Measure Up Pressure Down®

American Medical Group Foundation

February 2015 Campaign Updates

AMGA
American Medical Group Association®

Campaign Funding Announcements

UNITED HEALTH FOUNDATION®

Grant will support:

- **Health fair** during National High Blood Pressure Education Month in Washington, DC
- **New online and print materials** to address health disparities & reach new audiences
- **Targeted media placements** during May
- **Patient and provider videos** for use by campaign participants, partners, and other supporters

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MU/PD National Day of Action

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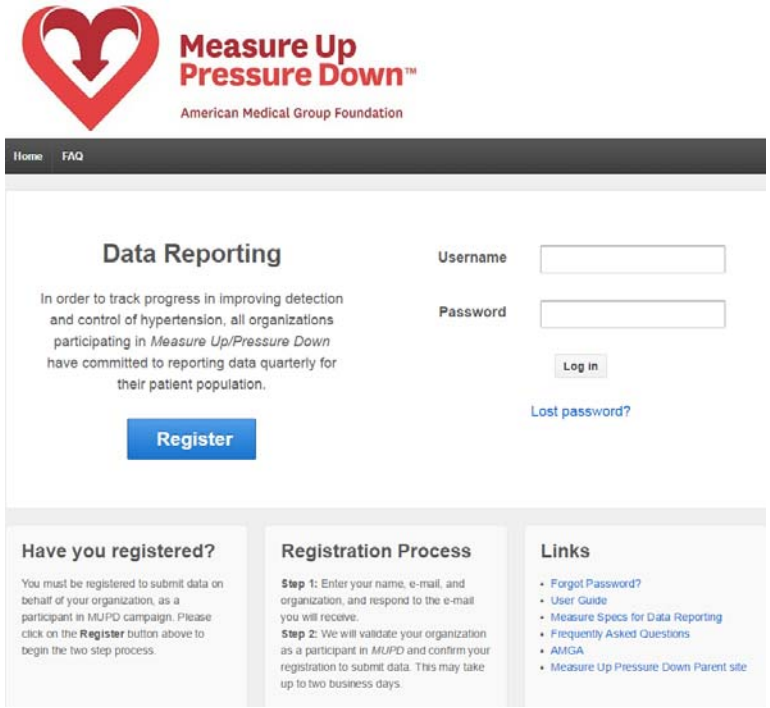
Q4 Data Reporting Available

- Q4 2014 data is currently accepted through the campaign portal
- To report your data, please visit: https://members.measureuppressuredown.com/



Updated Q4 2014 Reporting Deadline:
Friday, March 6

9th Annual Silent Auction

Interested in donating? Contact Sherry Greenwood at sgreenwood@amga.org

Measure Up Pressure Down®
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2015 Annual Conference

- **General Sessions**
  - The Future of Payment Models: An Exploration of Best Practices
  - Healthcare 2015 and Beyond: What Will Be the Keys to Success?
  - Why Employers Need Healthcare Reform to Succeed
  - The Art of Leadership
- **Peer-to-Peer Session Tracks:**
  - Population Health
  - Efficient Operations
  - Governance and Strategic Planning
  - Value-Based Care
  - Sustaining a Workforce

Patients with Undiagnosed Hypertension: Hiding in Plain Sight

Hilary K. Wall, MPH
Million Hearts® Science Lead
Centers for Disease Control and Prevention

AMGF Measure Up/Pressure Down® webinar
February 19, 2015

Overview

- Explore the problem of undiagnosed hypertensives in clinical settings
- Discuss what other health care systems have done to address the issue
- Review resources

Million Hearts®

Goal: Prevent one million heart attacks and strokes by 2017

- US Department of Health and Human Services initiative, co-led by:
  - Centers for Disease Control and Prevention (CDC)
  - Centers for Medicare & Medicaid Services (CMS)
- Partners across federal and state agencies and private organizations

