staff to re-check blood pressure and determine the patient's blood pressure based on the average of multiple measurements. The blood pressure alerts draw staff's attention to when the average blood pressure value of two or more measures is high and might otherwise be missed, and encourage staff to re-check blood pressure. The aim of blood pressure alerts is to increase the validity of blood pressure measurements, for

example by identifying cases of “white coat syndrome,” which happen when patients with normal blood pressure have a high blood pressure reading(s) at the doctor’s office, or by re-checking to confirm that a high blood pressure reading was not the result of improper blood pressure measurement technique used the first time. Blood pressure measurement technique is covered in Education for Nurses and Other Staff on Blood Pressure Measurement Technique (HMP Component 5).

By re-checking blood pressure to confirm that a patient has high blood pressure before prescribing medication or scheduling follow-up visits, blood pressure alerts ensure that only individuals with hypertension are clinically managed.[36]

Activities for Implementing Component 4: EHR Alerts for Blood Pressure Re-check

There are three activities involved in implementing Component 4:

1. Determine how the blood pressure alerts will function in your EHR.
2. Program the blood pressure alerts into your EHR.
3. Train staff on how to respond to blood pressure alerts.

Activity 1: Determine how the blood pressure alerts will function in your EHR

Since the blood pressure alert is an EHR reminder, you should work with the IT/EHR team, and clinical leadership and staff who will be using the alerts, to determine the appropriate EHR functionalities. It is helpful to engage staff at this stage to ensure that the functionality makes sense with their workflow. Though the blood pressure alert process can be adapted for your health system or clinic, the process for the blood pressure alerts for the HMP is as follows:[37]

- The alert should appear on the computer screen of the patient’s EHR if the average blood pressure measurement taken by nursing staff during vital sign assessment is elevated beyond the acceptable threshold value (e.g., 130/80 mm Hg).
- The alert should prompt the nursing staff to take an additional blood pressure measurement after one additional minute of rest.
- The alert should remain on the screen if the repeated blood pressure remains greater than or equal to the blood pressure threshold for the provider to view and address. The alert should not block access to other parts of the medical record.

You should share this process with the IT/EHR team as they are planning to create or activate the blood pressure alerts. Please note that terminology and steps for programming the EHR will vary between EHR vendors. The intent of this toolkit is to provide general guidance that IT/EHR staff can use to program the EHR at any organization.

Activity 2: Program the blood pressure alert into your EHR

Once you have determined how the blood pressure alerts will function in your EHR, you will need to program the alert into your EHR. You will need to work with your EHR administrator, programmer, or vendor to make these changes. Your EHR

vendor may offer pre-programmed alerts that can be turned on in your system; this may be less expensive than custom alerts.

The process for creating the blood pressure alerts will likely be unique to your EHR and desired functionality. However, one resource that provides a step-by-step guide for implementing a blood pressure alert is the BP Connect Health toolkit.[38] These steps are also referenced in Specialty Department Blood Pressure Measurements with Referral to Primary Care When Needed (HMP Component 9). If you program the blood pressure alerts into your EHR for this component, and you are also implementing Component 9, you may need to make only a few additional modifications.

EHR modifications for the BP Connect Health toolkit protocol[39] include creation of a blood pressure re-measurement decision prompt, a follow-up decision prompt, and an order set. IT staff implementing this component are encouraged to review the BP Connect Health Build Guide, included in the BP Connect Health toolkit, for more details.

After EHR modifications are complete, IT staff should test the new EHR functions and work with clinical staff to ensure they fit into the desired clinical workflow.

Activity 3: Train staff on how to respond to blood pressure alerts

Training the staff on how to respond to blood pressure alerts should include the following:

1. Train staff on the appropriate way to measure blood pressure [see Education for Nurses and Other Staff on Blood Pressure Measurement Technique (HMP Component 5)].
2. When a blood pressure alert appears, train the staff to take an additional blood pressure measurement after a defined period of time.
3. Train staff to record the additional blood pressure measurement in the EHR.

Suggestions for training on blood pressure measurement can be found in Education for Nurses and Other Staff on Blood Pressure Measurement Technique (HMP Component 5). It is important that staff have the opportunity to practice hands-on with the alert to ensure that they understand the EHR functionality.

Provider compliance with blood pressure alerts and re-checks can be monitored by calculating the proportion of alerts with appropriate follow-up. To measure compliance, calculate the proportion of blood pressure alerts for which an additional blood pressure measurement was taken and documented.[40] This can be monitored on a monthly basis and may be one mechanism used to identify staff in need of additional education.

Suggestions for Adapting Component 4: EHR Alerts for Blood Pressure Re-check

- Consider what your organization's blood pressure alert will prompt staff to do. For example, in addition to prompting nursing staff to re-check blood pressure, it can include prompts for nursing staff to provide patient education or refer the patient to the clinical pharmacist.
- To promote clinical staff receptiveness to the blood pressure alerts, emphasize that the alerts can have a positive impact on patients' hypertension control rates.
- Include a screenshot of the blood pressure alert in training materials for nursing staff to familiarize staff with look of the alert and emphasize its importance.
- To assess whether the blood pressure alerts have increased the number of blood pressure re-checks, pull a sample of patient records and calculate the number of patients eligible for a blood pressure re-check who received the follow-up measurement.
- Develop the blood pressure alert with input from the nursing staff who will use the alerts and allow them to test the alerts during development.
- Work with IT and clinical staff to minimize the disruption created by new alerts to mitigate EHR fatigue among clinical staff. Communicate the value of the blood pressure alert during staff training, as clinical staff may be resistant to a new EHR alert.

You may also want to consider the following questions as you think about implementing this component. Space has been provided in the table below to record your responses to each question.

1	Which staff need to be engaged to make this change to your EHR?
2	If your organization already uses alerts, which features of those alerts have been most useful? How could they be improved?
3	How long will this EHR modification take, and how does that fit with your implementation timeline? Is there a sufficient amount of time built in?

Resources

BP Connect Toolkit

This toolkit provides guidance on developing EHR prompts for blood pressure checks and re-checks in specialty care organizations; this guidance and the associated workflows may also be useful to primary care. (*University of Wisconsin – Madison School of Medicine and Public Health*, 2020)

2017 High Blood Pressure Clinical Practice Guidelines from the American College of Cardiology/American Heart Association [PDF-3.46MB]

This guideline provides clinical recommendations on page 52 and a list of fixed-dose combination antihypertensive drugs on page 255.

Provider Toolkit to Improve Hypertension Control. Walk-in Medical Assistant Blood Pressure Check Protocol [PDF-525.20KB]

This Kaiser Permanente blood pressure check protocol within the toolkit provides a suggested procedure for blood pressure checks and may be helpful when considering the clinical processes associated with blood pressure re-checks. (*American Medical Group Foundation*, 2013)

For resources on blood pressure check protocols, please see the toolkit chapter titled: No-Copayment Walk-in/Scheduled Blood Pressure Checks (HMP Component 3).

For resources on proper blood pressure measurement technique, which may be useful in training staff to respond to the EHR alerts, please see the toolkit chapter titled: Education for Nurses and Other Staff on Blood Pressure Measurement Technique (HMP Component 5).

Program Component 5: Education for Nurses and Other Staff on Blood Pressure Measurement Technique

In the box below, we summarize the highlights for implementing **HMP Component 5: Education for Nurses and Other Staff on Blood Pressure Measurement Technique**. By the end of this chapter, you will have the knowledge, skills, and tools to select a blood pressure measurement technique; identify activities in training staff on blood pressure measurement; and generate ideas for providing education on blood pressure measurement technique at your organization.

Component 5 Highlights	
Summary of HMP component:	Identify a blood pressure measurement technique for your health system, and provide education to staff to follow best practices for taking blood pressure measurements.
Activities to Implement:	1. Develop or select a blood pressure measurement technique. 2. Conduct training (including refresher training to keep staff up to date). 3. Make educational materials available to staff.
Infrastructure required:	Training materials and blood pressure equipment.
Key staff involved:	Nurses and/or any staff who will be taking patient blood pressure readings.

In order to implement this component, your health system will need to have trainers to train the staff who will measure blood pressure (e.g., nurses). You will also need to have or acquire the blood pressure equipment that will be used for the readings, and develop or acquire the training materials.

Background

Blood pressure readings can vary significantly based on the circumstances under which the measurement is taken. For example, time constraints in clinical practice, demands on patients' attention during the blood pressure assessment, improper patient posture, and incorrect stethoscope use can all lead to small errors in blood pressure measurement; these small inconsistencies translate to large inaccuracies on a population level with significant impacts on costs and morbidity.[41] It is important that all staff who take blood pressure measurements are trained on how to properly measure blood pressure, especially the nursing staff or MAs who will be responsible for the majority of blood pressure measurements.

As part of the HMP, nurses and MAs are responsible for checking patients' blood pressure during both the walk-in blood pressure checks [see No-Copayment Walk-in/Scheduled Blood Pressure Checks (HMP Component 3)] and the hypertension management visits [see Hypertension Management Visits (HMP Component 7)]. Although an EHR-based blood pressure alert [see EHR Alerts for Blood Pressure Re-check (HMP Component 4)] should help ensure accurate blood pressure

readings, educating nursing staff on the technique can further ensure the validity of blood pressure readings, potentially preventing unnecessary follow-up and medication prescriptions, reducing the burden on providers, and allowing them to focus their efforts on patients who are high risk. Proper blood pressure measurement technique can also prevent errors associated with underestimating blood pressure and failing to follow up with patients who need further attention.

Activities for Implementing Component 5: Education for Nurses and Other Staff on Blood Pressure Measurement Technique

There are three activities involved in implementing Component 5:

1. Develop or select a blood pressure measurement technique.
2. Conduct training (including refresher training to keep staff up to date).
3. Make educational materials available to staff.

