CARDIOVASCULAR HEALTH IN PRIMARY CARE:
PHASE I & II

Implementation Toolkit for Community Partners
Evidence-based strategies for disease management in high-risk and affected populations

Last Updated: 04/10/2017
CONTENTS

How to use this Implementation Toolkit ......................................................................................... 3
  Implementation Goals Checklist .................................................................................................. 4
Overview: Cardiovascular Health .................................................................................................... 5
Preparing for Implementation ........................................................................................................ 7
  Establish Project Workgroup ...................................................................................................... 7
Phase One Implementation ............................................................................................................. 8
  Goal 1: Implement Guidelines for Management of Hypertension ............................................. 9
  Goal 2: Provide Appropriate Training and Equipment for Blood Pressure Monitoring ........... 13
  Goal 3: Standardize Documentation of Self-management Plans ............................................... 14
  Goal 4: Evaluate Resource Gaps for Cardiovascular Disease Management ......................... 15
Phase Two Implementation ............................................................................................................. 16
  Goal 1: Establish a Registry of Patients with Hypertension ..................................................... 17
  Goal 2: Generate Lists of Hypertensive Patients Who Need Follow-up .................................. 18
  Goal 3: Implement Home-Based Blood Pressure Self-Monitoring Program ............................ 19
  Goal 4: Standardize Screening and Counseling for Tobacco Smoking .................................... 21
  Goal 5: Facilitate Referrals to NYS Smoker’s Quitline .............................................................. 22
Appendix A: Materials to Support Achievement of Implementation Goals .................................... 23
  Cardiovascular Health Workgroup Template ............................................................................. 23
  Staff Training Template ........................................................................................................... 24
  Quality Improvement Template ................................................................................................. 25
  Key Elements of Blood Pressure Measurement .......................................................................... 26
  Blood Pressure Equipment Checklist .......................................................................................... 27
  Cardiovascular Project Baseline Assessment ............................................................................ 28
Appendix B: Quality Improvement Resources ................................................................................ 29
  Plan, Do, Study, Act (PDSA) Cycles .......................................................................................... 29
  PDSA Worksheet for Testing Change - Template ...................................................................... 30
Appendix C: Treatment Guidelines ................................................................................................ 32
HOW TO USE THIS IMPLEMENTATION TOOLKIT

This Implementation Toolkit: Cardiovascular Disease Management – Phases 1 & 2 was developed by OneCity Health to enable primary care partners/sites to launch projects and oversee project performance.

The Toolkit is organized into sections based on phases of the project to be rolled out over time.

SYMBOL KEY

The symbols below are used throughout the document as indicators:

- 🔊 – Key component of project implementation
- ⚠️ – Important implementation consideration

ONECITY HEALTH SUPPORT DESK

If you have any questions, please contact the OneCity Health support desk:

Phone Number: 646-694-7090

Email: ochsupportdesk@nychhc.org, with the subject line “Cardiovascular Health Question”

Hours of Operation: Monday through Friday from 9am to 5pm ET
## Implementation Goals Checklist

### PREPARING FOR IMPLEMENTATION

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<th>Key Tasks</th>
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### PHASE ONE IMPLEMENTATION

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OVERVIEW: CARDIOVASCULAR HEALTH

PROJECT OBJECTIVE

The objective of this project is to improve the treatment of cardiovascular health in primary care, including blood pressure control, cholesterol management, smoking cessation, and aspirin use. Cardiovascular disease is a major source of suffering and early death in all populations. Control of cardiovascular disease is a key to helping patients and communities be healthier.

PHASED IMPLEMENTATION STRATEGY

Implementation of the Cardiovascular Project will be in four phases. The goals of each phase are based on the milestones provided by New York State for completion of this project and on evidence of what strategies work to improve patients’ and communities’ cardiovascular health. (The New York State milestones for the Cardiovascular Project are included in the appendix of this toolkit).

⚠️ You may find that your organization has already worked on and achieved improvements in some or all of these areas. If this is the case, then the Cardiovascular Project is an opportunity to further strengthen and enhance your work in key areas.

This Toolkit focuses on Phases One and Two. Detailed materials for later phases of work will be published in the future.

Phase One (months 0-3):

1. Implement guidelines for management of hypertension
2. Train all staff members who measure and record blood pressure to ensure appropriate technique, and ensure that appropriate equipment is being used
3. Standardize how self-management plans are documented in the medical record
4. Identify resource gaps that are important to the team’s ability to help patients with self-management of cardiovascular conditions, including medication adherence and lifestyle changes

Phase Two (months 3-9):

1. Establish a registry of patients diagnosed with hypertension
2. Generate lists of hypertensive patients who have not had a recent visit and conduct outreach to schedule follow-up visits for them
3. Implement a workflow to support home blood pressure monitoring as an element of hypertension management
4. Standardize screening and counseling for tobacco smoking
5. Facilitate referrals to NYS Smoker’s Quit Line

Later phases of this project will include:

- Offering group visits to hypertensive patients
- Identifying patients with elevated blood pressure without a diagnosis of hypertension and scheduling them for a hypertension visit
- Providing opportunities for patients to obtain blood pressure checks at the primary care site, without copayment or prior appointment
- Tracking referrals made to community-based organizations
- Implementing a guideline for management of cholesterol
- Recommending aspirin for prevention of cardiovascular events
- Promoting influenza vaccination
- Linking high risk populations to care management
- Implementing the Stanford Model for chronic diseases

HOW DOES THE CARDIOVASCULAR PROJECT ADDRESS PATIENT-CENTERED OUTCOMES?

For all Delivery System Reform Incentive Payment (DSRIP) projects, some metrics focus on improving the processes by which work is done at clinical sites, and others focus on outcomes such as improved health and reduced utilization. Although the earlier phases of this project focus on process metrics, all work on this project ultimately aims to improve patient outcomes and reduce potentially avoidable hospital and Emergency Department (ED) visits. As this project evolves, we will increasingly focus on outcomes metrics.

Examples of outcomes metrics for the Cardiovascular Project, as defined by New York State, are as follows. As you implement the Cardiovascular Project, keep in mind how you think your work will effectively address these patient outcomes.