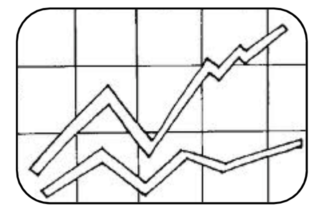
Key Components of Million Hearts®

Health Disparities

Keeping Us Healthy
Changing the environment

Excelling in the ABCS
Optimizing care

Focus on the ABCS



Health information technology

Innovations in care delivery

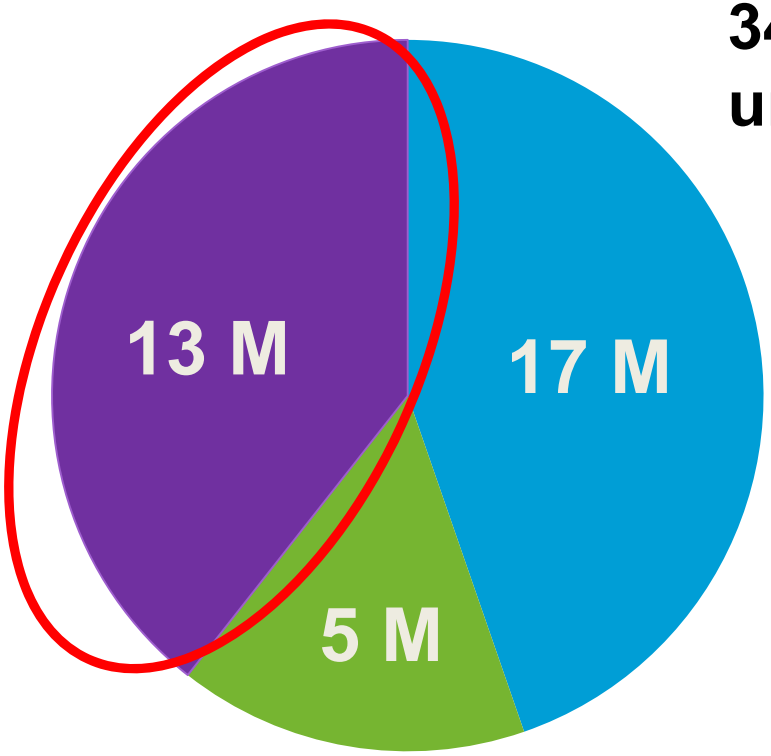
Hypertension (HTN) Prevalence

- 29% prevalence among US adults (2011-2012)
  - 33% among adults 40-59
  - 65% among adults 60+
  - 42% among non-Hispanic blacks
- ~71M adults have hypertension

Nwankwo T, Yoon SS, Burt V, Gu Q. Hypertension among adults in the United States: National Health and Nutrition Examination Survey, 2011–2012. NCHS data brief, no 133. Hyattsville, MD: National Center for Health Statistics. 2013.

Valderrama AL, Gillespie C, King SC, George MG, Hong Y, Gregg E. Vital signs: awareness and treatment of uncontrolled hypertension among adults — United States, 2003–2010. *MMWR*. 2012;61:703-709.

Uncontrolled HTN



34M US Adults with uncontrolled HTN

- Aware and treated
- Aware and untreated
- "Unaware"

Source: 2009-2010 National Health and Nutrition Examination Survey
Data may not add due to rounding.

"Unaware" – A Closer Look

- 81.8% have health insurance
- 82.5% report having a usual source of care
- 61.7% have received care two or more times in the past year

Wall HK, Hannan JA, Wright JS. Patients with Undiagnosed Hypertension: Hiding in Plain Sight. JAMA. 2014;312(19):1973-74.

Controlling High Blood Pressure Measures

Measure	Measure Definition	ICD-9-CM
NQF 0018 **PQRS 236** **CMS165v3** **ACO #28** **HTN-2**	The percentage of patients 18-85 years of age who had a **diagnosis** of HTN and whose BP was adequately controlled (<140/90) during the measurement year.	401.x (Essential HTN)

NQF – National Quality Forum; PQRS – CMS Physician Quality Reporting System; CMS165v3 – numbering convention for the CMS Medicare EHR Incentive Program; ACO #2 – numbering convention for the CMS Accountable Care Organizations; HTN-2 – numbering convention for the PQRS Group Practice Reporting Option

Why is finding undiagnosed hypertensives important?