Activity 1: Develop or select a blood pressure measurement technique

Staff should be taught how to obtain accurate blood pressure measurement. Numerous resources exist to identify the steps for proper blood pressure measurement. Many have very similar steps; however, there are slight differences that your clinical leadership should consider when selecting a procedure for proper blood pressure measurement at your health system or clinic. Resources that you may find helpful for selecting a procedure can be found in the resources section of this chapter.

Exhibit 5.1 provides an example checklist for conducting an accurate blood pressure measurement in a medical office from the AHA/AMA Target: BP Measure Accurately resource; the online resource also presents the estimated change in blood pressure reading associated with common positioning errors. This is just one example; you should work with your clinical healthcare leadership to select the technique for your health system or clinic.

Exhibit 5.1 Target: BP checklist for accurate blood pressure measurement[42]

Step	Description
Step 1: Prepare your patient	▪ Ask your patient to avoid caffeine, exercise, and smoking for at least 30 minutes. ▪ Ask your patient to empty bladder. ▪ Have your patient relax in a chair (feet on floor, back supported) for >5 min. Do not take blood pressure readings while your patient is sitting or lying on an examining table. ▪ Instruct your patient not to talk during the rest period or the measurement. ▪ Ask your patient to bare the arm where you will place the cuff.

Step	Description
Step 2: Use proper technique	▪ Use a validated, calibrated measurement device. ▪ Be sure the patient's arm is supported on a surface at the correct height. ▪ Place the middle of the cuff on the patient's upper arm. ▪ Use the correct cuff size. The bladder should go around 80% of the arm. Make a note if an unusual cuff size is needed. ▪ Use either the stethoscope diaphragm or bell for auscultatory readings.
Step 3: Take the measurements you need to diagnose and treat	▪ At the first visit, take readings from both arms. Take subsequent readings from the arm that gave the higher reading. ▪ Separate repeated measurements by 1–2 minutes. ▪ If you use the auscultation method, prefer a palpated estimate of radial pulse obliteration pressure to estimate systolic blood pressure. Inflate the cuff 20–30 mm Hg above this level to determine blood pressure. ▪ If you use the auscultation method, deflate the cuff pressure 2 mm Hg per/s and listen for Korotkoff sounds.
Step 4: Document your BP readings	▪ Record both systolic blood pressure and diastolic blood pressure. If using the auscultatory technique, record SBP and DBP as onset of the first Korotkoff sound and disappearance of all Korotkoff sounds, respectively, using the nearest even number. ▪ Note how much time had passed between blood pressure medication having been taken and time of measurement.
Step 5: Average the patient's BP readings	▪ Use an average based on ≥ 2 readings obtained on ≥ 2 occasions to estimate your patient's blood pressure.
Step 6: Give BP readings to patient	▪ Give patients both their systolic blood pressure and their diastolic blood pressure readings, verbally and in writing.
Step 7: Help patients minimize known risk factors	▪ Encourage patient to stop smoking cigarettes. ▪ Control diabetes mellitus if present. ▪ Control dyslipidemia or hypercholesterolemia. ▪ Counsel overweight or obese patients to reduce weight. ▪ Encourage patient who is inactive to begin regular exercise. ▪ Promote a healthy diet.
Step 8: Diagnose and evaluate your patient	It is reasonable to screen using automated office blood pressure (AOBP) and confirm using ambulatory blood pressure monitoring (ABPM) or self-measured blood pressure before making your diagnosis. Depending on the measurements taken, categorize your patient as: ▪ White coat hypertension ▪ Sustained hypertension ▪ Masked hypertension —and take action.

Activity 2: Conduct training (including refresher training to keep staff up to date)

Once you have developed or selected a procedure for proper blood pressure measurement, train your staff. Trainings can ensure that quality care is consistently being provided to patients with respect to the use of accurate blood pressure measurement technique. These trainings may include step-by-step instructions for taking, reading, and recording blood pressure, as well as information about factors that affect blood pressure. Nursing staff across all departments and sites should be trained on proper techniques. These trainings should be provided on a regular basis (e.g., annually) as well as during onboarding for new staff.

The training slides included with this toolkit can be adapted by your health system's trainer. Health systems implementing the HMP may refer to example lesson plans, training handouts, and competency assessments provided in the resources section of this chapter.

The hypertension management council should regularly revisit the clinical guidelines and standards of care for blood pressure measurement and update trainings to reflect the latest guidance.

Activity 3: Make educational materials available to staff

Along with providing educational materials to staff when conducting training, consider making educational materials available to staff in the following ways:

- **Integrating Materials into the EHR.** Your health system may integrate current clinical standards and other resources into your EHR so that providers can easily access these resources while working in the EHR.
- **Posting Measurement Guides.** Post laminated blood pressure measurement guides in rooms where blood pressure is measured.
- **Creating a Repository of Clinical Guidelines and Resources.** Your health system may aggregate current standards/clinical guidelines and other educational resources in one place so that they can be easily accessed by all providers and staff. If your health system has an intranet, these resources could be aggregated there.

Suggestions for Adapting Component 5: Education for Nurses and Other Staff on Blood Pressure Measurement Technique

- Train all staff on best practices in blood pressure measurement technique. Offer the training to all new staff as they are hired as well as through periodic refresher trainings, especially during the early implementation period when new processes are still becoming common practice. You can combine this training with other HMP trainings that all staff attend, such as the orientation training.
- Blood pressure measurement technique can be conducted by in-house trainers or external partners who offer blood pressure measurement training, such as a local technical college.
- Make blood pressure measurement technique training "hands-on" by including activities such as demonstrations or role playing.

- Reinforce the training through additional communication and support from program champions and organization leadership, particularly nursing departmental leadership. For example, send memos to nursing staff or make announcements during staff meetings to underscore the importance of proper blood pressure measurement technique.

You may also want to consider the following questions as you think about implementing this component. Space has been provided in the table below to record your responses to each question.

1	Which staff need to be trained in taking blood pressure measurements?
2	What types of training approaches (e.g., in person vs. online) are most effective with your staff?
3	Where is the best place to store training documents for staff so that they are easily accessible? Is there an organization intranet or online training platform that can house materials?
4	What is the best way of ensuring ongoing training for staff who missed initial training and for new staff?

Resources

The American Heart Association and American Medical Association's Target: BP Measure Accurately

This AHA tool provides steps for preparing patients, using proper technique, documenting and providing blood pressure readings, as well as a competency assessment.

Provider Toolkit to Improve Hypertension Control. Walk-in Medical Assistant Blood Pressure Check Protocol [PDF-525.20KB]

This Kaiser Permanente blood pressure check protocol within the toolkit provides a suggested procedure for blood pressure checks and may be helpful when determining procedures for proper blood pressure measurement. (*American Medical Group Foundation*, 2013)

2015 M.A.P Checklist [PDF-227.70KB]

This one-page checklist provides steps that providers can follow to improve blood pressure control. (*American Medical Association and Johns Hopkins School of Medicine*, 2015)

Guideline for the Prevention, Detection, Evaluation, and Management of High Blood Pressure in Adults: A Report of the American College of Cardiology/American Heart Association Task Force on Clinical Practice Guidelines

This article provides clinical practice guidelines that health systems may consult when developing procedures. (*American College of Cardiology and American Heart Association*, November 2017)

Recommended Standards for Assessing Blood Pressure in Human Research Where Blood Pressure or Hypertension Is a Major Focus

This article provides information on clinical processes or workflows to consider when determining procedures for proper blood pressure measurement. (*Kidney International Reports*, February 2017)

Principles and Techniques of Blood Pressure Measurement [PDF-1.52MB]

This article provides discussion of the basic techniques of blood pressure measurement and the technical issues associated with measurements in clinical practice. (*Cardiology Clinics*, November 2010)

Recommendations for Blood Pressure Measurement in Humans and Experimental Animals: Part 1: Blood Pressure Measurement in Humans

This article provides a detailed discussion of different types of blood pressure measurement. (*Circulation*, February 2005)

Resistant Hypertension

This article provides guidance on managing resistant hypertension. (*Journal of the American Board of Family Medicine*, July 2012)

Provider Toolkit to Improve Hypertension Control [PDF-10.54MB]

On pages 13-23 of this toolkit, there are multiple resources for training staff on proper blood pressure measurement, including a sample lesson plan and staff assessment. (*American Medical Group Foundation*, 2013)

Best Practices in Hypertension: Building a Hypertension Registry [PDF-5.71MB]

This profile of the Providence Medical Group highlights lessons learned and tips for developing a hypertension registry. Example lesson plans and a performance checklist for staff training on blood pressure measurement can be found in Appendix 7 (Pages 33-39). *(American Medical Group Association and Daiichi Sankyo Inc.,* 2006)

Provider Toolkit to Improve Hypertension Control. BP Addressed for Every Hypertension Patient at Every Primary Care or Cardiology Visit [PDF-160.29KB]

This resource within the toolkit provides helpful tips on overcoming clinical inertia when obtaining staff buy-in for blood pressure checks. (*American Medical Group Foundation*, 2013)

For resources on assessing staff adherence to proper blood pressure measurement technique, including example exams and performance checklists, please see the toolkit chapter titled: No-Copayment Walk-in/Scheduled Blood Pressure Checks (HMP Component 3).

Program Component 6: Promote Use of Combination Medications to Treat High Blood Pressure

In the box below, we summarize the highlights for implementing **HMP Component 6: Promote Use of Combination Medications to Treat High Blood Pressure**. By the end of this chapter, you will have the knowledge, skills, and tools to understand the resources available regarding combination medications; identify activities to develop policies regarding the use of combination medications; and generate ideas for implementing the policies at your health system.

Component 6 Highlights	
Summary of HMP component:	Develop a policy for prescribing combination medications.
Activities to Implement:	1. Work with health system leadership and providers to determine a standard prescribing protocol for combination medications. 2. Train staff to implement new protocols and disseminate new protocols.
Infrastructure required:	Staff to develop medication policy and resources to prepare guidance.
Key staff involved:	Physicians and clinical pharmacists.