- Reduction in potentially avoidable hospital admissions overall
- Reduction in potentially avoidable Emergency Department visits overall
- Reduction in hospital admissions related to uncontrolled hypertension or chest pain
- Increase in percentage of hypertensive patients whose blood pressure is well controlled
PREPARING FOR IMPLEMENTATION

Establish Project Workgroup

**Cardiovascular Health Workgroup**
As appropriate for your practice, establish a workgroup that includes individuals you think will be critical to your success in implementing this project. Consider including workgroup members from a variety of backgrounds and roles, such as:

- Physician
- Nursing
- Social work
- Nutrition
- Care coordination/case management
- Social work
- Pharmacy
- Health education
- Other relevant resources available in your setting

**Implementation Leader**
Identify an implementation leader to oversee the implementation. Specific tasks include:

- Engaging with clinical and administrative leadership to advocate for implementation and provide progress updates and reports
- Organizing workgroup and scheduling and facilitating meetings
- Ensuring that any necessary trainings are scheduled and attended
- Collaborating with OneCity Health to access support, training and materials for implementation
- Monitoring and troubleshooting implementation
- Ensuring that all steps of the project are completed on time

**Clinical Champion(s)**
A clinical champion must be well-positioned and able to engage, educate and lead others in the site-level implementation. Specific activities of the champion include:

- Engaging and advocating for cardiovascular health management improvements with clinical leaders
- Collaborating with clinical staff to ensure they have the tools and resources needed to be successful
- Working closely with the implementation leader to ensure that necessary training and support, including staff time, is in place
- Ensuring that the site’s implementation planning is geared towards effectively improving patient outcomes
PHASE ONE IMPLEMENTATION

You may find that your organization has already worked on and achieved improvements in some or all of these areas. If this is the case, then the Cardiovascular Project is an opportunity to further strengthen and enhance your work in key areas.

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Goal 1: Implement Guidelines for Management of Hypertension

Guideline-based management means that everyone in the primary care team has agreed to follow the same standard goals of treatment and the same standard treatment algorithm to achieve those goals. The standard goals and steps are based on national guidelines that summarize medical and public health evidence.

Guidelines do not replace the individualized evaluation and treatment plan that patients receive in primary care. Clinical providers may judge that a different goal or treatment is better for an individual patient. A patient’s own preferences and priorities may also change the plan of care.

Although they do not replace individualized care, guidelines do support high quality care across the patient population by creating a blueprint that applies to most patients and that everyone on the team can understand.

Using a guideline:

- Promotes consistent and timely evidence-based care for all patients
- Facilitates a team-based approach to identifying and managing patients’ needs
- Facilitates quality improvement activities

For Phase One of the Cardiovascular Project, your primary care team will use national, evidence-based guidelines for hypertension management.

Although there are a number of different guidelines available for hypertension management, this toolkit presents the guideline by the Eight Joint National Commission (JNC-8). This guideline (see Appendix) is endorsed by the American Academy of Family Physicians, a leading professional society for primary care providers.

The following steps for guideline implementation can also be used for the implementation of elevated cholesterol guidelines. This toolkit presents the 2013 American College of Cardiology/American Heart Association Guideline on the Treatment of Blood Cholesterol to Reduce Atherosclerotic Cardiovascular Risk in Adults (see Appendix).

Guideline implementation includes the following steps:

- **Step One**: Conduct a clinical staff meeting to review and discuss the guideline
- **Step Two**: Reinforce use of guidelines with primary care team
- **Step Three**: Embed guidelines in team-based care
- **Step Four**: Conduct quality improvement (QI) reviews on a sample of charts for each clinical provider
Step One: Conduct a Clinical Staff Meeting to Review the Guideline

The Clinical Champion should lead this meeting. Use a scheduled meeting time or schedule a separate meeting to review the hypertension guideline.

The agenda of this meeting is to:

- Review guidelines with the clinical staff
- Identify any areas of concern amongst the clinical providers
- Identify pragmatic barriers to following these guidelines and discuss how they can be addressed

Like all guidelines, the JNC-8 hypertension guideline has areas of controversy. In particular, some hypertension experts think that the higher blood pressure goal of 150/90 should apply only to patients 80 years or older, not to all patients 60 years or older.

In the case where a primary care partner wishes to use an adjusted guideline based on the judgment of its clinical leadership, it may adjust the guideline in light of those considered decisions. A single guideline should, however, be agreed on and implemented at the site.

The Eighth Joint National Committee (JNC-8) guidelines are provided in the Appendix.

Step Two: Reinforce use of guidelines with the primary care team

Use multiple reminders and supports to reinforce use of the hypertension guideline, such as the following:

- Post and provide materials on blood pressure in patient areas
- Post blood pressure treatment goals in both patient and clinical areas
- Post guidelines on the wall in clinical treatment areas
- Place guidelines and related tools (such as the cardiovascular risk calculator for cholesterol management - [http://tools.acc.org/ASCVD-Risk-Estimator/](http://tools.acc.org/ASCVD-Risk-Estimator/)) on the desktop computers in each clinical treatment room
- Send providers reminders to use guideline-based care by email and/or in scheduled team meetings
- Encourage or require providers to complete on-line Continuing Medical Education modules on evidence-based management based on national guidelines

Please see the appendix for materials to support this work.
Step Three: Embed guidelines in team-based care

The Cardiovascular Health Workgroup will schedule a meeting to plan how the primary care team can support hypertension management, based on the guideline.

Goals for team-based care of hypertensive patients include:

- Identify patients who need to initiate hypertension treatment
- Identify patients who are being treated but are still not at their blood pressure goal
- Identify opportunities to routinely reinforce patient education on adherence and lifestyle changes
- Ensure patients who are not at goal receive timely additional counseling, medication changes, or a provider visit

To identify opportunities for the primary care practice to establish care coordination teams, including use of nursing staff, pharmacists, dieticians and community health workers, to reinforce guideline-based hypertension treatment, the Workgroup should consider each of these goals in the context of:

- Mapping how patients move through the primary care site during their visits, including their contacts with different primary care team members
- Identifying where in the patient visit poor blood pressure control can be noted and flagged
- Identify when and by whom health literacy issues, and patient self-efficacy and confidence in self-management can be addressed
- Identify when and by whom education on adherence and lifestyle changes will be provided
- Identifying how non-physician team members can support routine timely re-evaluation of patients after new medication or lifestyle changes
- Flagging poorly controlled hypertensive patients for discussion during huddles

Step Four: conduct quality improvement reviews

Quality Improvement (QI) reviews will help to reinforce use of guidelines, provide ongoing education and feedback to individual providers, and inform ongoing team performance.

Ten charts of hypertensive patients should be reviewed for each provider.

