

## Identifying Undiagnosed Hypertension Train-the-Trainer Session Curriculum Overview

This curriculum was developed to be a resource for quality improvement staff and staff trainers who support adoption, implementation and maintenance of clinical processes—especially those related to hypertension. The focus of this session is preparing trainers to work with staff to develop policies and procedures for identifying undiagnosed or masked hypertension. Several research efforts have identified a difference of approximately 13% between expected and observed prevalence of hypertension among patient panels of large health care organizations (Clemins, Richey, Joshi, et al., 2018). Because of the known health risks related to uncontrolled hypertension, it is essential that we identify undiagnosed hypertension so we can connect patients to necessary treatment and supports.

Through spread of this training, and evidence-based materials from the Centers for Disease Control and Prevention (CDC), we hope more clinics will implement hypertension identification and control policies and procedures; improve referral and connection to appropriate blood pressure control resources and services for patients at risk of and diagnosed with hypertension; and address accurate measuring and monitoring of blood pressure.

### Intended Audience

The intended audience for this train-the-trainer session includes but is not limited to quality improvement staff, staff supervisors or trainers, medical assistant leads and community health worker supervisors. Although many of the concepts presented in this training refer to outpatient clinical settings, we believe the content could be adopted for other settings and staff.

### Goals and Purpose

This curriculum is designed to prepare staff trainers to support their organizations in:

- Identifying undiagnosed hypertensive patients
  - Calculating expected prevalence using the Million Hearts® campaign’s hypertension prevalence estimator tool using demographic and comorbidities data
  - Incorporating undiagnosed hypertension into existing population management efforts
- Establishing a process/procedure for screening patients
  - Using the electronic health record (EHR) and/or other data sources to search for patients who meet the established screening criteria
- Training or retraining clinical staff on appropriate blood pressure measurement techniques, including impacts of poor technique on blood pressure numbers
- Implementing a plan to diagnose identified patients, and connect those newly diagnosed with hypertension to necessary treatment and supports

## Sample Assessment Questions

Consider asking participants some of these questions in advance of your training to help guide your focus areas.

### Organization Assessment

#### Collect Your Data

- Number of patients with a formal hypertension diagnosis (all patients 18 to 85 years of age with a formal diagnosis of hypertension)
- Number of patients with controlled hypertension (number of patients with a formal hypertension diagnosis and whose most recent blood pressure measurement was below 140/90mm Hg)
- Overall hypertension control rate (percentage)
- Number of unique patients your clinic has seen during this reporting period

#### Accuracy of Blood Pressure

- Staff uses automated blood pressure machines. Generally, these machines measure blood pressure at least three times in a row, automatically, and are usually done in isolation. They can be attached to the wall or in a cart.
  - Yes/No
- Clinic has automated blood pressure machine(s) that are calibrated annually.
  - Yes/No
- When staff measures blood pressure, patient: *(check all that apply)*
  - Has rested quietly for five minutes immediately prior to measurement
  - Is seated in a chair with back supported
  - Has feet flat on the floor, or on a footstool
  - Has legs uncrossed
  - Has arm supported at mid-sternal level
  - Is not talking
  - None of the above
- Staff has multiple blood pressure cuff sizes available and uses them appropriately.
  - Yes/No
- When blood pressure is 140/90 mm Hg or greater:
  - Staff repeats the blood pressure using an automated office blood pressure machine with the patient alone in the room (to reduce “white coat” hypertension)
  - Staff discards the first reading, then averages two or more measurements together to determine the patient’s average blood pressure
  - None of the above
- On an annual basis, and during new staff orientation, our practice: *(check all that apply)*
  - Conducts training on accurate office blood pressure measurement for all clinical staff and providers
  - Conducts training on how to educate patients on correct home blood pressure measurement
  - Reviews and updates blood pressure measurement training standards and policies
  - None of the above

### **Staff Training and Office Policies**

- Staff encourages patients with high blood pressure to monitor their blood pressure at home by: *(check all that apply)*
  - Providing patients with home blood pressure monitors
  - Encouraging patients to purchase their own home blood pressure monitors
  - Providing patients with a way to log and track their blood pressure
  - Providing patients educational materials on blood pressure and correct blood pressure measurement
  - Providing patients with an after-visit summary with recommendations for blood pressure care
  - None of the above
- Staff teaches patients how to correctly take their blood pressure with a home monitor when one has been recommended, prescribed or given to patients.
  - Yes/No
- Multiple staff are involved in identifying ways to improve patient blood pressure control (e.g., huddles, chart review, multidisciplinary team meetings).
  - Yes/No