In order to implement this component, your health system will need staff who will develop and implement combination medication protocols, including physicians and clinical pharmacists. Your health system will also need to train staff to implement the new combination medication protocols, and disseminate the new protocols.

Combination Medications

A type of treatment that uses two or more medications administered separately or in a fixed-dose combination pill, which combines two or more medications into a single dosage.

Background

Promoting medication management strategies that are both clinically effective and associated with increased medication adherence among patients is essential to the HMP. This includes the use of combination medication protocols. Combination medications are a type of treatment that uses two or more medications administered separately or in a fixed-dose combination pill, which combines two or more medications into a single dosage.

The advantages of combination medication therapy include the potential to lower blood pressure more quickly (especially in those with resistant hypertension or salt sensitivity), obtain target blood pressure, and decrease adverse effects. Single-pill combination therapy offers the additional benefit of reducing pill burden and promoting patient adherence, and may be better tolerated than using a single medication, which typically requires a higher dose in order to achieve goals.[43,44,45] It

can also achieve cost savings in some cases.[46] However, clinicians should talk to patients about their preferences related to convenience and cost, as some fixed-dose combination pills may be less expensive than the two medications prescribed separately, while other fixed-dose combination pills may be more expensive.

Activities for Implementing Component 6: Promote Use of Combination Medications to Treat High Blood Pressure

There are two activities involved in implementing Component 6:

1. Work with health system leadership and providers to determine a standard prescribing protocol for combination medications.
2. Train staff to implement new protocols and disseminate new protocols.

Activity 1: Work with health system leadership and providers to determine a standard prescribing protocol for combination medications

The implementation leadership should consult with the hypertension management council (described in more detail in Integrated Care Team (HMP Component 1), but includes representative physicians and clinical pharmacists) to determine standard protocols for providers to follow when prescribing combination medications. When developing the combination medication protocols, consider existing prescribing protocols, the ability of the patient population to pay for medications, and which medications are covered under drug formularies for common health insurance that the organization accepts.

The combination medication protocol should be adaptable to meet patient needs and medication adherence goals. Ultimately, individual providers should determine the choice and doses of specific anti-hypertensive medications according to the needs of each patient and in accordance with what medications their health insurance covers, as applicable.

This toolkit does not provide clinical recommendations on this topic, but resources are included, including the ACC/AHA 2017 clinical practice guidelines that implementation leadership and hypertension management council may consider when developing protocols for providers (see the section on hypertension guidelines in the Overview chapter for more information). For clinical recommendations, see section 8.1.6.1 (Page 52) and for a listing of fixed-dose combination antihypertensive drugs, see Supplement D (Page 255) of 2017 High Blood Pressure Clinical Practice Guidelines from the American College of Cardiology/American Heart Association.[47]

In developing prescribing protocols, the hypertension management council may also consider additional strategies for improving medication adherence in partnership with providers. Some additional evidence-based strategies are outlined in Medication Adherence: Action Steps for Health Benefit Managers.

Activity 2: Train staff to implement new protocols and disseminate new protocols

To train staff to implement the prescribing protocols, the protocols for combination medications should be built into HMP provider education resources and activities

(particularly for new providers who were not part of developing the protocols). The protocols can be disseminated to relevant staff (physicians and clinical pharmacists) via email, printed materials, and pocket-card tools, as well as through clinic- or system-wide meetings.

To supplement the protocols on combination medications given to providers, leaders of the HMP implementation may also draw on materials made available by the Million Hearts® Initiative,[48] such as the Patient Visit Checklist: Supporting Your Patients with High Blood Pressure or the fact sheet on Improving Medication Adherence Among Patients with Hypertension.

Suggestions for Adapting Component 6: Promote Use of Combination Medications to Treat High Blood Pressure

- Develop your organization's combination medication guidance and protocol through collaboration among staff including the hypertension management council, other organization leadership, pharmacy staff, and providers. Train staff once the protocols are developed.
- Consider including a list of preferred medications on your combination medication protocol, including medications covered by Medicaid.
- Include the combination medication protocol in any existing organizational protocols for patients with uncontrolled blood pressure that cover topics such as scheduling follow-up appointments, ordering labs, referring to specialists, or managing hypertensive crisis.
- Communicate any information about patient charges for lab fees clearly and ahead of time to minimize confusion or unexpected costs for patients, especially if the HMP has been advertised as free.

You may also want to consider the following questions as you think about implementing this component. Space has been provided in the table below to record your responses to each question.

1	Who at your organization should work together to discuss combination medication protocols?
2	Are combination medications reimbursable through any of the plans' formularies that your organization accepts?
3	What are the best ways to share new protocols with providers at your organization? Options may include education materials, disseminated via email, printed materials, and pocket-care tools, as well as through clinic- or system-wide meetings.

Resources

2017 High Blood Pressure Clinical Practice Guidelines from the American College of Cardiology/American Heart Association [PDF-3.46MB]

This guideline provides clinical recommendations on page 52 and a list of fixed-dose combination antihypertensive drugs on page 255.

Cardiovascular Health Medication Adherence Action Steps for Health Benefit Managers [PDF-172.69KB]

This Million Hearts® guide provides systems-level steps for health system leaders to encourage medication adherence. (*Centers for Disease Control and Prevention*, 2016)

Hypertension Control: Action Steps for Clinicians [PDF-312.58KB]

This Million Hearts® guide provides action steps for clinicians to promote medication adherence. (*Centers for Disease Control and Prevention*, 2013)

Improving Medication Adherence Among Patients with Hypertension – A Tip Sheet for Health Care Professionals [PDF-292.48KB]

This Million Hearts® two-page tip sheet may serve as a helpful resource in educating clinicians on how to promote medication adherence. (*Centers for Disease Control and Prevention*, 2017)

Supporting Your Patients with High Blood Pressure Visit Checklist [PDF-106.81KB]

This Million Hearts® checklist may serve as a helpful resource for providers to have on hand while addressing medication adherence during visits. (*Centers for Disease Control and Prevention*, 2016)

Medication Adherence Action Kit

This New York City Department of Health kit provides multiple materials, including clinical tools and educational resources for providers and patients.

Provider Toolkit to Improve Hypertension Control [PDF-10.54MB]

The Morisky scale can be found on page 41 of this toolkit which may be used to assess risk of medication non-adherence. (*American Medical Group Foundation*, 2013)

Improving the Screening, Prevention, and Management of Hypertension—An Implementation Tool for Clinic Practice Teams [PDF-2.79MB]

This publication is for healthcare professionals and specifically clinic practice teams. It is meant to serve as a QI guide and a compilation of resources to support practices in their efforts to improve blood pressure control. Pages 53-56 in this tool provides step-by-step instructions for discussing and reinforcing medication adherence. (*Washington State Department of Health*, August 2013)

Diabetes Planned Visit Notebook: 2.12 Blood Pressure Titration Protocol for the Diabetes Planned Visit

This Agency for Healthcare Research and Quality protocol can be used to titrate medication for a patient with diabetes.

Integrating HIV and Hypertension Management in Low-Resource Settings: Lessons from Malawi

This article includes considerations for treating hypertensive patients with HIV. (*PLOS Medicine*, March 2018)

Program Component 7: Hypertension Management Visits

In the box below, we summarize the highlights for implementing **HMP Component 7: Hypertension Management Visits**. By the end of this chapter, you will have the knowledge, skills, and tools to understand the development of medication management plans; identify activities for implementing hypertension management visits; and generate ideas for integrating clinical pharmacists into the role of developing medication management plans with approval from PCPs at your organization.

Component 7 Highlights	
Summary of HMP component:	Clinical pharmacists develop medication management plans that are approved by the PCP and implemented by nurses at hypertension management visits. Clinical pharmacists and other providers are available to patients for consultation hours.
Activities to Implement:	1. Establish new clinical workflows for PCPs, pharmacists, and nursing staff during hypertension management visits: a. Develop medication management plans of care. b. Implement medication management plans of care during patient visits. c. Provide as-needed medication consultation to patients during walk-in "office hours."
Key staff involved:	Clinical pharmacists, PCPs, and nurses.

In order to implement this component, your health system will need the clinical staff who play a role in these visits, including clinical pharmacists, PCPs (physicians and advanced care providers including NPs and physician assistants), and nurses (RNs and LPNs).

Background

Clinical pharmacists can contribute to clinical care by making recommendations to adjust medications and developing medication management plans of care for patients to address medication adherence. These recommendations can then be reviewed and approved by the PCP. This type of integrated care allows clinical pharmacists to practice at the top of their license and saves time for the PCPs. This chapter describes how to integrate clinical pharmacists into the role of developing medication management plans of care for review by the PCP and implementation by nurses.

Activity for Implementing Component 7: Hypertension Management Visits

There is one activity involved in implementing Component 7:

1. Establish new clinical workflows for PCPs, pharmacists, and nursing staff during hypertension management visits:
   a. Develop medication management plans of care.
   b. Implement medication management plans of care during patient visits.
   c. Provide as-needed medication consultation to patients during walk-in "office hours."