- 100 adults with ICD-9-CM 401
- 70 of those adults with BP <140/90 **(70/100)*100 = 70%**

  → 70% BP control

What if a practice has 50 patients with multiple BP readings ≥140/90 but do not have the official 401.x diagnosis?

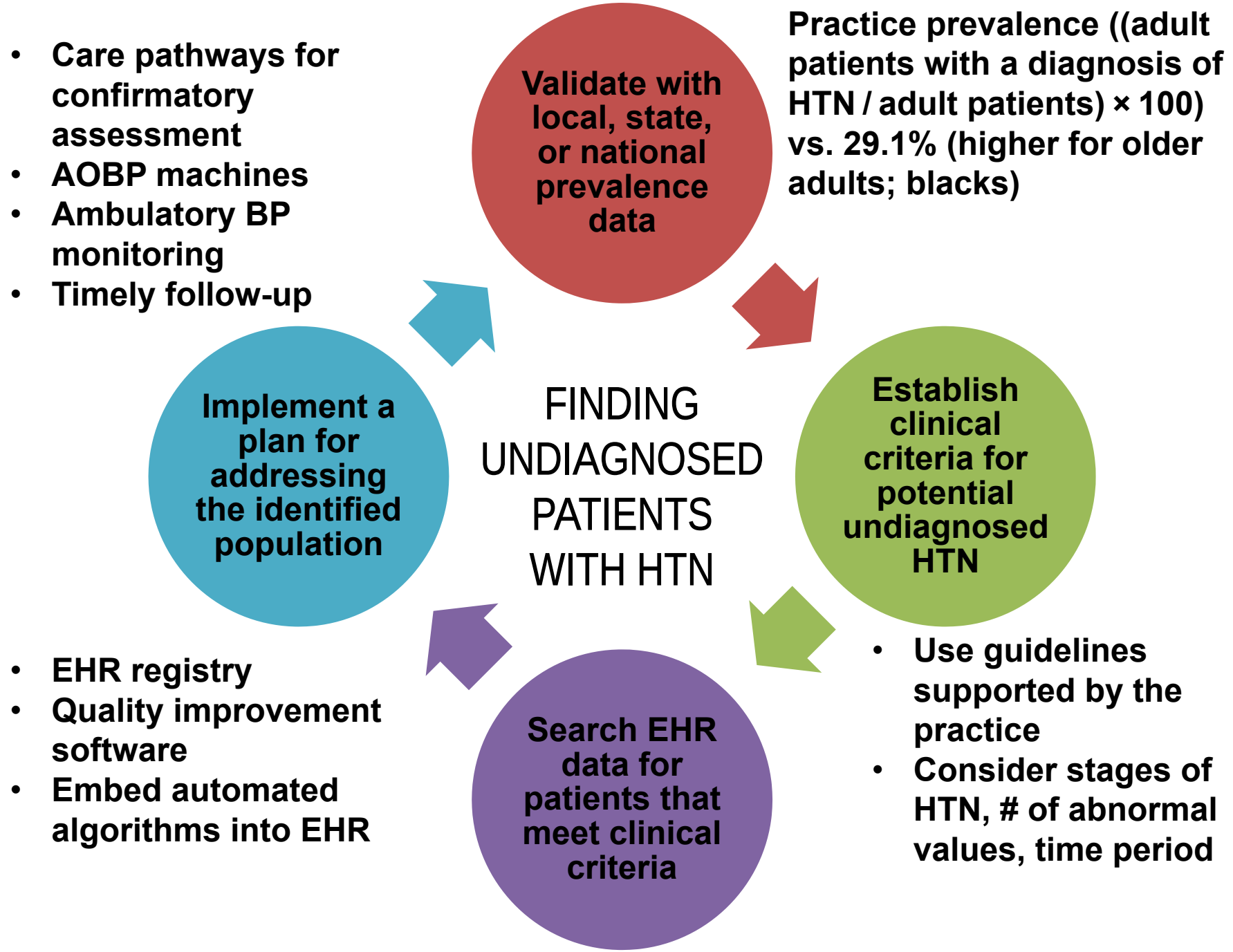
- 100 + 50 adults with possible hypertension
- 70 with BP <140/90