The Cardiovascular Workgroup can decide how this can be done at the site. Some examples include:
- Identify 10 hypertensive patients for each provider, and have the provider review his/her own charts
- Pair providers and have them review each other’s charts
- Assign a nurse to review a provider’s charts

The Cardiovascular Workgroup should review the team’s experience with QI chart reviews, and determine a schedule for repeat chart reviews. A minimum suggested schedule is to repeat monthly for three months.

Reporting back on QI results on a monthly basis to the primary care team will bring attention to the group’s ongoing work. This can be scheduled into routine clinical meetings.

Additional QI resources are available in the Appendix.
Goal 2: Provide Appropriate Training and Equipment for Blood Pressure Monitoring

Blood pressure measurement should be done correctly in the clinic setting, in accordance with American Heart Association Guidelines (http://hyper.ahajournals.org/content/45/1/142.full.pdf+html).

Tasks for workgroup

- Choose a training method (consider in-person teaching or video -- see Appendix for training options)
- List on Staff Training Template all staff members who take and record blood pressure measurements
- Ensure all staff completes training and documents this on the Staff Training Template (Appendix)
- Ensure supervisor observes each staff member measuring blood pressure with correct technique and documents this on the Staff Training Template
- Complete equipment deficiencies checklist
- Create plan to remediate equipment deficiencies

The workgroup should anticipate problems in patient flow that may result from improvement in blood pressure measurement techniques. For example, if waiting five minutes is a major barrier in your practice, then you may want to focus on patients whose initial reading is high, and make sure the second reading is after five minutes of quiet resting.
Goal 3: Standardize Documentation of Self-management Plans

- Identify current documentation practices for patient self-management plans
- Determine ability of Electronic Medical Record to document self-management plans in dedicated section
- Implement consistent documentation practices for self-management plans
- Submit initial report to OneCity Health of patient list (last name, first name, Medicaid ID number) of Medicaid patients who received self-management plan

All patients with hypertension, as per national guidelines, must receive counseling on lifestyle changes that improve blood pressure control.

Evidence-based recommendations for lifestyle changes, such as diet and exercise recommendations, are described in the appendix.

Self-management plans are meant to document changes that the patient can perform to improve his or her own health. These include medication adherence as well as lifestyle changes.

The self-management plan is a routine part of evidence-based hypertension management, and should be documented. Consistent documentation of self-management plans allow different members of the primary care team to reinforce and add to the plan. It also allows the patient to be provided with the self-management plan in a way that reflects this continuity of care.
Goal 4: Evaluate Resource Gaps for Cardiovascular Disease Management

Please complete and submit via the OneCity Health Partner Portal a Cardiovascular Project Baseline Assessment (copy of assessment questions found in the Appendix) in order to determine specific gaps in resources, including:

- Equipment needs
- Resources that support patient self-management and lifestyle changes, adherence and health literacy
- Staff training
- Documentation
PHASE TWO IMPLEMENTATION

You may find that your organization has already worked on and achieved improvements in some or all of these areas. If this is the case, then the Cardiovascular Project is an opportunity to further strengthen and enhance your work in key areas.

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Goal 1: Establish a Registry of Patients with Hypertension

A registry allows your practice to gather key information across the entire population of patients with hypertension. In addition to allowing providers to see all key information in one page as they consider patients’ treatment plans, the registry allows performance on hypertension treatment to be monitored for individual providers and for the practice as a whole. The entire patient panel can be reviewed in order to identify patients who need to be called back or targeted for improved outcomes.

Your primary care practice may already have a hypertension registry in your Electronic Medical Record or in other software.

In order to support OneCity Health project requirements, your hypertension registry should at a minimum enable you to:

- Maintain your registry in an electronic format
- Identify hypertensive patients with persistently elevated blood pressure
  - To identify appropriate target, registry should include age, comorbid diabetes, and comorbid chronic kidney disease
- Identify hypertensive patients who have not been seen for follow-up in the past year
- Identify the continuity provider for this patient

Your management of hypertension will be further supported if your registry can:

- Identify if patients are of African-American race, which may affect medication recommendations
- Identify if patients are on an ACE inhibitor
- Identify if patients have concerns regarding medication adherence
- Identify if patients have received targeted lifestyle counseling
- Identify if patients have social barriers to adherence
- Identify the care manager for this patient, if applicable

⚠️ If your practice does not have a hypertension registry, or has only a paper-based registry, OneCity Health may provide sites with a Centralized Care Management Systems (CCMS), GSI Health, and training for staff.

GSI HEALTH

All sites choosing to use GSI Health will be provided access to and training in the platform. Only authorized personnel will have access to the clinical data in GSI Health. Authorized personnel will be assigned unique usernames and passwords and access levels will be administered by this
specific individual log-on. Before access is provided to GSI Health, all staff must complete training. Whenever an employee leaves or transfers, the employee’s user ID/password is disabled and access is no longer available to the database. Patient data in GSI Health is also protected under NYC Health + Hospitals Protected Health Information (PHI) policy.

To request user training in GSI Health the IMPACT registry, please contact the OneCity Health support desk at ochsupportdesk@nychhc.org or (646) 694-7090. A template will be provided that will ask for the name, title, work address, phone, email and gender of each user so that a training can be appropriately scheduled.

**Goal 2: Generate Lists of Hypertensive Patients Who Need Follow-up**

- Use the hypertension registry to identify patients with hypertension who have not been seen in the past 12 months
- Assign primary care team member to reach out to patients to schedule follow-up visits
- Create a script and protocol for outreach calls
- Generate letters to patients who cannot be reached by telephone, requesting that they make follow-up visits
- Record in Electronic Medical Record and/or registry software the outreach activities as they are conducted
- Review in a workgroup meeting how this process has worked, and where it needs improvement.
  - How many attempted contacts were made?
  - How many successful contacts were made?
  - How can staff time be used efficiently for this process?
- Create a plan to periodically update this list and repeat outreach procedures (e.g. monthly)
**Goal 3: Implement Home-Based Blood Pressure Self-Monitoring Program**

When patients monitor their own blood pressure at home, they provide better data for diagnosing their blood pressure problems. However, blood pressure control will only improve if the clinical team provides follow-up to adjust the patient’s treatment as needed.