Clinical Pharmacist

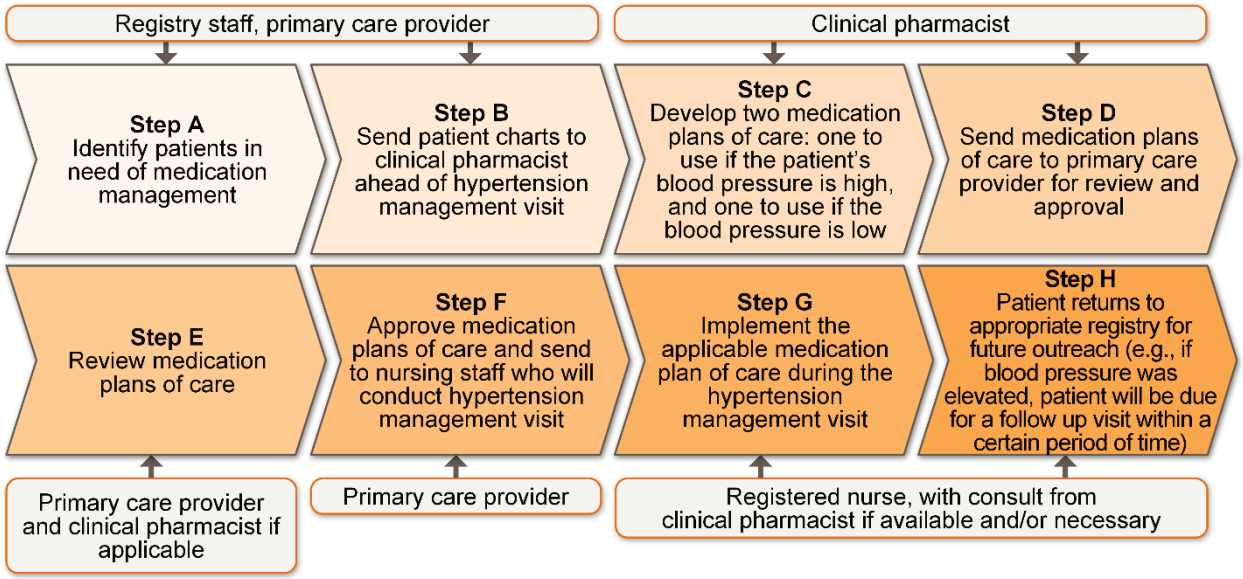
A pharmacist who provides patient care that optimizes medication therapy and promotes health, wellness, and disease prevention.

Activity 1: Establish new clinical workflows for hypertension management visits

Hypertension management visits encompass many of the other components in this toolkit and involve the entire integrated care team. Exhibit 7.1 below shows the steps associated with hypertension management visits. First, a patient is scheduled for a hypertension management visit after being identified through the registry or by providers and contacted by registry staff [Steps A and B in Exhibit 7.1 below, which are described more in Patient Registries and Outreach Lists in the EHR (HMP Component 2)]. As explained in more detail below, the clinical pharmacist and PCP work together to develop and approve a medication management plan of care for the patient before their visit (Steps C-F). During the visit, the nurse implements the care plan (Step G) and provides other hypertension management care, such as education on managing hypertension and assistance with initiating or validating the patient's home blood pressure monitor [see Promotion of Self-Measured Blood Pressure Monitoring (HMP Component 8)].

The involvement of the clinical pharmacists, who take an active role in managing hypertension as part of the hypertension management visits, is a key part of the HMP. The following two sections describe how the clinical pharmacist works with the PCP to develop medication management plans, and how the nurses implement the plans.[49]

Exhibit 7.1 Steps for Hypertension Management Visits



1A. Develop medication management plans of care

Ideally there is a clinical pharmacist located within each medical office who will be responsible for developing medication management plans of care. Once patients who are identified by the registry schedule a hypertension management visit [this process is discussed in Patient Registries and Outreach Lists in the EHR (HMP Component 2)], the medical records for these patients are sent to the clinical pharmacist for review ahead of the hypertension management visit. The clinical pharmacist can then develop a medication management plan of care for each patient that is preapproved by the PCP prior to each patient's hypertension management visit. Creating these plans of care ahead of time can increase efficiency by enabling an RN to implement the care plan while the patient is present. The clinical pharmacist and PCP should develop two separate plans of care for each patient scheduled for a hypertension management visit:

- A medication management plan to be implemented if the patient's blood pressure reading is at or below target blood pressure.
- A medication management plan to be implemented if the patient's blood pressure reading is above target blood pressure.

The medication management plan should be adaptable to address medication adherence and meet patient needs.

1B. Implement medication management plans of care during patient visits

Hypertension management visits are scheduled appointments and should be offered without copayment. During hypertension management visits, nursing staff implement the medication management plan of care developed by the clinical pharmacist and approved by the PCP. The goals of hypertension management visits are to:[50]

- Increase medication adherence.

- Encourage self-measured blood pressure monitoring.
- Promote patients' awareness of the importance of managing blood pressure, their control status, and their personal blood pressure goals.
- Remove potential barriers to care experienced by patients (e.g., cost, access, medication side effects, and cultural perceptions).
- Support the PCPs by redistributing tasks that can be carried out by other healthcare team members.

As part of the hypertension management visit, nursing staff may:

- Check the patient's blood pressure.
- Implement the medication management plan of care.
- Provide patient education.
- Order necessary labs as allowed within their scope of practice.
- Initiate and validate the patient's home blood pressure monitor.
- Refer to the PCP if needed.

During a hypertension management visit, the clinical pharmacist and PCP should be available in person or by phone to answer questions that arise.

Hypertension management visits and walk-in office hours (1C below) are an opportunity for providing educational materials to patients. During implementation, health systems can develop patient materials and ensure they are readily accessible in clinical settings; these materials should be culturally and linguistically tailored to meet the needs of the patient population served. While the HMP does not prescribe specific patient education materials, health systems may refer to examples provided in the resources section of this chapter.

1C. Provide as-needed medication consultation to patients during walk-in "office hours"

Clinical pharmacists and other providers should be available to patients during regularly scheduled walk-in office hours to discuss medications and provide educational resources related to medication and hypertension management. Patients may be able to attend these office hours after completing a hypertension management visit. These visits should be advertised to patients using similar avenues as the No-Copayment Walk-in/Scheduled Blood Pressure Checks (HMP Component 3). To publicize office hours, health systems can put up posters in waiting areas which can include patient success stories and distribute flyers to patients with information about office hours and other features of the HMP when their blood pressure is measured.

Train staff on new clinical workflows

Once the workflows are developed, program leadership should develop a health system protocol for hypertension management visits as they will be conducted in the health system. This protocol should be disseminated to all staff, and program leadership should conduct staff training on the new steps and any new EHR features that will be used.

It may be beneficial to tailor trainings on these new workflows to different types of staff. For example, clinical pharmacists and physicians could be trained together on the medication management plan aspect of this component without nurses. While nurses are responsible for implementing medication management plans during the hypertension management visits (though this role can be adapted based on your organization), clinical pharmacists and physicians also need to be trained on the protocol for a hypertension management visit because they may provide consultation at those visits as needed. Training should include how to obtain the most accurate blood pressure measurement. Please refer to Education for Nurses and Other Staff on Blood Pressure Measurement Technique (HMP Component 5) and Promote Use of Combination Medications to Treat High Blood Pressure (HMP Component 6) for recommendations about training staff on proper blood pressure measurement and combination medications.

Suggestions for Adapting Component 7: Hypertension Management Visits

General Adaptation Tips

- If pharmacists cannot titrate medications at your organization due to state laws, and you cannot establish a collaborative practice agreement (see below), pharmacists may need provider approval before making changes to patients' medications. To do this efficiently:
  - Create a set schedule for providers to review medication management plans and prescription changes in batches, and
  - Ensure that providers are available during hypertension management visits in the event of unanticipated changes to the medication management plan.
- If your organization does not employ pharmacists, consider partnering with community pharmacies or local pharmacy schools or residency programs to deliver the HMP.
- Organizations that are eligible for the HRSA 340B Drug Pricing Program may be able to offer reduced cost hypertension medication to their patients. Visit https://www.hrsa.gov/opa/index.html to learn more about program eligibility and registration.

Collaborative Practice Agreements

If pharmacists cannot currently titrate medications at your organization due to state laws, we recommend establishing collaborative practice agreements. The Policy Surveillance Program at Temple University provides an online dataset (valid through July 1, 2015) where you can learn the pharmacist scope of practice for your state; consult your state's Board of Pharmacy or medicine regulations for status changes since 2015. A collaborative practice agreement is a formal agreement in which a licensed provider makes a diagnosis, supervises patient care, and refers patients to a pharmacist under a protocol that allows the pharmacist to perform specific patient care functions. Account for the time that will be needed to execute a collaborative practice agreement at each participating site in the implementation timeline.

If a collaborative practice agreement is in place and adequate trust exists between providers and pharmacists, the providers and pharmacists can develop an overarching plan for how medications should be managed. Then pharmacists may be given the autonomy to make medication changes without provider approval.

You may also want to consider the following questions as you think about implementing this component. Space has been provided in the table below to record your responses to each question.

1	Who at your organization can facilitate buy-in and secure commitment from providers?
2	What existing relationships between providers and pharmacists at your organization can be built upon to establish collaborative partnerships for the collaborative practice agreement?
3	Does your state require registration with the board of pharmacy or a similar body for the pharmacist to qualify for participation in a collaborative practice agreement? Are there other state requirements for participation in a collaborative practice agreement?
4	If your organization does not employ pharmacists, are there local community-based pharmacists with whom you could collaborate? What is the process at your organization for establishing such partnerships? Alternatively, if you are affiliated with a pharmacy program, can you leverage that relationship?

Resources

Advancing Team-Based Care Through Collaborative Practice Agreements: A Resource and Implementation Guide for Adding Pharmacists to the Care Team [PDF-3.73MB]

This resource guide lays out considerations for putting a collaborative practice agreement in place. (*Centers for Disease Control and Prevention*, 2017)

Collaborative Practice Agreements and Pharmacists' Patient Care Services - A Resource for Pharmacists [PDF-315.83KB]

This resource guide provides tips for pharmacists when developing collaborative practice agreements as well as case examples to illustrate successful collaborative practice agreements. (*Centers for Disease Control and Prevention*, 2013)

Increasing the Use of Collaborative Practice Agreements between Prescribers and Pharmacists - A Brief for Decision Makers, Public Health Practitioners, and Prescribers [PDF-2.15MB]

This brief describes why health systems should consider implementing collaborative practice agreements. (*Centers for Disease Control and Prevention*, 2017)

Pharmacy: Collaborative Practice Agreements to Enable Collaborative Drug Therapy Management [PDF-867.74KB]

This guide describes considerations for implementing collaborative practice agreements between pharmacists and healthcare providers to enable medication therapy management. (*Centers for Disease Control and Prevention*, 2017)

From Policy to Implementation: Collaborative Drug Therapy Management in an Independent Pharmacy [PDF-220.89KB]

This CDC case study describes the experiences of a community pharmacy in Iowa that formed collaborative relationships with two local medical groups of family practice physicians, physician assistants, and NPs.