  → 47% BP control

(70/150)*100 = 47%

"Patients with Undiagnosed HTN: Hiding in Plain Sight"

- Wall HK, Hannan JA, Wright JS. Patients with Undiagnosed Hypertension: Hiding in Plain Sight. JAMA. 2014;312(19):1973-74.
  1. NorthShore University HealthSystem, Evanston, IL
  2. Geisinger Health, Pennsylvania
  3. Palo Alto Medical Foundation in Palo Alto, CA
  4. 11 primary care centers in West Virginia


Validate with local, state, or national prevalence data
Practice prevalence ((adult patients with a diagnosis of HTN / adult patients) × 100) vs. 29.1% (higher for older adults; blacks)
Establish clinical criteria for potential undiagnosed HTN
Use guidelines supported by the practice
Consider stages of HTN, # of abnormal values, time period
Search EHR data for patients that meet clinical criteria
EHR registry
Quality improvement software
Embed automated algorithms into EHR
Implement a plan for addressing the identified population
Care pathways for confirmatory assessment
AOBP machines
Ambulatory BP monitoring
Timely follow-up
FINDING UNDIAGNOSED PATIENTS WITH HTN

Ambulatory BP Monitoring – USPSTF

Draft: Recommendation Summary

Population	Recommendation	Grade (What's This?)
Adults age 18 years and older	The USPSTF recommends screening for high blood pressure in adults age 18 years and older. Ambulatory blood pressure monitoring is recommended to confirm high blood pressure before the diagnosis of hypertension, except in cases for which immediate initiation of therapy is necessary.	A

- Draft recommendations; public comment period closed 1/26/15
- If made final, ABPM will be covered by most plans under ACA

http://www.uspreventiveservicestaskforce.org/Page/Document/RecommendationStatementDraft/hypertension-in-adults-screening-and-home-monitoring

U.S. Preventive Services TASK FORCE

NorthShore University HealthSystem

Undiagnosed HTN Project

- Embedded several algorithms into their EHR to identify patients at risk for undiagnosed HTN
- Used an Automated Office Blood Pressure (AOBP) machine to verify HTN status
- Verified undiagnosed hypertension, NOT undocumented hypertension

Rakotz MK, Ewigman BG, Sarav M, et al. A technology-based quality innovation to identify undiagnosed hypertension among active primary care patients. *Ann Fam Med*. 2014;12(4):352-358.

Geisinger Health

- Used data from 400K+ adult outpatients to ID patients with HTN
  1. The problem list
  2. ICD-9-CM diagnosis
  3. Antihypertensive medications Rx
  4. Two elevated BP values based on JNC-7 criteria
     - 2 systolic measures ≥140 or 2 diastolic measures ≥90
- Found 106K patients with one or more criteria
- 30% based solely on #4 (i.e. undiagnosed)
- HTN Prevalence – ~18.6% vs ~26.5%

Shah NR. *Identifying hypertension in electronic health records: a comparison of various approaches.* Paper presented at: AHRQ Comparative Effectiveness Research Methods Symposium; June 2009; Rockville, MD. Of Various Approaches. AHRQ Comparative Effectiveness Research Methods Symposium, Rockville, MD, June 2009.

Palo Alto Medical Foundation

- 250,000 adult patients (active 2006 - 2008)
- For patients with ≥ 2 BP readings of 140/90 or higher, an antihypertensive medication prescription, or both, 37.1% did not have an ICD-9-CM code
- HTN prevalence went from 18.0% (ICD code only) to 28.7%
- Much more likely to be on an antihypertensive with a HTN diagnosis
  - 92.6% diagnosed vs 15.8% undiagnosed, P < .001

Banerjee D, Chung S, Wong EC, Wang EJ, Stafford RS, Palaniappan LP. Underdiagnosis of hypertension using electronic health records. *Am J Hypertens*. 2012;25(1):97-102.