Guides on self-measured blood pressure monitoring can be found at:


http://www.heart.org/HEARTORG/Conditions/HighBloodPressure/SymptomsDiagnosisMonitoringOfHighBloodPressure/Home-Blood-Pressure-Monitoring_UCM_301874_Article.jsp#.V4vRAesrK70

**Steps for the Workgroup are as follows:**

- Identify a primary care team member who will be responsible for overseeing this program

- Provide training and protocols to support oversight of this program (See Appendix for Staff Training Template)
  - Educating patient on proper cuff use and recording of blood pressure values at home
  - Creation of patient list or registry for patients enrolled in this program
  - Provision of home blood pressure cuffs or prescribing of cuffs to be obtained or prescribed
  - Determining blood pressure goal and communicating goal to patient

- Design a workflow to follow-up on self-monitored blood pressures for patients enrolled in this program. Consider:
  - Telephonic follow-up
  - Follow-up via secure email or patient portal
  - Nursing visits for review of serial home blood pressure readings
  - Lifestyle counseling to improve blood pressure control
  - Protocol to escalate management of poor control to physician
Plan a strategy to identify patients who would benefit from home-based blood pressure self-monitoring. Examples include:

- Confirm a new hypertension diagnosis
- Confirm suspected white coat hypertension (including patients with treated hypertension, who may have white coat hypertension overlying this)
- Manage difficult-to-treat hypertension
- Expedite treatment plan using home-based monitoring and telephone follow-up, to reduce the number of office visits
- Support patients who would like greater ability to self-manage hypertension

Create an internal referral mechanism for physicians or nurses who identify patients for this program.

Discuss program with physicians and with clinical teams; consider reminders at clinical meetings, via email, etc. to encourage appropriate referrals.

Use registry or patient log to track follow-up and identify adequacy of blood pressure control. Consider case reviews for patients with persistent poor blood pressure control.
Goal 4: Standardize Screening and Counseling for Tobacco Smoking

Health information systems such as electronic health records (EHR), clinical decision support systems, and electronic prescribing are potentially valuable components to improve the quality and efficiency of clinical interventions for tobacco use. The 5As and AAR are brief tobacco cessation interventions that can be integrated into the EHR as prompts for providers to complete.

5 A’S": ASK, ADVISE, ASSESS, ASSIST, AND ARRANGE

ASK - Identify and document tobacco use status for every patient at every visit. (You may wish to develop your own vital signs sticker, based on the sample below).
ADVISE - In a clear, strong, and personalized manner, urge every tobacco user to quit.
ASSESS - Is the tobacco user willing to make a quit attempt at this time?
ASSIST - For the patient willing to make a quit attempt, use counseling and pharmacotherapy to help him or her quit. (See Counseling Patients to Quit and pharmacotherapy information in this packet).
ARRANGE - Schedule follow up contact, in person or by telephone, preferably within the first week after the quit date.


ASK, ADVISE, REFER (AAR)

ASK if patient smokes
ADVISE patient to quit
REFER smoker to telephone quitline

Goal 5: Facilitate Referrals to NYS Smoker’s Quitline

The New York State Smokers’ Quitline offers its free Refer-to-Quit program for health care providers to help their patients stop smoking. As a confidential service, it offers coaching and cessation-related services to patients who use tobacco products.

New York State Smokers’ Quitline Provider Referral Program

1-866-NY-QUITS (1-866-697-8487) | nysmokefree.com


Referral Procedure:

1. Tobacco using patients are referred to the New York State Smokers’ Quitline using a secure online site or a Refer-to-Quit referral form found on the website.

2. Referrer completes form with information on tobacco user and verification of consent for the Quitline to contact.

3. Once referral is received at the Quitline, clients receive a call from a Quitline Quit Coach who will provide tailored stop-smoking or stop-smokeless-tobacco coaching session and screen for NRT eligibility.

4. If the Quit Coach is unable to reach the client by telephone after 5 attempts, a letter is sent encouraging the individual to contact the Quitline for assistance.

5. Eligible clients (regardless of their insurance coverage) are sent a 2-week supply of NRT (patches) in the mail.

6. Clients reached by the Quitline receive an informational kit that includes cessation guides and tailored information.

7. Progress reports on each referred client are processed after the client’s case is closed, indicating the Quitline’s intervention or attempts to reach the client are completed. Progress reports for all closed clients will be disseminated on the 1st and 15th of each month via online access, secured e-mail, or returned fax.

8. The referrer needs to select their preferred method for receiving the progress report on the referral form. If a selection is not indicated, no progress reports will be made available.

9. Progress reports provide information on the referred client’s call outcomes, quit status and NRT eligibility & status.

10. Online progress reports will be posted at the time the client’s case is closed.

11. Referrers can opt-out of receiving progress reports by indicating this on the referral form.

1 https://nysmokefree.com/subpage.aspx?pn=REFER2QUIT
APPENDIX A: MATERIALS TO SUPPORT ACHIEVEMENT OF IMPLEMENTATION GOALS

Cardiovascular Health Workgroup Template

**Instructions:** Please use the following template to identify your Cardiovascular Health Workgroup. All members on this finalized template should have express approval from their supervisor and/or leadership to participate in activities related to planning this project with a time possible commitment of 3-4 hours per week for the next three months. Note that, where possible, staff can use standing meetings and other admin time that are already allocated to manage clinic operations, transformation, etc.

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<th>Name</th>
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<th>Job Title</th>
<th>Department</th>
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<td>10</td>
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</tr>
</tbody>
</table>
### Staff Training Template

**Instructions:** Please complete the following template to identify **staff members who have received the necessary trainings** in your primary care site, and **track completion of training and observation of staff** in proper blood pressure measurement technique.