From Policy to Implementation: Collaborative Drug Therapy Management at a Federally Qualified Health Center [PDF-822.50KB]

This CDC summary describes the implementation of collaborative drug therapy management (CDTM) by an Arizona FQHC by participating in a collaborative practice agreement.

Using the Pharmacists' Patient Care Process to Manage High Blood Pressure: A Resource Guide for Pharmacists [PDF-632.59KB]

This guide provides current resources, best practices, tools, and examples that pharmacists may refer to when managing high blood pressure. (*Centers for Disease Control and Prevention,* 2016)

Community-Clinical Linkages for the Prevention and Control of Chronic Diseases – A Practitioner's Guide [PDF-1.68MB]

This guide provides a framework for connecting with community pharmacists. (*Centers for Disease Control and Prevention,* 2016)

Embedding Pharmacists into the Practice Module

This AMA STEPS Forward educational module describes steps for integrating pharmacists into practices to improve patient outcome.

Guidelines for Pharmacists Integrating into Primary Care Teams [PDF-725.96KB]

This article provides practice guidelines for integrating pharmacists into primary care teams. (*Canadian Pharmacists Journal*, November-December 2013)

Consortium Recommendations for Advancing Pharmacists' Patient Care Services and Collaborative Practice Agreements [PDF-1.01MB]

The American Pharmacists Association Foundation and American Pharmacists Association published seven recommendations, from a consortium of stakeholders representing pharmacy, medicine, and nursing, for pharmacists to engage in team-based, patient-centered care. (*Journal of the American Pharmacists Association*, March-April 2013)

Creating Community-Clinical Linkages Between Community Pharmacists and Physicians: A Pharmacy Guide [PDF- 1.13MB]

This guide describes a framework for creating linkages between community pharmacists and physicians that benefit community collaborators and the patients they serve. (*Centers for Disease Control and Prevention,* 2017)

Integrating Community Pharmacists into Complex Care Management Programs

This Center for Health Care Strategies webinar highlights opportunities for community pharmacies to deliver enhanced services for high-need, high-cost, low-income individuals.

Improving the Screening, Prevention, and Management of Hypertension—An Implementation Tool for Clinic Practice Teams [PDF-2.79MB]

This publication is for healthcare professionals and specifically clinic practice teams. It is meant to serve as a QI guide and a compilation of resources to support practices in their efforts to improve blood pressure control. Appendix 6 in this tool provides several patient education resources in English and Spanish that can be used to educate patients about the importance of blood pressure monitoring. (*Washington State Department of Health*, August 2013)

Help Patients Take Blood Pressure Medicine - English Video

This video provides information on how to help patient take blood pressure medication. (*Centers for Disease Control and Prevention*, February 2017)

Help Patients Take Blood Pressure Medicine - Spanish Video

This video provides information on how to help patient take blood pressure medication. (*Centers for Disease Control and Prevention*, April 2017)

How You Can Team Up with Patients - English Video

This video provides information on a pharmacist can team up with patients to keep their blood pressure under control. (*Centers for Disease Control and Prevention*, September 2012)

Your Guide to Lower Blood Pressure [PDF-268.56KB]

This guide provides an overview of high blood pressure and key strategies for lifestyle change. (*National Institutes of Health*, May 2003)

Hypertension Medications [PDF-405.96KB]

This patient education handout provides information on hypertension medications. (*Kaiser Permanente*, 2005)

Physical Activity – Every Move Matters [PDF-230.30KB]

This patient education handout provides tips for increasing physical activity, including how to start and maintain lifestyle changes. (*Kaiser Permanente*, 2007)

DASH Diet [PDF-134.87KB]

This patient handout provides dietary approaches to stop hypertension. (*Kaiser Permanente*, 2007)

For resources on promoting medication adherence among patients, please see the toolkit chapter titled: Promote Use of Combination Medications to Treat High Blood Pressure (HMP Component 6).

For resources on promoting self-measured blood pressure monitoring and patient self-management, please see the toolkit chapter titled: Promotion of Self-Measured Blood Pressure Monitoring (HMP Component 8).

Program Component 8: Promotion of Self-Measured Blood Pressure Monitoring

In the box below, we summarize the highlights for implementing **HMP Component 8: Promotion of Self-Measured Blood Pressure Monitoring**. By the end of this chapter, you will have the knowledge, skills, and tools to understand the benefits of promoting self-measured blood pressure monitoring; identify activities to implementing self-measured blood pressure monitoring in your health system or clinic; and generate ideas for instituting self-measured blood pressure monitoring.

Component 8 Highlights	
Summary of HMP component:	Educate patients on how to use home blood pressure monitors and provide results back to care providers to help them better manage their hypertension.
Activities to Implement:	1. Identify a source for accurate low-cost blood pressure monitors. 2. Develop a protocol for promoting home blood pressure monitors during patient encounters, including educating patients about how to use the monitor. 3. Develop a process for patients to securely communicate blood pressure readings. 4. Train staff.
Infrastructure required:	Home blood pressure monitors, patient education materials.
Key staff involved:	PCPs, nurses, or other staff who will educate patients on self-measured blood pressure monitoring.

In order to implement this component, your health system will need staff, such as nurses and PCPs, who will educate patients on self-measured blood pressure monitoring. Your health system also will need the means to obtain low-cost home blood pressure monitors for patients and develop or acquire education materials to distribute to patients.

Background

Home blood pressure monitoring is defined as the regular measurement of blood pressure by the patient outside the clinical setting, either at home or elsewhere. Patients check their own blood pressure using a home blood pressure measurement device at different points in time, record their blood pressure, and share results with their healthcare providers. By self-monitoring their blood pressure, patients help develop an accurate picture of their blood pressure over time and track their hypertension control rates, which in turn allows providers to make adjustments to the treatment regimen as needed to promote blood pressure control. Blood pressure results that are submitted by patients should be reviewed by the care team, and elevated blood pressure readings that may require physician intervention should be flagged for the provider's review. This chapter describes how organizations can create a self-measured blood pressure monitoring program, including providing

home blood pressure monitors, training and educating patients, and developing a process for communicating results to providers.

Activities for Implementing Component 8: Promotion of Self-Measured Blood Pressure Monitoring

There are four activities involved in implementing Component 8:

1. Identify a source for accurate low-cost blood pressure monitors.
2. Develop a protocol for promoting home blood pressure monitors during patient encounters, including educating patients about how to use the monitor.
3. Develop a process for patients to securely communicate blood pressure readings.
4. Train staff.

Activity 1: Identify a source for accurate low-cost blood pressure monitors

Organizations should identify a source for accurate low-cost blood pressure monitors that they can either provide to patients directly or can refer patients to for purchase. Organizations can purchase monitors in bulk and sell them to patients at wholesale cost or loan them to patients. Monitors should be available to patients via accessible community locations, such as the system's or clinic's pharmacy, if applicable.

If your organization decides to start a blood pressure monitor loaner program, you will need to determine the process to inventory, clean, and validate devices. You will also need to determine the terms of the loan and decide what lending criteria to use when patient demand exceeds supply. For more information on loaner programs, consult Target: BP's page Loaning Out Devices or the National Association of Community Health Center's Implementation Guide for self-measured blood pressure monitoring.

Some patients' blood pressure monitors may be covered by their health insurance. Medicare only covers ambulatory blood pressure monitoring. Medicare Part B currently does not cover home blood pressure monitors. Medicare Advantage plans may cover home blood pressure monitors as a supplemental benefit. Medicaid coverage for home blood pressure monitors varies by state; consult your state's Medicaid policies to learn more. Private insurance coverage also varies. Patients may be able to deduct the cost of a home blood pressure monitor from their healthcare flexible spending account (FSA).[51]

Activity 2: Develop a protocol for promoting home blood pressure monitors during patient encounters, including educating patients about how to use the monitor

The promotion of home blood pressure monitors will occur during No-Copayment Walk-in/Scheduled Blood Pressure Checks (HMP Component 3) and Hypertension Management Visits (HMP Component 7). Because the patient encounter should be tailored to your patient population, this toolkit provides numerous resources that you can use to develop a protocol for promoting home blood pressure monitors during patient encounters.

One such resource is the Million Hearts® Action Guide, Self-Measured Blood Pressure Monitoring Action Steps for Clinicians.[52] It provides materials to help you select and incorporate a clinical support system, develop a protocol for the patient encounter, and encourage payer coverage. It also provides suggested steps for key activities, such as checking that home blood pressure monitors are providing accurate readings.

With regard to developing a clinical protocol to empower patients to use home blood pressure monitors, the Self-Measured Blood Pressure Monitoring Action Steps for Clinicians provides the following guidance:

- **Engage patients** by discussing the importance of effectively controlling high blood pressure and how this may be achieved through self-measured blood pressure monitoring.
- **Select a home blood pressure monitor** by reviewing the types of available self-blood pressure monitoring devices with the patient. Page 11 of this guide provides key considerations for physicians.
- **Check the home blood pressure monitor for accuracy** by checking the home device against a reliable office device.
- **Educate the patient on using the home blood pressure monitor**, including how to operate the device, proper positioning and technique, and when to measure blood pressure. Appendix A of this guide provides the following detailed steps on proper preparation and technique (though you may wish to consider other protocols):
  - Taking two or three measurements, each one minute apart, in the morning and again in the evening.
  - Monitoring blood pressure preferably for seven days and at least for three days.
  - Recording these measurements to share with the healthcare provider, who will take the average of the measurements. The provider can use Target: BP's Self-Measured Blood Pressure Average Calculator.

As part of this education, clinical staff should provide educational materials, which may take the form of hard-copy materials or links to online materials. These materials should take health literacy into account and be available in different formats based on each patient's preferred learning method. The clinician should also review procedures on recording and communicating home blood pressure monitors, depending on the process developed in Activity 3 of this component (below).

As noted in the steps above, the Self-Measured Blood Pressure Monitoring Action Steps for Clinicians provides links to more detailed guidance for each of the protocol steps described here. We highlight some of the guidance from this guide and from other sources below as examples. Additional resources are also provided at the end of this chapter.

Example Guidance on Checking a Home Blood Pressure Monitor for Accuracy. Appendix C of the Self-Measured Blood Pressure Monitoring Action Steps for Clinicians provides a ten-step protocol for measuring home blood pressure measurement accuracy:[53]

1. Have the patient sit down with his or her arm at heart level. The arm should be completely relaxed.
2. Allow the patient to rest for five minutes.
3. Avoid any conversation during the measurements to prevent an increase in blood pressure.
4. Take a total of five sequential same-arm blood pressure readings, no more than 30 seconds apart.
5. Have the patient take the first two readings with his or her own device.
6. The healthcare clinician takes the third reading, preferably with a mercury sphygmomanometer or comparable device.
7. Have the patient take the fourth reading.
8. The fifth and final reading is taken by the healthcare clinician.
9. Compare the difference between the readings from the two cuffs.
    a. BP readings will usually decline over the five measurements. The final systolic blood pressure reading may be as much as 10 mm Hg lower than the first.
    b. If the difference is 5 mm Hg or less, the comparison is acceptable.
    c. Do the calibration again if the difference is greater than 5 mm Hg but less than 10 mm Hg.
    d. The device may not be accurate if the difference is greater than 10 mm Hg.†
10. Repeat this procedure annually.

Example Guidance for Educating Patients on Home Blood Pressure Monitor Use. The AHA provides guidance that you can use in educating your patients:[54]

- **Be still.** Don't smoke, drink caffeinated beverages, or exercise within 30 minutes before measuring your blood pressure. Empty your bladder and ensure at least five minutes of quiet rest before measurements.
- **Sit correctly.** Sit with your back straight and supported (on a dining chair, rather than a sofa). Your feet should be flat on the floor and your legs should not be crossed. Your arm should be supported on a flat surface (such as a table) with the upper arm at heart level. Make sure the bottom of the cuff is placed directly above the bend of the elbow. Check your monitor's instructions for an illustration or have your healthcare provider show you how.
- **Measure at the same time every day.** It's important to take the readings at the same time each day, such as morning and evening. It is best to take the readings daily however ideally beginning two weeks after a change in treatment and during the week before your next appointment.
- **Take multiple readings and record the results.** Each time you measure, take two or three readings one minute apart and record the results using a printable or online tracker. If your monitor has built-in memory to store your readings, take it with you to your appointments. Some monitors may also allow you to upload your readings to a secure website after you register your profile.
- **Don't take the measurement over clothes.**

†Though there is no established target for how close the readings from the patient's cuff should be to those from the clinician's cuff, this exercise can provide a general sense of the SMBP device's accuracy, which can be taken into consideration for future measurements recorded at home. To further ensure accuracy, consider statically calibrating the clinic and home devices following the National Health and Nutrition Examination Survey (NHANES) Health Tech/Blood Pressure Procedures Manual.

To accompany the one-on-one education provided during the patient encounter, you may want to provide resources for patients to take with them. For example, Target: BP has a flyer with tips for self-measurement of blood pressure. Additional examples of materials that could be offered to patients include Checking Your Blood Pressure at Home, a handout that introduces self-measured blood pressure monitoring.

Activity 3: Develop a process for patients to securely communicate blood pressure readings

As described in the Self-Measured Blood Pressure Monitoring Action Steps for Clinicians guide, patient's self-measured blood pressure readings should be communicated through a secure communication loop that complies with the Health Insurance Portability and Accountability Act (HIPAA) regulations. This communication should be tied to the EHR if possible and may take the following forms:

- Secure patient portals.
- Personal health records connected to the EHR.
- Secure provider-patient email.
- Telemedicine devices that securely transmit reading from patients to providers.
- Routinely-shared handwritten logs.

If the patient will be responsible for recording their own results and sharing with the provider via a handwritten log, you may provide the patient with a blood pressure log to use. The AHA/American Stroke Association offers a handout called My Blood Pressure Log that may be used. Other examples are provided in the additional resources section at the end of this chapter.

In considering other health IT mechanisms for securely transmitting blood pressure readings from patients to providers, healthcare systems implementing the HMP may work with the following partners, as adapted from Table 2 of the Self-Measured Blood Pressure Monitoring Action Steps for Clinicians guide:

- Health Center Controlled Networks.
- Quality Improvement Network – Quality Improvement Organizations.
- State health department analytics/informatics staff.
- Local EHR user groups.
- Regional Extension Centers.

Activity 4: Train staff

Once the process and protocols are in place, train staff on how to validate home monitors and how to instruct patients to use the blood pressure monitors. Be sure to cover:

- Proper self-measured blood pressure measurement technique for patients, as described in Appendix A of the Self-Measured Blood Pressure Monitoring Action Steps for Clinicians. As part of this, health systems should train and periodically retrain clinicians on cuff selection, proper patient positioning, disallowing talking during measurements, and accurate blood pressure observation.
- Procedures for checking the accuracy of home blood pressure monitors.
- Recommended patient education materials.
- The process for securely communicating home blood pressure readings between providers and patients determined in Activity 3.

Suggestions for Adapting Component 8: Promotion of Self-Measured Blood Pressure Monitoring

- Review existing supplies before purchasing new monitors, as your organization may have a surplus of blood pressure monitors available that you can use for the HMP.
- Track the distribution of home blood pressure monitors through a new billing code.
- Adapt the staff who distribute home blood pressure monitors and provide education to patients based on your staffing structure and workflows. For example, nursing staff can distribute monitors during blood pressure check visits, or clinical pharmacists can distribute them during hypertension management visits.
- If you do not have enough blood pressure monitors to give to all patients, develop and share a list of community locations where patients can get their blood pressure checked at a low cost, such as local pharmacies.
- Combine home blood pressure monitor distribution and patient education with education on other topics related to hypertension, such as diet, exercise, and medication adherence.
- Determine how pharmacists, providers, and other clinical staff will communicate patients' self-measured blood pressure monitoring results to one another. For example, staff can include notes on patient progress in the EHR.

You may also want to consider the following questions as you think about implementing this component. Space has been provided in the table to record your response to each question.

1	If similar processes are already in place at your organization, how can the current process for providing home blood pressure monitors be improved? (e.g., are different sources, financing systems, or methods of distribution needed?)	
2	Which blood pressure self-measurement protocol is most appropriate for your organization?	
3	What current infrastructure is in place at your organization for patient-to-provider communication that you can leverage to create a process for patients to communicate blood pressure readings to providers for the HMP?	

4	When and how often will staff at your organization be trained on promoting self-measured blood pressure monitoring?

Resources

Self-Measured Blood Pressure Monitoring: Actions Steps for Clinicians [PDF-946.68KB]

This Million Hearts® guide provides detailed step-by-step instructions and examples of self-measured blood pressure monitoring protocols. (*Centers for Disease Control and Prevention*, 2014)

Improving the Screening, Prevention, and Management of Hypertension—An Implementation Tool for Clinic Practice Teams [PDF-2.79MB]

This publication is for healthcare professionals and specifically clinic practice teams. It is meant to serve as a QI guide and a compilation of resources to support practices in their efforts to improve blood pressure control. Appendix 6 in this tool provides several patient education resources in English and Spanish that can be used to educate patients about the importance of blood pressure monitoring. Appendix 7 in this tool provides home blood pressure monitoring logs in both English and Spanish. Appendix 8 in this tool provides an example of a protocol for promoting self-measured blood pressure monitoring during patient encounters. (*Washington State Department of Health*, August 2013)

Patient Self-Monitoring of Blood Pressure: A Provider's Guide [PDF-623.38KB]

This New York City Department of Health guide provides guidance when determining protocols for promoting self-measured blood pressure monitoring during patient encounters.

Self-Measured Blood Pressure Monitoring Program: Engaging Patients in Self-Measurement [PDF-1.54MB]

This program describes various ways that the patient can obtain blood pressure measurements outside of the clinical office either through the purchase of a device or a physician-led blood pressure monitor loaner program. This program guide not only provides guidance on patient self-measure blood pressure monitoring, but several examples and templates such as a self-measured blood pressure monitoring log and clinical competency checklists. (*American Medical Association and Johns Hopkins School of Medicine*, 2015)

How to Check a Home Blood Pressure Monitor for Accuracy [PDF-50.94KB]

This AMA one-page guide provides steps on checking a home blood pressure monitor for accuracy.

Partnering in Self-Management Support: A Toolkit for Clinicians

This Institute for Healthcare Improvement toolkit provides on engaging patients in general self-management.

Blood Pressure Measurement Instructions [PDF-119.95KB]

This handout from AHA provides blood pressure measurement instructions. (*American Heart Association*, 2018)

Cost-effectiveness Evaluation of a Home Blood Pressure Monitoring Program

This article provides information about the cost effectiveness of self-measured blood pressure monitoring. (*American Journal of Managed Care*, October 2014)

US Blood Pressure Validated Device Listing

This AMA website provides a list of blood pressure measurement devices that have been validated for clinical accuracy as determined through an independent review process.

Program Component 9: Specialty Department Blood Pressure Measurements with Referral to Primary Care When Needed

In the box below, we summarize the highlights for implementing **HMP Component 9: Specialty Department Blood Pressure Measurements with Referral to Primary Care When Needed**. By the end of this chapter, you will have the knowledge, skills, and tools to understand specialty department blood pressure measurements with referrals to primary care when needed; identify activities in implementing these measurements and referrals; and generate ideas for them at your organization.