University of West Virginia

- 11 primary care centers in West Virginia
- Chronic Disease Electronic Management System (CDEMS)
- Query found 14,893 patients with:
  - ICD-9-CM code 401
  - 2 or more blood pressure readings of 140/90 or higher (n = 1076)
  - A diagnosis of essential hypertension based on free-text entries (n = 898)
- 13.3% potentially hypertensive patients overall
  - Varied across the sites from 3.6% to 47.9%

Baus A, Hendryx M, Pollard C. Identifying patients with hypertension: a case for auditing electronic health record data [published online April 1, 2012]. *Perspect Health Inf Manag*. 2012;9:1e.

University of Wisconsin

- 14,970 patients (2008-2011)
- Clinical criteria:
  - Excluded patients with a diagnosis code or current antihypertensive Rx
  - ≥ 3 outpatient BPs from 3 separate dates, at least 30 days apart, within a 2-year period (≥140 or ≥ 90)
  - ≥ 2 elevated BPs (≥ 160 or ≥ 100), at least 30 days apart, but within a 2-year period
- After 4 years, 18–31-year-olds had a 33% slower rate of receiving a diagnosis compared to those 60+

Johnson HM, Thorpe CT,. Bartels CM, Schumacher JR, Palta M, Pandhi N, Sheehy AM, Smith MA. Undiagnosed hypertension among young adults with regular primary care use. J Hypertens . 2014, 32:65–74

Resources

- **Hypertension Prevalence Estimator –** For practices/health systems to use to estimate their expected hypertension prevalence among their patient population
  - Spring 2015
- **Whiteboard animation** – a creative depiction of the hiding in plain sight phenomenon and what clinical settings can do
  - Summer 2015
- Disparities analyses

Questions?

- Hilary Wall – hwall@cdc.gov

Eliminating Undiagnosed Hypertension

Michael Rakotz, MD
Director of Chronic Disease Prevention, Improving Health Outcomes
American Medical Association
Assistant Clinical Professor, Department of Family and Community Medicine
Feinberg School of Medicine, Northwestern University

AMA
AMERICAN MEDICAL ASSOCIATION

OBJECTIVES

- Review lessons learned from implementation of a long term continuous quality improvement project to detect patients with undiagnosed hypertension

NorthShore University HealthSystem Undiagnosed Hypertension Project 2010 - present

- Large multispecialty medical group and 4 hospital system
- Chicago Metropolitan area
- 22 primary care centers
- In 2010 there were > 800 physicians,
  (roughly 200 of whom were primary care physicians)

Understanding the Problem In the System

“Look back” criteria 2006-2010 for adults 18-80

- Systolic blood pressure ≥140 or diastolic blood pressure ≥90 on 3 or more visits in all ambulatory practice settings across the system
- No diagnosis in the chart – Problem list, Past Medical Hx, Encounter Diagnosis
- Not taking blood pressure medication

Results of Initial Query

- > 6,000 patients met criteria for having hypertension, but were undiagnosed and untreated
- > 3,000 additional patients were diagnosed with hypertension but were untreated

From the time of 3rd occurrence of elevated blood pressure, 17,000 missed opportunities during office visits to make a diagnosis of hypertension

Implementing A Plan

Design a quality improvement project that leads to

- Better screening to identify patients at-risk for undiagnosed hypertension
- Increase accuracy/reliability of blood pressure measurements to confirm the diagnosis
- Better recognition of at-risk patients at point of care
- Change culture around use of teamwork, clinical decision support tools and quality improvement (administrators, staff, clinicians)

Keys to success: “Buy In” From All Team Members

- Identify physician champions
- Identify clinical/administrative champions
- Create and use a project manual
- Train and encourage all staff to recognize and communicate elevated BPs
- Automate office protocols

NorthShore Algorithms to Identify Patients At-risk for Undiagnosed Hypertension

Algorithm	Number Identified
1. All patients whose 3 most recent encounters yielded a mean SBP >140 mm Hg or a mean DBP >90 mm. Encounters used were within 12 months before their most recent encounter	720
2. All patients who had 3 encounters with a SBP >140 or DBP >90 mm Hg within 12 months before their most recent encounter	968
3. Patients who had a single encounter with a SBP >180 or a DBP >100 mm Hg within 12 months before their most recent encounter	527
Unique patients identified by algorithms 1, 2, or 3	1,586