<table>
<thead>
<tr>
<th>Site Name:</th>
<th>Implementation Lead:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Date:</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Name</th>
<th>Job Title/Department</th>
<th>Discipline</th>
<th>Date training completed</th>
<th>Staff member signature (training completed)</th>
<th>Date observation completed</th>
<th>Supervisor signature (observation completed)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
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<td>2</td>
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<td>12</td>
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<td></td>
<td></td>
</tr>
</tbody>
</table>
### Quality Improvement Template

<table>
<thead>
<tr>
<th>Data Point</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Provider name</td>
<td></td>
</tr>
<tr>
<td>Chart reviewed # (of 10 total)</td>
<td>____ of 10</td>
</tr>
<tr>
<td>Patient name</td>
<td></td>
</tr>
<tr>
<td>Medical Record Number</td>
<td></td>
</tr>
<tr>
<td>Date of last visit</td>
<td></td>
</tr>
<tr>
<td>Was blood pressure checked at this visit?</td>
<td>Yes / No</td>
</tr>
<tr>
<td>If the patient has chronic renal disease, is he/she on an ACE inhibitor?</td>
<td>Yes / No / Not Applicable</td>
</tr>
<tr>
<td>Was BP at goal? (If yes, can end chart review here)</td>
<td>Yes / No</td>
</tr>
<tr>
<td>Was medication adherence documented as addressed?</td>
<td>Yes / No</td>
</tr>
<tr>
<td>Were any lifestyle recommendations (diet, weight loss, exercise, etc.)</td>
<td>Yes / No</td>
</tr>
<tr>
<td>documented as addressed?</td>
<td></td>
</tr>
<tr>
<td>Was medical therapy changed?</td>
<td>Yes / No</td>
</tr>
<tr>
<td>Was there a clear plan for follow-up of blood pressure?</td>
<td>Yes / No</td>
</tr>
</tbody>
</table>
### Key Elements of Blood Pressure Measurement

#### Patient position

- Patient is seated in a chair with his/her back supported
  - Unsupported back can raise diastolic pressure by 6mmHg
- Legs are uncrossed
  - Crossing legs raises systolic pressure by 2-8mmHg
- All clothing covering arm is removed
- Arm is resting on a stable surface at heart level (mid-sternum)
  - If arm is not resting on a surface, pressure will appear raised
  - Moving arm above or below heart level causes blood pressure to vary
- Patient is relaxed, ideally resting quietly for at least 5 minutes before pressure taken
- No talking during blood pressure measurement

#### Cuff

- Appropriate cuff size is used (do not use cuffs that are too small)
- Cuff should have a line on it marking whether size is appropriate when wrapped around arm
- Midline of cuff is placed over arterial pulse of brachial artery in antecubital fossa (inside of elbow)

#### Number of readings

- If the first one is elevated, a second measurement should be taken at least 1 minute later
- If blood pressure is measured in both arms in initial visit, use the higher reading

#### For manual blood pressure readings

- Cuff should end 2-3 inches above antecubital fossa, if stethoscope is being used
- Cuff deflation should be at 2-3mmHg per second
## Blood Pressure Equipment Checklist

<table>
<thead>
<tr>
<th>Equipment Standard</th>
<th>Yes/No</th>
<th>If Applicable</th>
<th>Remediation Plan</th>
<th>Date for Completion</th>
<th>Date Completed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Blood pressure monitors are functioning at vital signs station and in all examination rooms</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tubing and release valves are undamaged</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Medium and large cuffs available at all measuring stations</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Medium and large cuffs available in all examination rooms</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cuffs have lines marked on them to guide appropriate sizing</td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>
The Cardiovascular Project Baseline Assessment should be completed by your site and submitted via the OneCity Health Partner Portal to help determine specific gaps in: equipment; resources that support patient self-management and lifestyle changes, adherence and health literacy; staff training; and documentation.
APPENDIX B: QUALITY IMPROVEMENT RESOURCES

Plan, Do, Study, Act (PDSA) Cycles

The Plan-Do-Study-Act (PDSA) cycle is part of the Institute for Healthcare Improvement Model for Improvement, a simple yet powerful tool for accelerating quality improvement. Once a team has set an aim, established its membership, and developed measures to determine whether a change leads to an improvement, the next step is to test a change in the real work setting. The PDSA cycle is shorthand for testing a change—by planning it, trying it, observing the results, and acting on what is learned. This is the scientific method, used for action-oriented learning.

The steps in the PDSA cycle are:

- **Step 1: Plan**—Plan the test or observation, including a plan for collecting data
- **Step 2: Do**—Try out the test on a small scale
- **Step 3: Study**—Set aside time to analyze the data and study the results
- **Step 4: Act**—Refine the change, based on what was learned from the test

For more information:
http://www.ihi.org/resources/Pages/HowtoImprove/ScienceofImprovementTestingChanges.aspx

---

### PDSA Worksheet for Testing Change - Template

#### AIM

**PDSA Cycle # 1**  
(Every Aim will require multiple small tests of change)  
Describe your test of change:

<table>
<thead>
<tr>
<th>Person(s) Responsible</th>
<th>When to complete</th>
<th>Where to complete</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### PLAN

List the tasks needed to set up this test of change:

<table>
<thead>
<tr>
<th>Person(s) Responsible</th>
<th>When to complete</th>
<th>Where to complete</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1.  
2.  
3.  

Predict what will happen when the test is carried out

<table>
<thead>
<tr>
<th>Indicator to measure if prediction succeeds</th>
</tr>
</thead>
</table>
### Implementation Toolkit: Cardiovascular Health

#### DO

<table>
<thead>
<tr>
<th>Describe what actually happened when you ran the test.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
</tbody>
</table>

#### STUDY

<table>
<thead>
<tr>
<th>Describe the measured results and how they compared to the predictions.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
</tbody>
</table>

#### ACT

<table>
<thead>
<tr>
<th>Describe what modifications to the plan will be made for the next cycle from what you learned.</th>
</tr>
</thead>
</table>
Hypertension Treatment Guidelines

GUIDELINE FOR THE MANAGEMENT OF HIGH BLOOD PRESSURE IN ADULTS (JNC-8)

2014 Evidence-Based Guidelines for the Management of High Blood Pressure in Adults

JNC-8 is a widely followed guideline in primary care and is endorsed by the American Academy of Family Physicians (AAFP).