Component 9 Highlights	
Summary of HMP component:	Specialists (such as obstetricians/gynecologists and behavioral health specialists) conduct blood pressure checks and re-checks, and refer patients who have high blood pressure back to their PCP.
Activities to Implement:	1. Engage clinic staff in integrating protocols for specialty department blood pressure measurement and referral. 2. Develop EHR alerts and order sets to remind staff of protocols and facilitate follow-up. 3. Educate specialty department staff on protocols for blood pressure measurement and referral. 4. Provide feedback to staff to assist them in following the protocol.
Infrastructure required:	Training materials on new staff protocols and proper technique for blood pressure checks, blood pressure equipment, EHR alerts for blood pressure checks and re-check, and EHR follow-up prompts and order sets to facilitate primary care follow-up.
Key staff involved:	Specialists, nurses, MAs, and PCPs.

In order to implement this component, your health system will need nurses or MAs who measure blood pressure during specialty visits, specialists who make referrals to primary care when blood pressure is elevated, and PCPs who see patients with elevated blood pressure identified during a specialty care visit.

Background

Specialty departments can be engaged in the HMP by building blood pressure checks, re-checks, and referrals to primary care into the clinical workflow across specialty departments. Blood pressure checks should be a standard part of the appointment rooming process for patients across the health system, and blood pressure alerts programmed into the EHR should prompt staff to perform a blood pressure re-check according to the same criteria used during a primary care visit. Patients with elevated blood pressure should be referred to primary care for follow up. Although specialty clinic visits and specialty care providers outnumber primary care visits and PCPs in the United States, respectively, specialty care providers often do not document high blood pressure or take steps to address it.[55] Engaging

specialty care practices in the identification and care coordination of hypertensive patients thus represents an important opportunity to better manage patients' hypertension.

This toolkit component summarizes the steps and resources laid out in the BP Connect Health Toolkit; health systems implementing HMP are encouraged to review this toolkit in greater depth. The toolkit describes the steps for facilitating primary care follow-up for hypertension when patients are identified as having high blood pressure during specialty care visits. The BP Connect Health Toolkit is based on the Kaiser Permanente Northern California Program.[56]

The steps of the BP Connect Health Toolkit staff protocol are described below:

- **Check.** Re-measure BP if above the goal set by the health system.
- **Advise.** Order primary care follow-up, or other needed care, if blood pressure is confirmed high.
- **Connect.** Help schedule primary care appointment.

Activities for Implementing Component 9: Specialty Department Blood Pressure Measurements with Referral to Primary Care when Needed

There are four activities involved in implementing Component 9:

1. Engage clinic staff in integrating protocols for specialty department blood pressure measurement and referral.
2. Develop EHR alerts and order sets to remind staff of protocols and facilitate follow-up.
3. Educate specialty department staff on protocols for blood pressure measurement and referral.
4. Provide feedback to staff to assist them in following the protocol.

Activity 1: Engage clinic staff in integrating protocols for specialty department blood pressure measurement and referral

Obtaining buy-in from staff and leadership in specialty care departments is the first activity. Health systems implementing the HMP should make the case that this protocol can significantly improve blood pressure control among patients. The following video may be presented to staff and leadership to illustrate the value of integrating this protocol: BP Connect Health Video. The BP Connect Health Toolkit also provides slides that give an overview and can help health systems secure buy-in from leadership and staff.

Pilot Study Findings

In the BP Connect Health pilot study, the blood pressure re-measurement increased from 2% to over 75% and staff orders for primary care follow-up improved from 0% to 76% averaged over six months with a peak of >90% near the completion of the study.[57]

HMP implementers should work with leaders in specialty care departments to reach a consensus on the definition of high blood pressure and define action steps based on different blood pressure ranges with input from PCPs. Depending on how high the patient's blood pressure is, action steps may include a follow-up primary care visit

within four weeks, within one week, or an immediate follow-up/hand-off for the patient's safety.

Activity 2: Develop EHR alerts and order sets to remind staff of protocols and facilitate follow-up

The activities for implementing blood pressure alerts are described in EHR Alerts for Blood Pressure Re-Check (HMP Component 4). If you have already implemented blood pressure alerts for Component 4, you may be able to skip this step depending on your EHR. IT staff implementing this component are encouraged to review the BP Connect Health Build Guide, included in the BP Connect Health Toolkit, for more details.[58]

After EHR modifications are complete, IT staff should test the new EHR functions and work with clinical staff to ensure they fit into the desired clinical workflow.

Activity 3: Educate specialty department staff on protocols for blood pressure measurement and referral

Educating staff on about specialty department blood pressure measurements and referrals should consist of the following:

1. Educate staff typically involved in the rooming process (MAs and nurses) on the importance of proper checks and re-checks as well as proper blood pressure measurement technique. Please see Education for Nurses and Other Staff on Blood Pressure Measurement Technique (HMP Component 5) for recommended training procedures and resources. The BP Connect Health Toolkit also includes handouts and PowerPoint slides that can be used to educate specialty care staff on protocols for blood pressure checks/re-checks and primary care referral. As part of this training, these staff should receive an orientation to the new EHR features implemented in Activity 2 of this component.
2. Educate scheduling staff on proper procedures for scheduling patients for follow-up. The BP Connect Health Toolkit provides an instruction sheet for schedulers, which can be printed and posted in the office to remind schedulers about proper follow-up procedures for patients with hypertension.

If possible, health systems should include specialty care staff in trainings on blood pressure re-checks and proper blood pressure measurement technique held for nursing staff in primary care organizations.

Activity 4: Provide feedback to staff to assist them in following the protocol

During the implementation process, HMP implementers should remain in close communication with staff at specialty care departments to ensure new protocols are being adopted. If the health system implementing this HMP component has an EHR that is integrated across primary and specialty care organizations, IT staff assisting with implementation may pull EHR data to assess the frequency with which blood pressure re-checks and follow-ups are occurring. The program monitoring efforts associated with primary care practices may be expanded to include specialty care

practices. Providing this feedback to specialty care practices can help them engage in continuous QI.

Suggestions for Adapting Component 9: Specialty Department Referral to Primary Care

- Identify the types of specialists practicing in your organization who can refer patients with elevated high blood pressure readings. If specialty departments currently do not conduct blood pressure re-checks at your organization, develop new protocols and training for these staff.
- Obtain organizational and departmental level leadership buy-in to facilitate specialty care staff engagement.
- Adapt the referral workflows and communication pathways between specialists, PCPs, and clinical pharmacists to suit your organization's needs. For example, consider whether specialists should refer the patient to the PCP for a visit before the clinical pharmacist develops the medication management plans of care.
- Determine whether it makes more sense for specialty providers and specialty care nurses to attend HMP trainings with PCPs and primary care nurses, or whether separate trainings make more sense for your organization's needs and existing training protocols.

You may also want to consider the following questions as you think about implementing this component. Space has been provided in the table below to record your response to each question.

1	How are specialty department referrals captured in the EHR?
2	How can your organization collaborate with specialty care departments to make changes to their EHR and establish a process for referral?
3	Does your organization intend to collaborate with specialty care practices outside your organization or limit collaboration to specialty care practices within your organization (if applicable)?

Resources

BP Connect Toolkit

This toolkit provides guidance on developing EHR prompts for blood pressure checks and re-checks in specialty care organizations; this guidance and the associated workflows may also be useful to primary care. (*University of Wisconsin – Madison School of Medicine and Public Health*, 2020)

Provider Toolkit to Improve Hypertension Control [PDF-10.54MB]

On pages 75-84 of this toolkit, there are tips for involving specialists in blood pressure control, and example specialty care workflows. (*American Medical Group Foundation*, 2013)

Provider Toolkit to Improve Hypertension Control. Walk-in Medical Assistant Blood Pressure Check Protocol [PDF-525.20KB]

This Kaiser Permanente blood pressure check protocol within the toolkit provides a suggested procedure for blood pressure checks and may be helpful when considering the clinical processes associated with blood pressure re-checks. (*American Medical Group Foundation*, 2013)

Recommended Standards for Assessing Blood Pressure in Human Research Where Blood Pressure or Hypertension Is a Major Focus

This article provides information on clinical processes or workflows to consider as part of engaging clinic staff in integrating protocols for specialty department blood pressure measurement and referral. (*Kidney International Reports*, February 2017*)*

The American Heart Association and American Medical Association's Target: BP Measure Accurately

This AHA tool provides steps for preparing patients, using proper technique, documenting and providing blood pressure readings, as well as a competency assessment.

2015 M.A.P Checklist [PDF-227.70KB]

This one-page checklist provides steps that providers can follow to improve blood pressure control. (*American Medical Association and Johns Hopkins School of Medicine*, 2015)

Program Component 10: Incentives, Rewards, and Recognition

In the box below, we summarize the key highlights for implementing **HMP Component 10: Incentives, Rewards, and Recognition**. By the end of this chapter, you will have the knowledge, skills, and tools to understand potential incentives, rewards, and recognition for the HMP; identify activities in building an incentive program; and generate ideas for instituting an incentive program at your organization.

Component 10 Highlights	
Summary of HMP component:	Financial and non-financial rewards for high-performing providers and/or teams given based on the achievement of hypertension and overall health system goals.
Activities to Implement:	1. Determine incentive structure and identify performance measures. 2. Promote incentive program awareness among staff. 3. Monitor performance, provide regular feedback, and distribute performance-based incentives.
Infrastructure required:	Varies based on type of incentive program.
Key staff involved:	Leadership and human resources department.

In order to implement this component, your health system's leadership and human resources staff will need the capacity to develop an incentive program, the financial resources required to do so, and resources to promote awareness among employees and conduct ongoing monitoring.

Background

Incentives, which may be either financial or non-financial, encourage providers and staff to achieve and maintain hypertension management goals and promote accountability. By recognizing the accomplishments of individual staff and teams, an incentive program can help drive continual QI at the health system. Because the HMP is a team-based integrated care model, it is important to recognize and incentivize teams who work together to support and share responsibilities for hypertension management.

As part of the HMP, health systems should adopt an incentive structure that aligns with existing structures, programs, and goals and is within the scope of what the health system is able to support financially. This incentive structure should include both financial and non-financial rewards for high-performing providers and/or teams, given based on the achievement of hypertension and overall health system goals. This chapter is intended to describe activities and considerations for incentivizing high-performing providers, staff, and teams.

Activities for Implementing Component 10: Incentives, Rewards, and Recognition

There are three activities involved in implementing Component 10:

1. Determine incentive structure and identify performance measures.
2. Promote incentive program awareness among staff.
3. Monitor performance, provide regular feedback, and distribute performance-based incentives.

Activity 1: Determine incentive structure and identify performance measures

The incentives used to promote the HMP should be in alignment with the health system's overall quality goals. Health systems should consider aligning HMP incentives with the goals identified by the hypertension management council. Based on these goals, the health system can determine corresponding performance measures.

An incentive program may include financial incentives, non-financial incentives, or a combination. Allowing staff to be involved in the development of the incentive program policies, criteria, and procedures can add credibility to the program. When developing the incentive program structure, organizations should attempt to create a program that abides by the following principles.[59]

Incentive Program Tips

When developing an incentive program, consider:

- The budget for any financial incentives and the administrative time and resources to manage the program.
- Who will be responsible for managing the incentive program.
- How information about the incentive program will be communicated to staff.
- How the incentive program will be evaluated and modified as needed.

1. **Equitable and Fair.** Employees should have an equal chance of being recognized for their work or contributions regardless of their title or location.
2. **Understandable and Transparent.** Employees should know about the incentive program, how it operates, and have access to information about the program.
3. **Established Standards.** The organization should have written standards to help everyone understand what it takes to earn a reward or recognition.
4. **Knowledgeable Decision-Makers.** Staff and leadership who make decisions about rewards and recognition should have sufficient knowledge to make an informed judgment about when rewards and recognition are merited.
5. **Motivating.** Awards are important to employees who receive them and should be presented in a way that encourages them to continue doing outstanding work.
6. **Results Are Public.** When an employee receives a reward or recognition, those who work around them should be aware of it.
7. **Timely Payoff.** In the case of financial incentives, employees should receive compensation in a reasonable amount of time.

8. **No Excess Red Tape.** The requirements for filing and processing an award should not become so burdensome that staff are reluctant to submit nominations.
9. **No Favoritism.** An employee's chance of getting an award should be based on their work contribution, not dependent on favoritism, who they know, or where they work.

Non-financial incentives may include public recognition of providers or care teams who are excelling at achieving hypertension control rates among their patients. Health systems may hold a yearly employee appreciation banquet during which exemplary employees or teams are recognized. These incentives are often based in human resources departments. Consider building on existing employee recognition platforms at your system, if applicable. Other approaches include offering continuing medical education to providers who participate in the HMP trainings, or making posters about program success stories and posting them around the clinic. Health system leadership is responsible for determining financial compensation based on hypertension-related performance. Hypertension management and control metrics can be used to determine performance-based compensation. Incentives should be aligned with the system's overall quality goals, and payments can be tied to existing quality bonuses, as applicable.

Financial incentives could take the form of monetary bonuses or incentive payments to providers or employees, based on their performance. The incentives can be based on performance over a defined time period or can be tied to achieving certain thresholds regardless of time period.

Financial incentives could take the form of monetary bonuses or incentive payments to providers or employees based on their performance. Health system leadership is responsible for determining financial compensation based on hypertension-related performance. Hypertension management and control metrics can be used to determine performance-based compensation. As such, the incentives used to promote the HMP should be in alignment with the health system's overall quality goals. Health systems should consider aligning HMP incentives with the goals identified by the hypertension management council. Based on these goals, the health system can determine corresponding measures. Measures may include both process and outcome measures as shown below in Exhibit 10.1.

Exhibit 10.1 Examples of Process and Outcome HMP Measures

Measure Type	Measure
Outcome	Increase hypertension control rate by year's end to 79.0%.
Process	Using registry, monitor patients not seen in more than 12 months and maintain percentage ≤ 6.0%.
	Monitor blood pressure alert compliance in primary care departments to achieve blood pressure alert compliance of 90.0%.
	Monitor blood pressure alert compliance in specialty care departments to achieve blood pressure alert compliance of 70.0%.

The second part of the first implementation activity is to identify performance measures for the incentive program that are related to the goals of the HMP. Based on the goals, corresponding selected measures, and targets, the health system can determine criteria for awarding non-financial incentives and a payment schedule for financial incentives. Exhibit 10.2 below shows an example of such a performance payment schedule.

Exhibit 10.2 Example Incentive Program Payment Schedule[60]

Goal	Performance Based on:	Performance	Payment
To improve blood pressure control in patients at high risk for a coronary event.	Clinic blood pressure goal attainment.	71.0%	$750
		66.0%	$600
		61.0%	$450
		56.0%	$300
		51.0%	$150

Activity 2: Promote awareness of incentive program among staff

After determining the incentive structure, the health system should make clinical staff aware of goals and institute a system for performance monitoring to ensure that staff are aware of their performance and able to engage in continual QI.

For non-financial incentive programs, health systems may do this through educational sessions, announcements in team meetings, and employee newsletters. If non-financial incentives involve providing staff with performance metrics, this can be done using dashboards.

For financial incentive programs, health systems should communicate about incentives through appropriate channels, which may include human resources departments.

Activity 3: Monitor performance and distribute performance-based incentives

The health system should institute a system for performance monitoring to ensure that staff are aware of their performance and able to engage in continual QI.

One way to communicate performance information to staff is to create dashboards around key programmatic elements. Sharing this data with providers and staff may increase motivation and accountability during the early implementation period. Sample metrics include:

- Percentage of eligible patients reached by HMP outreach per month.
- Percentage of scheduled HMP visits that are completed (i.e., patient show rates).
- Number of patients referred to the HMP, seen in the program, and who bring in their blood pressure monitoring logs, per month.
- Monthly hypertension control rate by clinic.

The hypertension management council [described in Integrated Care Team (HMP Component 1)] is responsible for monitoring progress on achieving hypertension control targets across the health system and identifying high performers. Health system leadership in conjunction with the human resources department may then award non-financial recognition or financial compensation in accordance with the incentive structure determined in Activity 1.

Suggestions for Adapting Component 10: Incentives, Rewards, and Recognition

- Use non-monetary incentives such as t-shirts or luncheons to recognize exemplary staff and promote the HMP. Provide support for related professional development activities, such as continuing medical education credits about hypertension management.
- Communicate performance metrics regularly to staff, including clinic site-level metrics and comparisons across clinic sites, to promote engagement. Use EHR dashboards, report cards, or progress updates via email.
- Develop an incentive program that aligns with your current activities or existing incentive programs. For example:
  - Integrate metrics from the HMP into your current decision-making regarding annual bonuses.
  - Work with the human resources department to develop non-financial incentives and incorporate these into annual employee appreciation events or staff recognition displays.

You may also want to consider the following questions as you think about implementing this component. Space has been provided in the table below to record your response to each question.

1	Does your organization have an existing incentive structures for provider or team performance and QI?
2	Would it be better to integrate the incentive program into current activities or establish a new program for the HMP?
3	What measures will you use to determine incentives for the HMP?
4	Does your organization participate in any national QI or pay-for-performance initiatives that align with the HMP?

Resources

Provider Toolkit to Improve Hypertension Control [PDF-10.54MB]

This toolkit provides tips on encouraging team-based care for hypertension management including blood pressure goals. Pages 67-73 in this toolkit provide examples of dashboards/reports with blood pressure goals, metrics, and

performance from the Mercy Clinics, Kaiser Permanente, and the Cleveland Clinic. (*American Medical Group Foundation*, 2013)

Improving the Screening, Prevention, and Management of Hypertension—An Implementation Tool for Clinic Practice Teams [PDF-2.79MB]

This publication is for healthcare professionals and specifically clinic practice teams. It is meant to serve as a QI guide and a compilation of resources to support practices in their efforts to improve blood pressure control. Pages 12-15 in this tool provides an example of a measurement worksheet. (*Washington State Department of Health*, August 2013)

Primary Care Information Project (PCIP): Provider Dashboard [PDF-1.45MB]

The PCIP assists New York City-based practices, independently owned community health centers, and hospital ambulatory sites with adopting and implementing health information systems, QI, and practice transformation initiatives. As part of PCIP, the New York City Department of Health developed an example provider dashboard with prevention and management metrics. (*New York City Department of Health*, 2015)

Primary Care Information Project: Your Practice Hypertension Panel Summary [PDF-1.34MB]

The PCIP assists New York City-based practices, independently owned community health centers, and hospital ambulatory sites with adopting and implementing health information systems, QI, and practice transformation initiatives. As part of PCIP, the New York City Department of Health developed an example of a provider report with a summary of a practice panel of hypertensive patients. (*New York City Department of Health*, 2015)

Incentive Programs that Reward Collaborative Physician Efforts to Improve the Quality and Cost- Effective Delivery of Hospital Care [PDF-467.10KB]

This Davis Wright Tremaine presentation provides information on physician incentive arrangements and may be useful when developing the structure of an incentive system.

Section 3: Are You Ready To Improve? 3.E. Recognizing and Rewarding Success

The Consumer Assessment of Healthcare Providers and Systems (CAHPS) Ambulatory Care Improvement Guide is a comprehensive resource for health plans, medical groups, and other providers seeking to improve their performance in the domains of quality measured by CAHPS surveys. This guide provides information on external rewards and may be useful when developing the structure of an incentive system. (*Agency for Healthcare Research and Quality*, May 2017)

Using Workforce Practices to Drive Quality Improvement: A Guide for Hospitals [PDF-634.37KB]

This guide provides information on tracking and rewarding performance and may be useful when developing the structure of an incentive system. (*Health Research & Educational Trust*, March 2010)

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