Recall of Patients: What Works

Any patient satisfying any algorithm

- Placed on a notification list to come in for additional blood pressure measurements

Primary care physicians are given lists

- Review list for accuracy and review chart to determine if outreach is appropriate

Patient outreach (telephone calls, letters)

- Staff notify patients they may be at-risk for hypertension, and schedule follow-up appointment

Standardized Visit to Confirm Diagnosis

For follow up visits:

1. Automated Office BP (AOBP)

- Takes multiple BPs with patient alone in the room (correlates well with mean daytime ambulatory blood pressure monitoring (ABPM))

2. Self Measured BP (SMBP) - Usually performed at home

- Protocols for SMBP correlate very well with daytime mean ABPM

3. Multiple high quality office BP measurements

- Properly sized cuff, position and rest required (protocol)

***24 Hour Ambulatory Blood Pressure Monitoring is the most accurate option, if available**

Standardized Visit to Confirm Diagnosis: Why AOBP?

- Traditional office blood pressures are unreliable and fraught with error
- Traditional office blood pressures do not correlate well with daytime mean ambulatory blood pressures (outcomes)
- “White coat” effect is mitigated by AOBP machines
- More accurate/reliable blood pressure measurements may reduce clinician hesitation (reduce clinical inertia)

Vidt DG, et al. Cleve Clin J Med. 2010;77(10):683-8

Standardized Visit to Confirm Diagnosis: SMBP

Why use Self-Measured Blood Pressure?

- Out of office blood pressure protocols using SMBP correlate better with predicating outcomes than office BPs
- SMBP protocols are recommended as an option to confirm suspected hypertension in most hypertension guidelines
- Most SMPB Protocols involve using a validated automated home machine to take two BPs morning and evening (one minute apart) for at least 4 days, and averaging all of the numbers
- Use of these devices with feedback to clinical team has been shown to improve BP control and increase patient adherence to treatment

Standardized Visit to Confirm Diagnosis: Office BP

If you Use Traditional Office BP Measurement to Obtain a Confirmatory Measurement:

- Use a validated, automated device if possible
- Use the correct cuff size on a bare arm
- Ensure patient is positioned correctly*
- Ensure patient has emptied their bladder
- Ensure patient has rested quietly for at least five minutes
- Obtain the average of at least three BP measurements (to increase diagnostic accuracy)

Evidence-based tips for correct positioning

Ensure patient is seated comfortably with:

- Back supported
- Arm supported
- Cuff at heart level
- Legs uncrossed
- Feet flat on the ground or supported by a foot stool
- No one talking during measurement

For Patients Who Do Not Return for Confirmatory Visit…

- Create electronic “Best Practice Advisory” alerts to fire at the point of care for patients who satisfy any of the algorithms

- Clinical decision support alerts can be used during office visits for both clinic staff and providers to prompt obtaining validation BP testing (regardless of the reason of for the visit)

“What If We Don’t Have An EDW or Ability to Query or create Best Practice Advisories in the EHR?”

Pre-Visit Summaries can be used as an alternative

- Staff review schedules 1 day prior to visit, alerting clinical staff at morning huddles or when at-risk patients arrive
- Staff use a BP measurement protocol to confirm if the patient does or does not meet criteria for HTN

Does it work?

2.5 years later NorthShore maintains a diagnosis rate of 97-98% for patients suspected of having hypertension (by algorithm criteria) who have a diagnosis in their EMR.

Only 40 % of the patients we recalled had HTN on validation BPs with AOBP. Why?

- At least 15-20% of patients with elevated office BPs have white coat syndrome
- The only way to eliminate this is with AOBP or out of office measurement using ABPM or SMPB
- Many patients identified as at-risk for undiagnosed HTN do NOT have true HTN (this makes sense given the largely inaccurate data from manual blood pressures that fill EHRs and EDWs, and white coat effect)
- One way to decrease this problem is to train all clinical staff to **MEASURING BP ACCURATELY EVERY TIME**

Questions?

www.ama-assn.org/go/improveoutcomes