Key Recommendations

- In the general population aged ≥ 60 years, initiate pharmacologic treatment to lower blood pressure (BP) at systolic blood pressure (SBP) ≥ 150 mmHg or diastolic blood pressure (DBP) ≥ 90 mmHg to a goal SBP < 150 mmHg and goal DBP < 90 mmHg.
- In the general population < 60 years, initiate pharmacologic treatment to lower BP at SBP ≥ 140 mmHg or DBP ≥ 90 mmHg to a goal SBP < 140 mmHg and goal DBP < 90 mmHg.
- In the population aged ≥ 18 and < 70 years with chronic kidney disease (CKD), initiate pharmacologic treatment to lower BP at SBP ≥ 140 mmHg or DBP ≥ 90 mmHg and treat to goal SBP < 140 mmHg and goal DBP < 90 mmHg. Initial (or add-on) antihypertensive treatment should include an angiotensin-converting enzyme inhibitor (ACEI) or angiotensin receptor blocker (ARB) to improve kidney outcomes, regardless of race.
- In the population aged ≥ 18 years with diabetes, initiate pharmacologic treatment to lower BP at SBP ≥ 140 mmHg or DBP ≥ 90 mmHg and treat to a goal SBP < 140 mmHg and goal DBP < 90 mmHg.
- In the general nonblack population, including those with diabetes, initial antihypertensive treatment should include a thiazide-type diuretic, calcium channel blocker (CCB), ACEI, or ARB.
- In the general black population, including those with diabetes, initial antihypertensive treatment should include a thiazide-type diuretic or CCB.
- The main objective of hypertension treatment is to attain and maintain goal BP. If goal BP is not reached within a month of treatment, increase the dose of the initial drug or add a second drug from one of the recommended classes (thiazide-type diuretic, CCB, ACEI, or ARB). Continue to assess BP and adjust the treatment regimen until goal BP is reached, adding a third drug if needed. Do not use an ACEI and an ARB together in the same patient. If goal BP cannot be reached using the recommended drug classes

because of a contraindication or the need to use more than 3 drugs to reach goal, antihypertensive drugs from other classes can be used.

• Consider referral to a hypertension specialist for patients in whom goal BP cannot be attained or for complicated patients.
2014 Evidence-Based Guideline for the Management of High Blood Pressure in Adults
Report From the Panel Members Appointed to the Eighth Joint National Committee (JNC 8)


Adult aged ≥18 years with hypertension

Implement lifestyle interventions (continue throughout management)

Set blood pressure goal and initiate blood pressure lowering medication based on age, diabetes, and chronic kidney disease (CKD)

General population (no diabetes or CKD) vs. Diabetes or CKD present

All ages Diabetes present vs. No CKD

All ages CKD present with or without diabetes

Age ≥ 60 years

Blood pressure goal
SBP <150 mm Hg
DBP <90 mm Hg

Initiate thiazide-type diuretic
ACEI or ARB or CCB, alone or in combination

Select a drug treatment titration strategy
A. Maximize first medication before adding second or
B. Add second medication before reaching maximum dose of first medication or
C. Start with 2 medication classes separately or as fixed-dose combination

Blood pressure goal
SBP <140 mm Hg
DBP <90 mm Hg

Initiate thiazide-type diuretic or CCB, alone or in combination

Blood pressure goal
SBP <140 mm Hg
DBP <90 mm Hg

Initiate ACEI or ARB, alone or in combination with other drug class

Blood pressure goal
SBP <140 mm Hg
DBP <90 mm Hg

Nonblack

Black

See next page for Titrating Hypertension Medication
At goal blood pressure?

Yes

No

Reinforce medication and lifestyle adherence. For strategies A and B, add and titrate thiazide-type diuretic or ACEI or ARB or CCB (use medication class not previously selected and avoid combined use of ACEI and ARB). For strategy C, titrate doses of initial medications to maximum.

At goal blood pressure?

Yes

No

Reinforce medication and lifestyle adherence. Add and titrate thiazide-type diuretic or ACEI or ARB or CCB (use medication class not previously selected and avoid combined use of ACEI and ARB).

At goal blood pressure?

Yes

No

Reinforce medication and lifestyle adherence. Add additional medication class (eg, β-blocker, aldosterone antagonist, or others) and/or refer to physician with expertise in hypertension management.

At goal blood pressure?

No

Yes

Continue current treatment and monitoring.

After treatment adjustments, blood pressure control can be reassessed within a month to determine if control has been attained. Continue to assess BP and adjust the treatment regimen until goal BP is reached.
**Hypertension Guideline: Choice of Medications**

Dosing is based on JNC-8 recommendations
*Other medication options may also be clinically acceptable.*

<table>
<thead>
<tr>
<th>Medication class</th>
<th>Choice of medications</th>
<th>Initial Dose</th>
<th>Target Dose</th>
<th>Doses per day (divided dose if &gt;1)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thiazide</td>
<td>Hydrochlorothiazide</td>
<td>12.5-25mg</td>
<td>25-50mg</td>
<td>1-2</td>
</tr>
<tr>
<td></td>
<td>Chlorthalidone</td>
<td>12.5mg</td>
<td>12.5-25mg</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Indapamide</td>
<td>1.25mg</td>
<td>1.25-2.5mg</td>
<td>1</td>
</tr>
<tr>
<td>ACEI</td>
<td>Lisinopril</td>
<td>10mg</td>
<td>40mg</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Enalapril</td>
<td>5mg</td>
<td>20mg</td>
<td>1-2</td>
</tr>
<tr>
<td>CCB</td>
<td>Amlodipine</td>
<td>2.5mg</td>
<td>10mg</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Diltiazem XR</td>
<td>120-180mg</td>
<td>360mg</td>
<td>1</td>
</tr>
<tr>
<td>ARB</td>
<td>Losartan</td>
<td>50mg</td>
<td>100mg</td>
<td>1-2</td>
</tr>
<tr>
<td></td>
<td>Valsartan</td>
<td>40-80mg</td>
<td>160-320mg</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Irbesartan</td>
<td>75mg</td>
<td>300mg</td>
<td>1</td>
</tr>
<tr>
<td>Beta-blocker</td>
<td>Atenolol</td>
<td>25-50mg</td>
<td>100mg</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Metoprolol succinate ER</td>
<td>50mg</td>
<td>100-200mg</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Metoprolol tartrate</td>
<td>50mg</td>
<td>100-200mg</td>
<td>1-2</td>
</tr>
</tbody>
</table>

*Once-daily dosing can increase medication adherence.*

*Combination medications can increase medication adherence.*
GUIDELINES FOR USE OF SIMPLIFIED MEDICATION REGIMENS/COMBINATION MEDICATIONS


- This project promotes simpler medication regimens, including combined medications
- Providers should strongly consider prescribing simplified regimens once correct dosing for patient has been determined
- Coverage of medication formulations varies between insurers, including between Medicaid managed care organizations

GUIDELINE FOR THE MANAGEMENT OF CHOLESTEROL

2013 ACC/AHA Guideline on the Treatment of Blood Cholesterol to Reduce Atherosclerotic Cardiovascular Risk in Adults4


Qualification5: “The guideline uses a CVD risk assessment tool that has not been validated and may overestimate risk. The risk cut-off of 7.5%, rather than 10%, will significantly increase the number of individuals on statins.” (American Academy of Family Physicians)


2013 ACC/AHA Guideline on the Treatment of Blood Cholesterol to Reduce Atherosclerotic Cardiovascular Risk in Adults


*ASCVD - atherosclerotic cardiovascular disease defined as coronary heart disease, stroke, and peripheral arterial disease, all of presumed atherothrombotic origin.