### **Effective Use of EHRs and Registries**

- Our practice has a system to alert the provider about a patient's elevated blood pressure reading (i.e., EHR, manual alert).
  - Yes/No
- Our practice has a system in place to notify patients with uncontrolled hypertension (or not controlled to goal) that they are overdue for a blood pressure check.
  - Yes/No
- Practice has a system in place to identify patients who have had at least two readings of 140/90 or greater, but who have not been formally diagnosed with hypertension (i.e., undiagnosed hypertension).
  - Yes/No

### **Clinic Champion**

Is there a clinic champion other than yourself (e.g., nurse, physician, nurse practitioner, physician assistant) dedicated to hypertension control?

- Champion name
- Champion clinic title

### **Optional**

- What is one successful practice your clinic has had involving blood pressure control?

## Curriculum Outline

This curriculum is divided into five sections with accompanying PowerPoint slides, suggested activities, and a variety of resources for your staff.

### Making the Case

When introducing any change, it is important for leaders to be engaged and help “chart the course” for staff. Even then, it can be difficult to gain buy-in from staff and maintain communication and engagement. This section of the training outlines some of the data and information about undiagnosed hypertension and heart disease. Also in this section are a few strategies for introducing a quality improvement effort, like improving identification of undiagnosed hypertension using tools and concepts from a number of sources, including the Safety Net Medical Home Initiative.

### Suggested Activities:

- Situation, Background, Assessment, Recommendation (SBAR)
  - Have staff practice using this model of communication by splitting into pairs and discussing either an example you can create and provide or one they come up with together.
- Use the CDC Prevalence Calculator to estimate the percentage of your patients who have hypertension and compare with your current hypertension prevalence by diagnosis code.
  - If you have the data available, you can plug the numbers into the calculator.

### Handouts/Resources:

- American Medical Group Association. (2015). Hypertension Prevalence—AMGA Results Using Dx Code, Problem List, and Elevated Blood Pressure Readings. Retrieved from Million Hearts website: [https://millionhearts.hhs.gov/files/MH\\_SnapshotsProgress\\_HTNPrevAMGA.PDF](https://millionhearts.hhs.gov/files/MH_SnapshotsProgress_HTNPrevAMGA.PDF)
- CDC Hypertension FastStats: <https://www.cdc.gov/nchs/fastats/hypertension.htm>
- CDC Hypertension Infographic: <https://www.cdc.gov/bloodpressure/infographic.htm>
- Undiagnosed Hypertension Prevalence Calculator: <https://nccd.cdc.gov/MillionHearts/Estimator/>
- Safety Net Medical Home Implementation Guide: Engaged Leadership: <http://www.safetynetmedicalhome.org/sites/default/files/Implementation-Guide-Engaged-Leadership.pdf>
- SBAR or Situation, Background, Assessment, Recommendation: <https://www.ahrq.gov/teamstepps/instructor/fundamentals/module3/igcommunication.html#barprov>
- TeamSTEPPS Communication for Office-Based Care: <https://www.ahrq.gov/teamstepps/officebasedcare/classroom.html>
- Trends in Prevalence and Control of Hypertension According to the 2017 American College of Cardiology/American Heart Association (ACC/AHA) Guideline: <https://www.ahajournals.org/doi/10.1161/JAHA.118.008888>
- Wall HK, Hannan JA, Wright JS. Patients with Undiagnosed Hypertension: Hiding in Plain Sight. *JAMA*. 2014;312(19):1973–1974. doi:10.1001/jama.2014.15388

## Workflow (Re)design

This section of the training provides a high-level review of one quality improvement strategy—the Model for Improvement—and explains how to facilitate a workflow mapping exercise with staff. As recommended by AHRQ, this activity can be an effective way to display what you think is happening with a process, observe what is actually happening and make adjustments to get to your ideal process.

### Suggested Activity:

- Workflow Mapping Activity (see slide notes): Define a process where either a patient could receive a diagnosis of hypertension if you are based in a clinic or a patient might have their blood pressure measured and high readings noted for referral to PCP office if you are based in the community.
  - If you are training a team and participants represent different roles, have them each map out the workflow as they understand it from their roles. After everyone has had time to map the workflow, have folks walk around the room to observe the workflows created by their colleagues—are they consistent? Different? What do you notice?
  - Guide the group through a discussion using some of the questions provided in the slides or your own.
- Share the Care™ (UCSF Center for Excellence in Primary Care): If team-based care is not currently a strong model for your organization, you could use this activity instead and talk about hypertension identification and management tasks as examples of who does it now and who could do it if everyone was working to the top of their license.  
[https://cepc.ucsf.edu/sites/cepc.ucsf.edu/files/STC\\_Activity\\_14-0603.pdf](https://cepc.ucsf.edu/sites/cepc.ucsf.edu/files/STC_Activity_14-0603.pdf)

### Handouts/Resources:

- AMA STEPS Forward Health Coaching Module: <https://edhub.ama-assn.org/steps-forward/module/2702562>
- Creating Patient-centered Team-based Primary Care (AHRQ PCMH): <https://pcmh.ahrq.gov/page/creating-patient-centered-team-based-primary-care>
- Hypertension Protocol—Team Care with Medical Assistants. Agency for Healthcare Research and Quality, Rockville, MD. Content reviewed November 2018: <http://www.ahrq.gov/evidencenow/tools/hypertension-workflow.html>
- Implementing Team-based Care (AMA STEPS Forward): <https://edhub.ama-assn.org/steps-forward/module/2702513>
- Institute for Healthcare Improvement (IHI) Model for Improvement: <http://www.ihl.org/resources/Pages/HowtoImprove/default.aspx>
- Knox L, Brach C. Primary Care Practice Facilitation Curriculum (Module 10). AHRQ Publication No. 15-0060-EF, Rockville, MD: Agency for Healthcare Research and Quality; September 2015: <https://pcmh.ahrq.gov/sites/default/files/attachments/pcpf-module-10-workflow-mapping.pdf>
- Langlely GJ, Moen RD, Nolan KM, Nolan TW, Norman CL, Provost LP. (2009). The Improvement Guide: A practical approach to enhancing organizational performance. 2nd Ed. Jossey-Bass, San Francisco, CA. pp. 409-415.
- Module 5. Mapping and Redesigning Workflow. Agency for Healthcare Research and Quality, Rockville, MD. Content reviewed May 2013: <http://www.ahrq.gov/professionals/prevention-chronic-care/improve/system/pfhandbook/mod5.html>

## Establishing Identification Criteria

In this section of the training, we focus on risk factors as well as establishing criteria for identifying undiagnosed hypertension. There are example criteria your organization may want to use, or your providers may want to develop their own version. Whatever criteria you decide on, make sure your organization can create a list of patients who match those criteria and that responsible staff are trained and have protocols. Also consider how often these reports are pulled and determine your outreach and inreach workflows.

### Suggested Activity:

- Discussion with providers pulling in evidence
- Chart Scrubbing Example

### Handouts/Resources:

- AHA High Blood Pressure Toolkit: <http://aha-clinical-review.ascendeventmedia.com/books/aha-high-blood-pressure-toolkit/4/#zoom=z>
- Health Center Network New York Undiagnosed Hypertension Registry: [http://hcnny.org/HCNNY\\_UndxHTNRegistry.pdf](http://hcnny.org/HCNNY_UndxHTNRegistry.pdf)
- Improving Identification and Diagnosis of Hypertensive Patients Hiding in Plain Sight (HIPS) in Health Centers: <https://www.sciencedirect.com/science/article/pii/S1553725017302039?via%3Dihub>
- Kaiser Permanente National. (2018) Clinical Practice Guidelines: Adult Blood Pressure Clinician Guide. Retrieved from National Clinical Library: <https://cl.kp.org>
- Measure Up Pressure Down Provider Toolkit to Improve Hypertension Control: <http://www.measureuppressuredown.com/HCProf/Find/Toolkit/Plank6.pdf>

## Getting to a Diagnosis

Once you meet with your identified patients, it is important to make sure staff are practicing correct measurement technique to avoid inaccurate readings. Ensuring staff have regular training on appropriate blood pressure measurement and removing barriers is key.

### Suggested Activity:

- Appropriate Blood Pressure Measurement (Re)Training including observation and practice in real-time or use video like Measure Up, Pressure Down
- Discussion with providers about clinical guidelines

### Handouts/Resources:

- Measure Up, Pressure Down training video: <https://vimeo.com/92849743>
- Measurement of Blood Pressure in Humans: A Scientific Statement From the American Heart Association: <https://www.ahajournals.org/doi/10.1161/HYP.000000000000087>
- Staff Training: Appropriate BP Measurement
- Target: BP Technique Quick-Check
- Target: BP 7 Simple Steps to Get an Accurate Blood Pressure Reading (poster)
- Utah Million Hearts Hypertension Webinar: <https://healthinsight.org/bloodpressure#accurate-hypertension-measurement-and-diagnosis>

- AOBP versus manual measurement: “...BP measured with AOBP versus the auscultatory method is closer to awake out-of-office BP levels measured with ambulatory BP monitoring (ABPM).” <https://www.ahajournals.org/doi/pdf/10.1161/HYP.0000000000000087>

## Early Treatment and Support

This section offers considerations and examples for engaging patients early in their new diagnosis. Consider how you close the loop with patients, so they understand what it means to have hypertension and their options to help control it. There are a variety of tools available to support counseling and action planning for your organization to consider. Choose a few and work with your staff to determine which ones work best for them.

### Suggested Activity:

- Health Coaching Role Play
- Action Planning Role Play

### Handouts/Resources:

- Agenda Mapping on page 17 of this PDF: <https://www.communitycarenc.org/media/files/mi-guide.pdf>
  - Readiness Rulers on page 23 of the same PDF
- Compass Quality & Technical Assistance Center of New York: <https://compass.qtacny.org/>
- Community Nutrition Resources for Your Primary Care Setting: <https://healthinsight.org/tools-and-resources/send/287-nutrition-interventions-for-your-primary-care-setting-march-21-2017/923-nutrition-community-resources>
- Decisional Balance Worksheets: learn more at <https://www.ahrq.gov/professionals/prevention-chronic-care/improve/community/obesity-toolkit/obtoolkit-tool14.html>
  - For a 10-minute video on how to use this tool, and why this particular pattern of questions works so well, check out Dr. Bill Matulich's video demonstration: <http://www.youtube.com/watch?v=JLLoEBj3GDw>
- Difficult Conversations—using opioids as an example: <https://www.oregonpainguidance.org/resources/difficult-conversations/>
- Motivational Interviewing tools and techniques: <https://motivationalinterviewing.org/category/resource-tag/readiness-change>
- Self-Management Support. Agency for Healthcare Research and Quality, Rockville, MD. Content reviewed October 2018. <http://www.ahrq.gov/professionals/prevention-chronic-care/improve/self-mgmt/self/index.html>
- Tobacco Cessation Resources:
  - Smoke Free Oregon: <https://smokefreeoregon.com/resources/quit/i-want-to-quit/>
  - Free, quick online tobacco cessation counseling (with CME for limited time). **Access the training:** <https://tcrc.rapidlearner.com/3462253711>  
**Reach out to** Anona Gund with questions ([Anona.E.Gund@dhsosha.state.or.us](mailto:Anona.E.Gund@dhsosha.state.or.us) or 971-673-2832)
- University of California at San Francisco (UCSF) Center for Excellence in Primary Care. (2014). My Action Plan: [https://cepc.ucsf.edu/sites/cepc.ucsf.edu/files/Action\\_Plan\\_14-0602.pdf](https://cepc.ucsf.edu/sites/cepc.ucsf.edu/files/Action_Plan_14-0602.pdf)

## Action Planning

Action planning is the very important last step in your training. Now that you have shared this information with your staff, work with them to identify areas they want to improve. This section will offer some examples of how you can work with your team to develop concrete goals and next steps to make sure this important effort gets addressed.

### Suggested Activity:

- Group discussion
- Individual reflection

### Handouts/Resources:

- IHI Model for Improvement Clip 1: <https://www.youtube.com/watch?v=SCYghxtioIY>
- Undiagnosed Hypertension Training Action Plan Template

Materials for this Undiagnosed Hypertension Training course were developed by Comagine Health, formerly HealthInsight, with financial support from the Oregon Health Authority Health Promotion and Chronic Disease Prevention Section.