ASCVD Calculator with Decision Support - American College of Cardiology: tools.acc.org/ASCVD-Risk-Estimator/

Qualification: "The guideline uses a CVD risk assessment tool that has not been validated and may overestimate risk. The risk cut-off of 7.5% rather than 10%, will significantly increase the number of individuals on statins." (American Academy of Family Physicians, http://www.aafp.org/patient-care/clinical-recommendations/all/cholesterol.html)
High-, Moderate-, and Low-Intensity Statin Therapy (Used in the RCTs Reviewed by the Expert Panel)*


<table>
<thead>
<tr>
<th>High-Intensity Statin Therapy</th>
<th>Moderate-Intensity Statin Therapy</th>
<th>Low-Intensity Statin Therapy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Daily dose lowers LDL-C, on average, by approximately ≥50%</td>
<td>Daily dose lowers LDL-C, on average, by approximately 30% to &lt;50%</td>
<td>Daily dose lowers LDL-C, on average, by &lt;30%</td>
</tr>
<tr>
<td>Atorvastatin (40)-80 mg</td>
<td>Atorvastatin 10 (20) mg</td>
<td>Simvastatin 10 mg</td>
</tr>
<tr>
<td>Rosuvastatin 20 (40) mg</td>
<td>Rosuvastatin (b) 10 mg</td>
<td>Pravastatin 10-20 mg</td>
</tr>
<tr>
<td></td>
<td>Simvastatin 20-40 mg</td>
<td>Lovastatin 20 mg</td>
</tr>
<tr>
<td></td>
<td>Pravastatin 40 (80) mg</td>
<td>Fluvastatin 20-40 mg</td>
</tr>
<tr>
<td></td>
<td>Fluvastatin (XL) 80 mg</td>
<td>Fluvastatin 40 mg BID</td>
</tr>
<tr>
<td></td>
<td>Fluvastatin 20-40 mg</td>
<td>Pitavastatin 1 mg</td>
</tr>
</tbody>
</table>

*Individual responses to statin therapy varied in the RCTs and should be expected to vary in clinical practice. There might be a biological basis for a less-than-average response.

†Evidence from 1 RCT only: down-titration if unable to tolerate atorvastatin 80 mg in the IDEAL (Incremental Decrease through Aggressive Lipid Lowering) study.

‡Although simvastatin 80 mg was evaluated in RCTs, initiation of simvastatin 80 mg or titration to 80 mg is not recommended by the FDA because of the increased risk of myopathy, including rhabdomyolysis.

Boldface type indicates specific statins and doses that were evaluated in RCTs included in CQ1, CQ2, and the Cholesterol Treatment Trialists 2010 meta-analysis included in CQ3. All of these RCTs demonstrated a reduction in major cardiovascular events. Italic type indicates statins and doses that have been approved by the FDA but were not tested in the RCTs reviewed.

BID indicates twice daily; CQ, critical question; FDA, Food and Drug Administration; LDL-C, low-density lipoprotein cholesterol; and RCTs, randomized controlled trials.
APPENDIX D: GUIDANCE ON MEASURING BP ACCURATELY

Assess Adherence to Proper BP Measuring Techniques

Competency Checklist Blood Pressure Measurement
*Cleveland Clinic*

Blood Pressure Spot Check
*Kaiser Permanente*
http://bit.ly/1qDLGYE

New Employee Blood Pressure Measurement Initial Competency Checklist
*HealthPartners*
http://bit.ly/1w9vvan

Quarterly Blood Pressure Auditing Tool
*HealthPartners*
http://bit.ly/1rgemGC

Clinician Education – BP Measurement

Checking Blood Pressures Nursing Competency
*Sharp Rees-Stealy Medical Group*
http://bit.ly/1ty6uaN

Correct Blood Pressure Measurement Technique Handout
*Colorado Springs Health Partners*
http://bit.ly/1sN0OHr

Standard Work Form, Blood Pressure Measurement in the Clinic
*Park Nicollet*
http://bit.ly/1rBkXv6

Standard Work Form, Automatic Omron Blood Pressure Measurement
*Park Nicollet*
http://bit.ly/1vj9neK

BP Measurement: The Proper Way [Video]
*Cornerstone Health Care*
http://bit.ly/1GXBxin

BP Measurement: The Wrong Way [Video]
*Cornerstone Health Care*

**Blood Pressure Accuracy and Variability Quick Reference**

*HealthPartners*

http://bit.ly/1wc3wpv
## APPENDIX E: TRAINING RESOURCES

### Tobacco Control
Clinical Training from the University of Texas Tobacco Research and Evaluation Team
http://www.uttobacco.org/our-programs/clinical-training

Monograph 5: Tobacco and the Clinician: Interventions for Medical and Dental Practice
http://cancercontrol.cancer.gov/brp/tcrb/monographs/5/

### Guidelines for Referring Smokers to the Quitline
New York State Quitline Courses
https://www.nysmokefree.com/CME/Courses.aspx

### Measuring and Recording Blood Pressure Monitoring
Reading Blood Pressure
https://www.youtube.com/watch?v=oioFVbsiwEk

Blood Pressure and Pulse
http://www.medicalvideos.org/videos/150/blood-pressure-and-pulse

Blood Pressure Measurement Tutorial
http://www.abdn.ac.uk/medical/bhs/tutorial/tutorial.htm

Training Day – How to Measure Blood Pressure
https://www.youtube.com/watch?v=Za9RdBHpeAI

### Guidelines Related to Strategies from the Million Hearts Campaign
Million Hearts Education Modules
https://millionhearts.osu.edu/course

### Self-management Goals through Person-centered Methods
American Medical Association's Motivating Patients to Change Behavior
http://www.bigshouldersdubs.com/clients/AMA/22-AMA-Motivating.htm

American Academy of Family Physicians' Have You Really Addressed Your Patient's Concerns?
http://www.aafp.org/fpm/2008/0300/p35.html
Department of Health and Human Services’ Self-Management Support

Patient-centered Care
http://www.son.washington.edu/pqe/patient-centered-video.asp

Self-Management Strategies for Vulnerable Populations
http://www.bigshouldersdubs.com/clients/AMA/18-AMA-SelfManagement.htm

Planned Care Visit
http://www.improvingchroniccare.org/index.php?p=Planned_Care_Videos&s=225

Health Coaching
http://cepc.ucsf.edu/health-coaching

Coaching Patients for Successful Self-Management
http://www.chcf.org/publications/2008/08/video-on-coaching-patients-for-successful-selfmanagement

**Making Warm Referrals and the Follow-up Process**

Sample Warm Hand-Off Scripts and Procedures
http://www.ibhp.org/?section=pages&cid=122

Clinical-Community Linkages for Prevention

**Home Blood Pressure Monitoring with Follow-Up Support**

Self-Measured Blood Pressure Monitoring: Action Steps for Clinicians
http://millionhearts.hhs.gov/docs/mh_smbp_clinicians.pdf

Practical advice for home blood pressure measurement
http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2650763/

Video: How to measure blood pressure using an automatic monitor
http://www.mayoclinic.org/diseases-conditions/high-blood-pressure/multimedia/how-to-measure-blood-pressure/vid-20084749
APPENDIX F: HYPERTENSION SELF-MANAGEMENT RESOURCES

Toolkits

Self-Measured Blood Pressure Monitoring: Action Steps for Clinicians
_Million Hearts Campaign_

Brief Hypertension Action Tools
_College of Family Physicians of Canada_
http://www.cfpc.ca/projectassets/templates/resource.aspx?id=1542&langType=4105

Helping Patients Manage Their Chronic Conditions
_California Healthcare Foundation_
By Thomas Bodenheimer, M.D., Kate MacGregor, M.P.H., and Claire Shafiri
http://www.chcf.org/publications/2005/06/helping-patients-manage-their-chronic-conditions

Partnering in Self-Management Support: A Toolkit for Clinicians
_Improving Chronic Illness Care_

Group visits

Group Visit Starter Kit
_Improving Chronic Illness Care_
http://www.improvingchroniccare.org/downloads/group_visit_starter_kit_copy1.doc

Putting Group Visits into Practice
_Massachusetts General Hospital_
http://www.massgeneral.org/stoecklecenter/assets/pdf/group_visit_guide.pdf

Videos
Techniques for Effective Patient Self-Management
This 33 minute CHCF video provides strategies and tools based on the principles of motivational interviewing that busy clinicians can use to help patients adopt healthy behaviors. Must register to gain access.

Coaching Patients for Successful Self-Management
http://www.chcf.org/publications/2006/08/~/link.aspx?_id=1EDFF7ECB5154201A418D125AC04BB13&_z=ixzz1508lqanV
A 14 minute video by CHCF. Video includes two topics:
1. Using the action planning process to support healthy behavior change
2. Ensuring patients are taking their medications appropriately.

The Planned Care Visit Video Series
http://www.improvingchroniccare.org/index.php?p=Planned_Care_Videos&s=225
Created by Improving Chronic Illness Care. Videos include:
1. The Patient Experience
2. The Provider Experience
3. The Self-Management Interview
APPENDIX G: PATIENT EDUCATION MATERIALS – HYPERTENSION

Hypertension Control and Self-Management

American Heart Association
http://www.heart.org/HEARTORG/Conditions/Conditions_UCM_001087_SubHomePage.jsp

ABCS for Heart Health
Cuatro pasos adelante
This easy-to-understand fact sheet about the ABCS of heart health (Aspirin when appropriate, Blood pressure control, Cholesterol management, and Smoking cessation) is available in English and Spanish.
Download the fact sheet (English) [PDF-278KB]
Download the fact sheet (Spanish) [PDF-1.3MB]

Keep the Beat: Control Your High Blood Pressure
National Heart, Lung and Blood Institute

Heart & Vascular Disease Resources
National Heart, Lung and Blood Institute
http://www.nhlbi.nih.gov/health/resources/heart

Visit Checklist: Supporting your Patient with High Blood Pressure
Million Hearts Campaign

My Blood Pressure Log
New York City Department of Health
http://bit.ly/1wgTuWo

Blood Pressure Report Card
Billings Clinic
http://bit.ly/1nTtAWR

Blood Pressure Monitoring
American Heart Association
http://bit.ly/11q5Gs8
How to Monitor and Record Your Blood Pressure
American Heart Association
http://bit.ly/1vfP4hS

Instructional Video: Monitoring Blood Pressure at Home
American Heart Association
http://bit.ly/1pffQ8p

Printable Log to Record Home Blood Pressure Measurements
American Heart Association
http://bit.ly/1sUFssq

AHRQ. Measuring Your Blood Pressure at Home: A Review of the Research for Adults
Agency for Healthcare Research and Quality
http://go.usa.gov/fjqT
APPENDIX H: CREATING A PATIENT REGISTRY

Agency for Health Care Research and Quality
http://www.effectivehealthcare.ahrq.gov/repFiles/PatOutcomes.pdf

Using a Simple Patient Registry to Improve Your Chronic Disease Care
American Academy of Family Physicians
http://www.aafp.org/fpm/2006/0400/p47.html

Care Management Tracking System (CMTS)
University of Washington’s AIMS Center
http://aims.uw.edu/resource-library/care-management-tracking-system-cmts

Identify a Population-Based Tracking System
University of Washington’s AIMS Center
https://aims.uw.edu/collaborative-care/implementation-guide/plan-clinical-practice-change/identify-population-based

IMPACT Patient Tracking Tools
University of Washington, Department of Psychiatry & Behavioral Sciences
http://impact-uw.org/tools/patient.html

Registries Made Simple
American Academy of Family Physicians

Understanding Panel Management: A Comparative Study of an Emerging Approach to Population Care
Kaiser Permanente

Hypertension Registry

Registry Used to Track Hypertension Patients
American Medical Group Association
http://bit.ly/12k9MT1

Undiagnosed Hypertension Registry
Health Center Network of New York
http://bit.ly/1sUmOPG
APPENDIX I: EHR-BASED DECISION SUPPORT

How-To Guides for Clinical Decision Support (CDS) Implementation
Office of the National Coordinator for Health Information Technology
https://www.healthit.gov/policy-researchers-implementers/cds-implementation

Meaningful Use Case Studies: Improving Blood Pressure Control for Patients with Diabetes in 4 Community Health Centers
Office of the National Coordinator for Health Information and Technology

Hypertension Control: