4th Annual Hypertension Summit 2019

Welcome!

North Dakota Be Legendary. | Health Altru AMA Health System

American Heart Association | American Stroke Association

Today's Agenda

12:30 – 1:30	Million Hearts® Evidence-Based Strategies and Tools for Hypertension Control	Hilary Wall, MPH
1:30 – 2:30	Self-measured Blood Pressure Monitoring: A Way Towards Better BP Control	Laken Barkowski, RN
2:30 – 3:00	Target: BP and Check. Change. Control. Cholesterol – American Heart Association	Lori Hall, MA
3:00 – 3:15	Break (Snacks provided by American Heart Association)	
3:15 – 4:00	Cardiac Ready Communities - Community Spotlight	Jenny Iverson
4:00 – 5:00	Engaging Patients through Lifestyle Modification	Jennifer Haugen, RD, CSSD, LD Chad Spradlin, MBA, PES
5:00 – 5:30	Evaluation and Wrap Up	

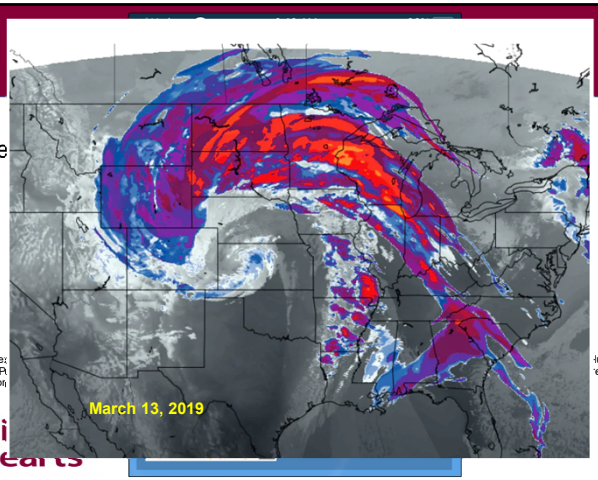
Million Hearts® Evidence-Based Strategies and Tools for Hypertension Control

Hilary K. Wall, MPH
Senior Health Scientist/Million Hearts Science Lead
Centers for Disease Control and Prevention

Million Hearts®

ND 2019 Hypertension Summit
March 21, 2019

- None



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Million Hearts®

Overview

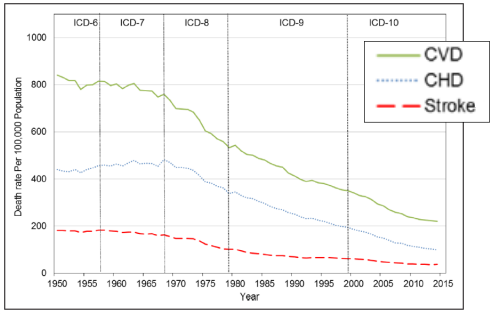
- CVD burden
- Million Hearts® 2022
- Hypertension control resources
- Finding undiagnosed hypertensives
- Other resources of interest

Heart Disease and Stroke Burden

- More than **1.5 million** people in the U.S. suffer from heart attacks and strokes per year[1]
- More than **800,000** deaths per year from cardiovascular disease (CVD)[1]
- CVD costs the U.S. **hundreds of billions** of dollars per year[1]
- CVD is the greatest contributor to racial disparities in life expectancy[2]

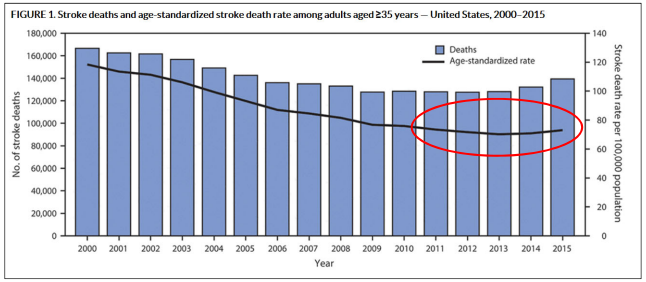
1. Benjamin EJ, Blaha MJ, Chiuve SE, Cushman M, Das SR, Deo R, et al. Heart Disease and Stroke Statistics-2017 Update: A Report From the American Heart Association. Circulation 2017;135(10):e146–603.
2. Kochanek KD, Arias E, Anderson RN. How did cause of death contribute to racial differences in life expectancy in the United States in 2010? NCHS data brief, no 125. Hyattsville, MD: National Center for Health Statistics. 2013

Heart Disease and Stroke Trends 1950-2015



Mensah GA, Wei GS, Sorlie PD, et al. Decline in Cardiovascular Mortality – Possible Causes and Implications. Circulation Research. 2017;120:366-380.

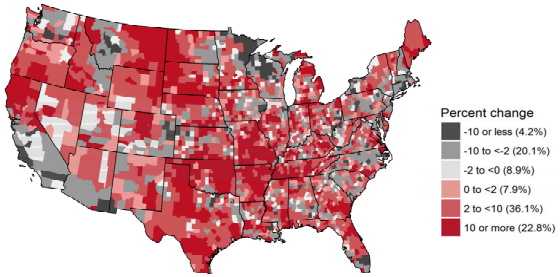
Recent Patterns in Stroke Deaths



Yang Q, et al. Vital Signs: Recent Trends in Stroke Death Rates — United States, 2000–2015. *Morb Mortal Wkly Rep.* 2017;66:933–939.

Alarming Mortality Rate Changes

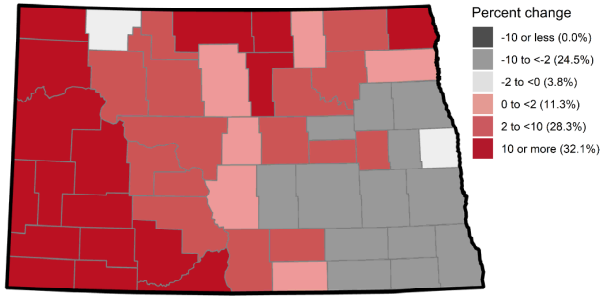
County-level percent change in heart disease death rates, United States, Ages 35-64, 2010-2015



Vaughan AS, Patel SA, Kramer MR, Schieb L, Casper M. Relationships of macro-level conditions with cross-sectional and temporal trends in county-level premature heart disease death rates, 2010-2015. Journal of Epidemiology and Community Health. 2019. Under review.

ND Mortality Rate Changes

County-level percent change in heart disease death rates, North Dakota, Ages 35-64, 2010-2015



Million Hearts® 2022

- **Aim:** Prevent 1 million—or more—heart attacks and strokes in the next 5 years
- National 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

Million Hearts® 2022 *Priorities*

Keeping People Healthy
Reduce Sodium Intake
Decrease Tobacco Use
Decrease Physical Inactivity

Optimizing Care
Improve ABCS*
Increase Use of Cardiac Rehab
Engage Patients in Heart-healthy Behaviors

Improving Outcomes for Priority Populations
Blacks/African Americans with hypertension
35- to 64-year-olds
People who have had a heart attack or stroke
People with mental illness or substance use disorders who use tobacco

*Aspirin when appropriate, Blood pressure control, Cholesterol management, Smoking cessation

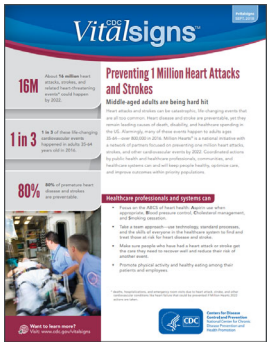
Clinical Quality Measures

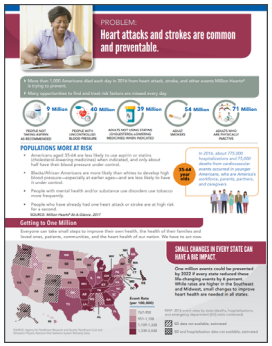
Domain	NQF #	CMS #
Aspirin when appropriate	0068	164
Blood pressure control	0018	165
Cholesterol management (statin use)	n/a	347
Smoking cessation (assessment and treatment)	0028	138

- Included in CMS Quality Payment Program/Merit-based Incentive Payment System (QPP/MIPS)
  - Cardiology
  - Internal Medicine
  - General/Family Medicine

https://millionhearts.hhs.gov/data-reports/cqm/measures.html

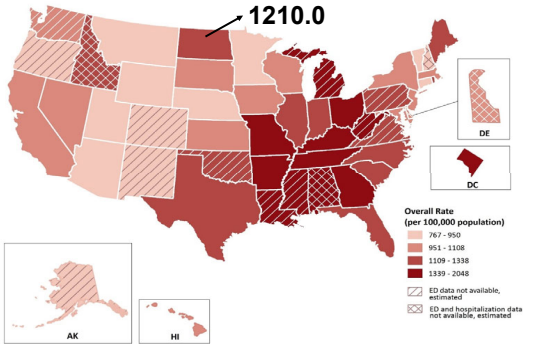
MH 2022 Vital Signs





https://www.cdc.gov/vitalsigns/pdf/vs-0918-million-hearts-H.pdf

Million Hearts® -preventable event rates among adults aged ≥18 years by state, 2016



Data Sources: Healthcare Cost and Utilization Project data (2016), National Vital Statistics mortality data (2016);
Ritchey MD, Wall HK, Owens PL, Wright JS. Vital Signs: State-level Variation in Non-fatal and Fatal Heart Disease and Stroke Events Targeted for Prevention by Million Hearts 2022. MMWR. 2018;67(35):974-982.

Million Hearts® State Profile: North Dakota

2016 Values*

Treat-and-Release ED Visit Rate	Acute Hospitalizations				Mortality Rate
	Rate	Cost, In US$ (2016) billions	Mean cost (US$) per event	Per-capita costs (US$)	
162.8	912.4	0.09	18,224	157	134.8

Estimated 2017–2021 Values Without Intervention

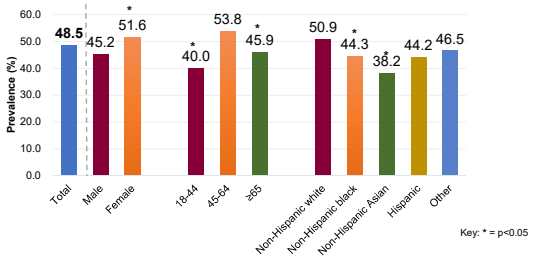
Treat-and-Release ED Visits (thousands)	Acute Hospitalizations (thousands)	Deaths (thousands)	Total Mutually Exclusive Events (thousands)	Expected Hospitalization Costs, in US$ (2016) billions
5.4	30.2	4.5	40.1	0.5

*Rates are per 100000 population; standardized, by age, to the 2012 US Census population
ED: emergency department

Ritchey MD, Wall HK, Owens PL, Wright JS. Vital Signs: State-level Variation in Non-fatal and Fatal Heart Disease and Stroke Events Targeted for Prevention by Million Hearts 2022. MMWR. 2018;67(35):974-982.

Blood Pressure Control

Blood pressure control among adults aged ≥18 years with hypertension – NHANES 2015-2016



Wall HK, Ritchey MD, Gillespie C, et al. Vital Signs: Prevalence of Key Cardiovascular Disease Risk Factors for Million Hearts 2022 — 2011–2016. MMWR. 2018;67(35):983-991.

Missed Opportunities

9.0 M not taking aspirin as recommended
40.1 M with uncontrolled HBP
39.1 M not using statins when indicated
54.1 M combustible tobacco users
\+ **70.9 M** who are physically inactive

213.1 M missed opportunities

55% of these opportunities are in adults aged 35–64 years

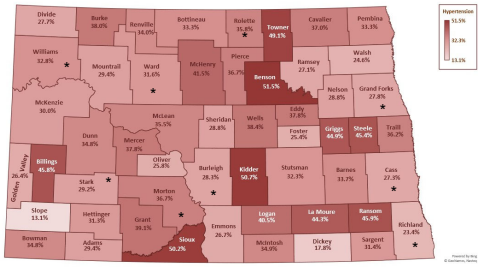
Wall HK, Ritchey MD, Gillespie C, et al. Vital Signs: Prevalence of Key Cardiovascular Disease Risk Factors for Million Hearts 2022 — 2011–2016. MMWR. 2018;67(35):983-991.

ND Self-reported HTN Awareness

Percentage of People Reporting High Blood Pressure in North Dakota

ND prevalence = 28.9%; 65.2% on meds - BRFSS 2015

U.S. prevalence = 29.8% - BRFSS 2015



Source: 2017 North Dakota Behavioral Risk Factor Surveillance System (BRFSS)
Fang J, Gillespie C, Ayala C, Loustalot F. Prevalence of Self-Reported Hypertension and Antihypertensive Medication Use Among Adults Aged ≥18 Years — United States, 2011–2015. MMWR Morb Mortal Wkly Rep 2018;67:219–224.

CDC Hypertension Control Champions

- Annual recognition program – https://millionhearts.hhs.gov/partners-progress/champions/list.html
- ≥ 70% on BP control
- 101 champions from 2012-2018
  - 34 states and D.C.
  - Treating 15 million US adults with HTN aged 18-85
- 2015 – Altru Health System, Grand Forks, North Dakota
- 2017 – Sanford Health Clinics, Bismarck, North Dakota

2018 Congratulations Champions!

Hypertension Control Tools

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Hypertension Control Change Package

http://millionhearts.hhs.gov/Docs/HTN_Change_Package.pdf

Change Package Format

Change Concept
- General notions that are useful in the development of more specific ideas for changes that lead to improvement

Change Idea
- Actionable, specific ideas for changing a process

Tools & Resources
- Can be adapted by or adopted in a health care setting

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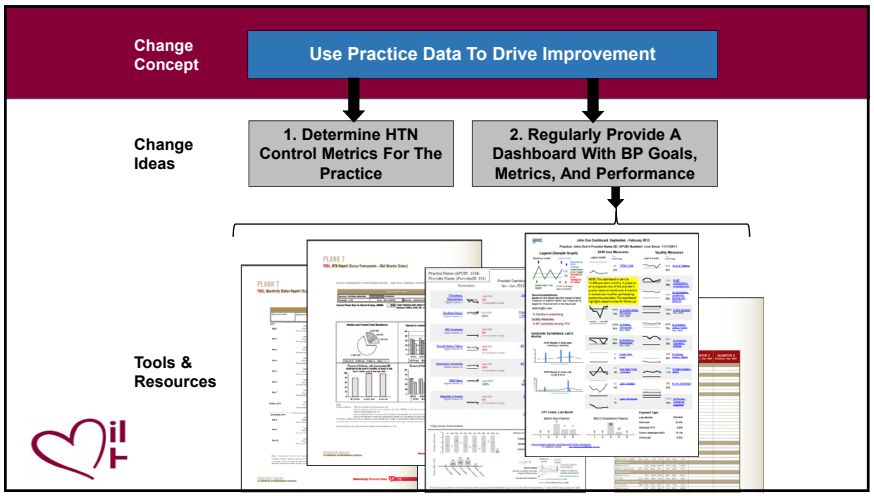
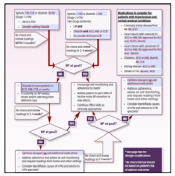


Standardized Treatment Protocols

- http://millionhearts.hhs.gov/resources/protocols.html
  - Hypertension control
  - Cholesterol management
  - Tobacco assessment and treatment
- Key components, implementation guidance
- Evidence-based protocols examples
- Customizable template – HTN, Tob
- Help address disparate populations



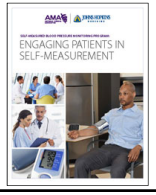
Self-Measured Blood Pressure Monitoring (SMBP)

- Strong evidence for SMBP plus additional clinical support
  - 1:1 counseling
  - Group classes
  - Web-based or telephonic support
- Good evidence for SMBP for confirming HTN diagnosis
  - USPSTF HTN screening recs
  - 2017 ACC/AHA HTN guideline

- Patient-Clinician Feedback Loop

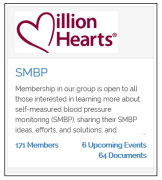
SMBP Resources

- Guidance for clinicians on:
  - Training patients to use monitors
  - Checking home machines for accuracy
  - Suggested protocol for home monitoring
  - Cuff loaner program
- Training videos
- https://millionhearts.hhs.gov/tools-protocols/smbp.html



Million Hearts® SMBP Forum

- **Meets quarterly** to facilitate the exchange of SMBP best practices, tools, and resources
- **Join the SMBP Forum at** http://bit.ly/SMBPForum
- **Access materials via the SMBP Healthcare Community**
  - Go to www.healthcarecommunities.org and log in to your account (free to register)
  - Search for 'SMBP' under the 'Available Communities' tab
  - Click "Join Community"
- **Questions:** MillionHeartsSMBP@nachc.org



Finding Undiagnosed Hypertensives

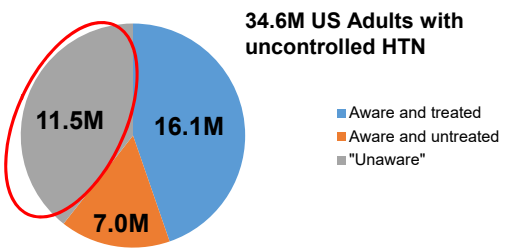
"Hiding in Plain Sight"
(HIPS)

Hypertension Prevalence (JNC 7)

- 32.1% prevalence among US adults
  - 40.5% among adults 45-64
  - 65.9% among adults 65+
  - 40.1% among non-Hispanic blacks
- 78M adults have hypertension

Source: 2015-2015 National Health and Nutrition Examination Survey

Uncontrolled HTN (JNC 7)



Source: 2013-2014 National Health and Nutrition Examination Survey

"Unaware" – A Closer Look (JNC 7)

- 80.9% have health insurance
- 82.7% report having a usual source of care
- 63.3% have received care two or more times in the past year

Source: 2011-2014 National Health and Nutrition Examination Survey

Controlling High Blood Pressure Measures

Measure	Measure Definition	ICD-10-CM
NQF 0018 CMS165	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.	I10 (Essential HTN)

NQF – National Quality Forum; CMS165 – numbering convention for the CMS e-specified measures

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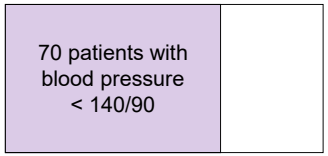
Assessing Hypertension Control

100 patients with diagnosed hypertension



(70/100)*100 = 70% control

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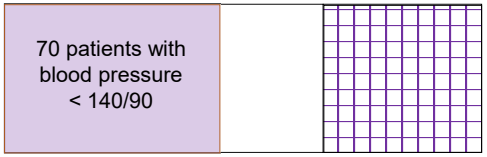
150 patients with hypertension?

100 patients with diagnosed hypertension + **50** patients with abnormal BP values



(70/150)*100 = 47% control

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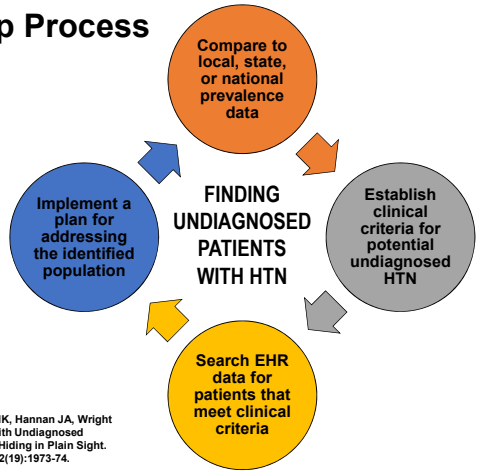
4-Step Process



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

Are patients with hypertension being missed?

- Calculate practice prevalence

$$\frac{\text{\# of adult patients with a diagnosis of HTN (e.g. ICD-10 I10)}}{\text{\# of adult patients (18-85, not pregnant, no ESRD)}} \times 100$$

- Compare to 32.1%

  OR

- Use the Million Hearts Hypertension Prevalence Estimator Tool
  - https://nccd.cdc.gov/MillionHearts/Estimator/

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Compare to local, state, or national prevalence data

Clinical Criteria for Undiagnosed Hypertension

- Use guidelines supported by the practice
- Consider:
  - Stages of hypertension
  - # of abnormal values
  - Time period
- Adults 18-85
- Standard exclusion criteria

  →Patients who have died

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Establish clinical criteria for potential undiagnosed HTN

Use Electronic Health Record Data

- Population health management software solutions
- EHR registry functionality
- Embed automated algorithms into EHR
  - Requires informatics staff
- Customized reports from EHR vendor

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Search EHR data for patients that meet clinical criteria

Plan for Confirmation and Treatment

- 24-hour Ambulatory BP monitoring (ABPM)
- Self-measured BP monitoring (SMBP)
- Automated Office BP machines (AOBP)
- Confirmatory office measures

USPSTF recommendation for hypertension screening https://www.uspreventiveservicestaskforce.org/Page/Document/RecommendationStatementFinal/high-blood-pressure-in-adults-screening

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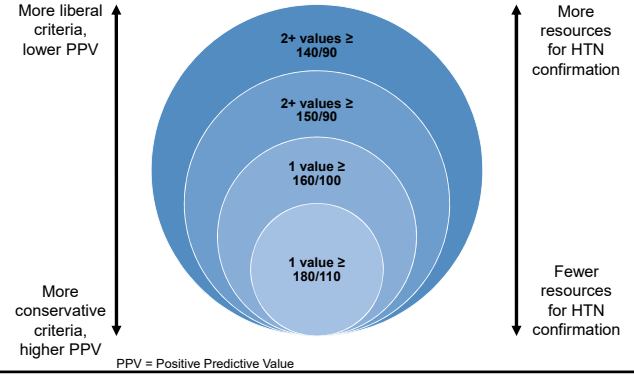
Implement a plan for addressing the identified population

What to do with patients confirmed to not have hypertension?

- ICD-10-CM – R03.0 – Elevated blood-pressure reading, without diagnosis of hypertension
  - "This category is to be used to record an episode of elevated blood pressure in a patient in whom no formal diagnosis of hypertension has been made, or as an isolated incidental finding."
  - http://www.icd10data.com/ICD10CM/Codes/R00-R99/R00-R09/R03-/R03.0

Implement a plan for addressing the identified population

Clinical Criteria – Sample Stepped Approach



PPV = Positive Predictive Value

Data Exploration Case Studies

NorthShore Algorithms

Table 1. Number of At-Risk Patients Identified by Each Hypertension Screening Algorithm

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

SBP = systolic blood pressure; DBP = diastolic blood pressure.

Note: All data were obtained from outpatient encounters with a primary care physician or specialist.

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.

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

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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%

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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+

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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

National Association of Community Health Centers

- 100,000K patients from 10 FQHCs from 4 Health Center Controlled Networks – CA, KY, MO
- Clinical criteria:
  - ≥ 2 elevated BP (≥140 SBP or ≥ 90 DBP), past 12 months
  - 1 Stage 2 (≥ 160 SBP or ≥ 100 DBP), past 12 months
- Developed a change package of information on next steps and methods for scaling up
- http://mylearning.nachc.com/diweb/fs/file/id/229350

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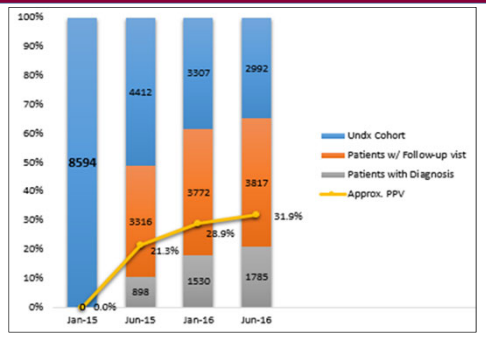
Undiagnosed Hypertension Cohort

65.2% had a follow up visit; of these, 31.9% were dx w/HTN



Meador M, Osheroff JA, Reisler B. Improving Identification and Diagnosis of Hypertensive Patients Hiding in Plain Sight (HIPS) in Health Centers. Jt Comm J Qual Patient Saf. 2018 Mar;44(3):117-129.

Pearls from the Literature

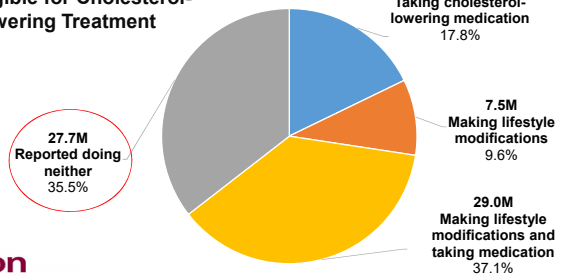
- No one algorithm is a silver bullet
- Starting conservatively can generate numerous patients resulting in a high positive predictive value
- Undiagnosed vs. undocumented hypertension
- Much more likely to be on an antihypertensive with a HTN diagnosis
- HIPS issue can vary greatly across sites
- Could be a disparities issue, e.g. young adults

Potential Challenges

- Lack of interest or buy-in from clinic staff
  - Face validity check – HTN prevalence or patients ≥180/110
- Inadequate EHR functionality
  - Population health management software solutions
  - http://www.phii.org/sites/www.phii.org/files/resource/files/Population%20Health%20Management%20Software%20Report.pdf
- HTN control rates will drop when potentially undiagnosed patients are identified

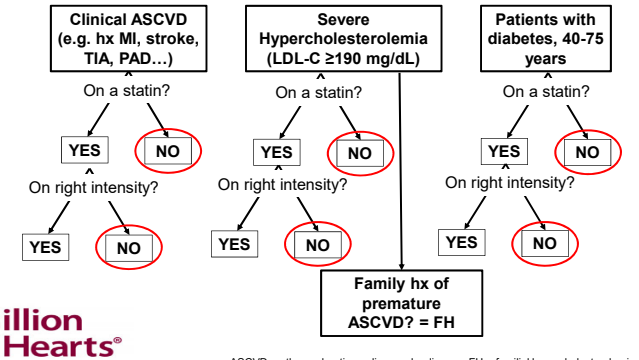
Data Exploration for Other Topics

78.1 M Adults Aged ≥21 Years Who Are On Or Eligible for Cholesterol-Lowering Treatment



Source: Mercado C, DeSimone A, Odom E, Gillespie C, Ayala C, Loustalot F; Centers for Disease Control and Prevention (CDC). Prevalence of Cholesterol Treatment Eligibility and Medication Use Among Adults — United States, 2005–2012. MMWR Morb Mortal Wkly Rep. 2015; 64(47):1305-11

HIPS – Cholesterol Management



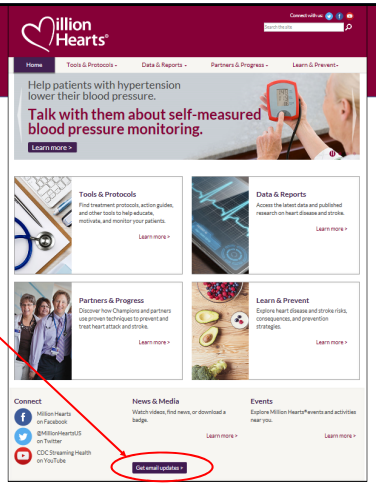
ASCVD = atherosclerotic cardiovascular disease; FH = familial hypercholesterolemia

Other Resources of Interest

Additional Resources

- Physical Inactivity – https://millionhearts.hhs.gov/tools-protocols/tools/physical-activity.html
- Cholesterol Management – https://millionhearts.hhs.gov/tools-protocols/tools/cholesterol-management.html
- Tobacco Use – https://millionhearts.hhs.gov/tools-protocols/tools/tobacco-use.html
- Particle Pollution – https://millionhearts.hhs.gov/tools-protocols/tools/particle-pollution.html
- Cardiac Rehabilitation – https://millionhearts.hhs.gov/tools-protocols/tools/cardiac-rehabilitation.html

- Subscribe to bimonthly e-Update from the Million Hearts® homepage



Questions?

Hilary Wall – hwall@cdc.gov

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Self-measured Blood Pressure (SMBP) Monitoring: A Way Towards Better BP Control

Laken Barkowski, RN, BSN, MSHS
Senior Program Manager of Health Systems Improvement,
American Medical Association

March 21, 2019

TARGET:BP | American Heart Association. AMA

Disclosures

- None

Objectives

- Describe the M.A.P. BP Improvement Program
- Explain the importance of measuring blood pressure (BP) accurately and the evidence for using SMBP
- Describe approaches to implementing a SMBP program
- Propose tools and resources care teams can use for effective implementation and use of SMBP

M.A.P. BP Improvement Program

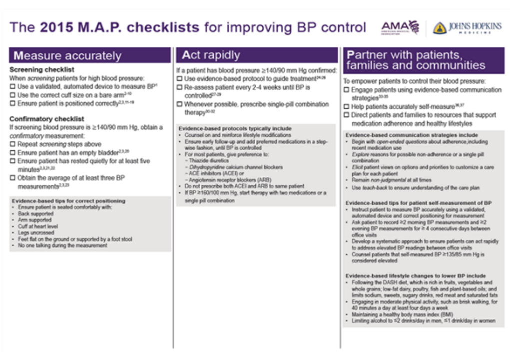
Factors Impacting Blood Pressure Control

Patient factors
- Non-adherence to treatment
- Socioeconomic determinants of health

Physician factors
- Time
- Knowledge of evidence (willingness to use)

System factors
- Quality/Performance reporting
- Work flow efficiency
- Leadership (buy-in)

M.A.P. Checklists



M.A.P. BP Improvement Program: Measure Accurately

EVIDENCE-BASED STRATEGIES AND ACTION STEPS

1. **Proper patient preparation, validated device usage and correct measurement technique**
2. **Proper documentation of measurements**
3. **Feedback and metrics to drive improvement**

AVAILABLE RESOURCES

- **Fact sheet**
- **Podcast**
- **Positioning poster**
- **Measurement proficiency tool**
- **Instructional decal for BP monitors**
- **Instructional videos**

METRICS

Terminal digit preference
Confirmatory metric

OUTCOMES

BP control:
% adults with Hypertension who have BP controlled (NQF 0018)

Δ in SBP
Δ in DBP

M.A.P. BP Improvement Program: Act Rapidly

EVIDENCE-BASED STRATEGIES AND ACTION STEPS

1. Standardized treatment protocols to diagnose and treat high BP
2. Frequent follow up visits to reduce therapeutic inertia
3. Single-pill combination therapy to treat high BPs whenever possible
4. Patient outreach
5. Feedback and metrics to drive improvement

AVAILABLE RESOURCES

- Treatment / Management Protocols
- Clinical Inertia Chart Review

METRICS

Therapeutic Inertia Index

OUTCOMES

BP control: % adults with Hypertension who have BP controlled (NQF 0018)

Δ in SBP
Δ in DBP

M.A.P. BP Improvement Program: Partner with Patients

EVIDENCE-BASED STRATEGIES AND ACTION STEPS

1. Patient self-monitoring of blood pressure
2. Counseling on non-pharmacologic lifestyle interventions
3. Collaborative communication strategies
4. Strategies to improve medication adherence
5. Feedback and metrics to drive improvement

AVAILABLE RESOURCES

- SMBP Online Program
- SMBP Instructional Video
- Infographics
- Patient Education Materials

METRICS

Δ in BP after Therapeutic Intensification (Proxy for medication adherence)

OUTCOMES

BP control: % adults with Hypertension who have BP controlled (NQF 0018)

Δ in SBP
Δ in DBP

M.A.P. Framework for BP Control

The three pillars of the program are ALL needed- each addresses a major barrier to cardiovascular disease prevention

Boonyasai RT, Rakotz MK, Lubomski LH, et al. Measure accurately, Act rapidly, and Partner with patients: An intuitive and practical three-part framework to guide efforts to improve hypertension control. J Clin Hypertens. 2017;19:684-694. https://doi.org/10.1111/jch.12995

Evidence of Effectiveness of BP Improvement Program

JCH
The Journal of Clinical Hypertension
OFFICIAL JOURNAL OF THE WORLD HYPERTENSION LEAGUE
Received: 15 June 2017 | Revised: 16 August 2017 | Accepted: 28 August 2017
DOI: 10.1111/jch.13141
ORIGINAL PAPER
WILEY

Measure Accurately, Act Rapidly, and Partner With Patients (MAP) improves hypertension control in medically underserved patients: Care Coordination Institute and American Medical Association Hypertension Control Project Pilot Study results

Robert B. Hanlin MD[1,2] | Irfan M. Asif MD[1,2] | Gregory Wozniak PhD[3] | Susan E. Sutherland PhD[2,4] | Bijal Shah MD[1] | Jianing Yang MS[3] | Robert A. Davis MS[4] | Sean T. Bryan MD[5] | Michael Rakotz MD[3] | Brent M. Egan MD[2,4,6]

Results Summary:

*Between baseline and the last study visit, BP control to <140/<90 mm Hg increased from **61.2% to 89.9%** (P < .0001).*

MAP rapidly and significantly improved hypertension control in medically underserved patients, largely as a result of measuring BP Accurately and partnering with patients

Hypertension

ORAL ABSTRACT PRESENTATIONSSESSION TITLE: BLOOD PRESSURE CONTROL AND ADHERENCE TO TREATMENT

Can Hypertension Control be Improved Within a Short Time Frame? - Results From Implementing the Measure Accurately,
Act Rapidly and Partner With Patients (MAP) Program

Brent Egan, Michael Rakotz, R. Bruce Hanlin, Irfan Asif, Jianing Yang, Susan Sutherland, Robert Davis, Gregory Wozniak

Hypertension. 2017;70:A093

Results Summary

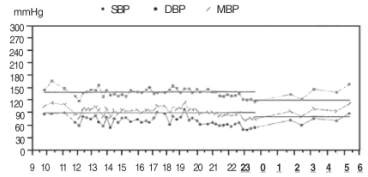
BP control rose from 66.1% at baseline to 74.8% (p<001) among 16,344 patients with baseline and MAP visits

- 15 of 16 practices had better BP control after 6 months MAP intervention
- In uncontrolled patients at baseline, mean SBP/DBP fell from 149/85 to 139/80 mmHg (p<.001/p<.001)
- The distributions of SBP and DBP among uncontrolled patients shifted to lower values between baseline and last intervention visit (p<0001)

The Importance of BP Measuring Accurately

Measure Accurately to Obtain Accurate, Representative Blood Pressures

- BP variability exists in everyone and contributes to *uncertainty* about whether any single BP is representative of a patients true BP
- *Uncertainty* about BP is the leading reason clinicians fail to initiate and escalate therapy to patients with uncontrolled high BP
- *Conventional* or *routine* office BP measurement correlate poorly with a patient's *true* BP and future cardiovascular events
- Poorly performed BP measurements (which are very common) result in inaccurate BP readings, contributing to uncertainty and potential harm to patients over time



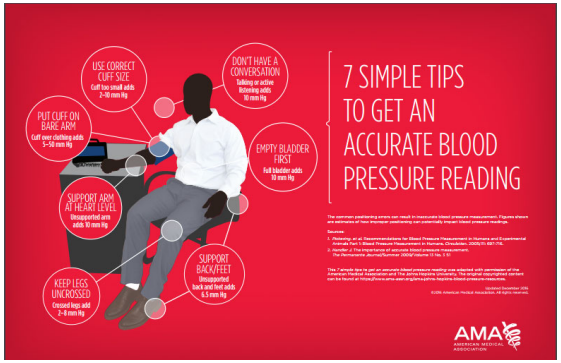
How does this affect clinicians in practice?

Kerr E et al. The Role of Clinical Uncertainty in the Treatment Decisions for Diabetic Patients with Uncontrolled Blood Pressure. *Annals of Internal Medicine* (148) Number 10 717-727

Measuring BP Accurately

Observer Factors	Patient Factors	System Factors
Wrong cuff size	Full bladder	Location of monitor/device
Cuff placed over clothing	Stimulants	Noise
Improper positioning	Recent exercise	Work Flows
No rest	Recent meal	
Terminal digit preference	Talking, texting, reading	
Talking to patient		
Too rapid cuff deflation		

Measuring BP Accurately



White Coat and Masked Hypertension

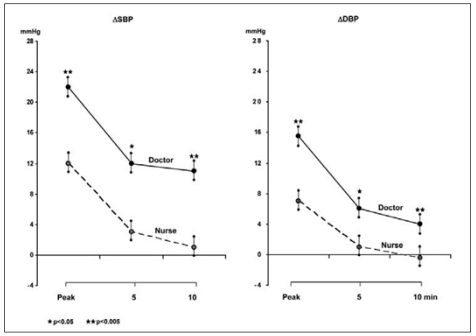
Almost all patients will experience some degree of alerting response

- White coat hypertension: Office BP is high in a patient whose out of office BP normal

But some will experience none at all…

- Masked hypertension: Office BP normal in a patient whose out of office BP high

Alerting Response



Mancia G, Parati G, Pomidossi G, Grassi G, Casadei R, Zanchetti A. Alerting reaction and rise in blood pressure during measurement by physician and nurse. Hypertension 1987.Feb;9(2):209–15.

The Case for SMBP

The Case for SMBP

Accurate, representative BP readings are needed to make sound medical decisions. SMBP readings are more likely to representative a patient's true BP than a single office blood pressure reading.

What is SMBP?

- Patient self-measurement of their blood pressure outside of the clinical setting
- Patients receive training on how to properly self-measure from their clinical team
- Patients share these BP readings with their healthcare team

Why Use SMBP?

- Measurements are taken in the patient's usual environment
- Provides multiple BPs over a longer period of time (more representative of patient's true BP)
- Eliminates white coat effect
- Can identify patient's with masked hypertension

Benefits of SMBP

SMBP improves BP control

- There is sufficient evidence of the effectiveness for SMBP to improve BP when used alone (training provided for proper use and communication)
- There is strong evidence for the effectiveness of SMBP to improve BP when combined with additional support
(i.e., patient counseling, education, or web-based support)

Uhlig K, Patel K, Ip S, et al. Self-measured blood pressure monitoring in the management of hypertension. Annals of Internal Medicine 2013, 159(3): 185-194. and CDC community guide task force 2015

Benefits of SMBP

SMBP is more predictive of cardiovascular outcomes than traditional office BPs

1. Target organ damage
2. Risk of future cardiovascular events
1. Mortality

Sharman JE, Howes FS, Head GA, et al. Home blood pressure monitoring: Australian expert consensus statement. *Journal of Hypertension* 2015; 33: 1721-1728

Benefits of SMBP

SMBP can increase precision in the diagnosis of hypertension

1. Confirming elevated office readings
2. Differentiates between white coat and sustained HTN
3. Helps to identify patients with masked HTN

Parati G, Stergiou GS, Asmar R, et al. European society of hypertension practice guidelines for home blood pressure monitoring. *J Hum Hypertenss* 2010; 779-785

Benefits of SMBP

SMBP can be used to assess BP control

1. Provides a reliable estimate of effectiveness of antihypertensive treatment
2. Assesses control at different times across a 24 hour period
3. Allows for better treatment decisions to be made in a timely fashion

Sharman JE, Howes FS, Head GA, et al. Home blood pressure monitoring: Australian expert consensus statement. *Journal of Hypertension* 2015; 33: 1721-1728
Parati G, Stergiou GS, Asmar R, et al. European society of hypertension practice guidelines for home blood pressure monitoring. *J Hum Hypertenss* 2010; 779-785

Benefits of SMBP

SMBP improves adherence to therapy

1. Empowers patient to be more involved to self-manage
2. Improves medication adherence with clinical support

Sharman JE, Howes FS, Head GA, et al. Home blood pressure monitoring: Australian expert consensus statement. *Journal of Hypertension* 2015; 33: 1721-1728
Parati G, Stergiou GS, Asmar R, et al. European society of hypertension practice guidelines for home blood pressure monitoring. *J Hum Hypertenss* 2010; 779-785

Implementing a SMBP Program

Implementing a SMBP program

1. Considerations before initiating a SMBP program
2. Building a SMBP program
3. Which patients benefit from SMBP
4. Training patients to properly self-measure
5. Interpreting SMBP readings

Considerations Before Initiating a SMBP Program

Considerations Before Initiating a SMBP Program

- Identify at least one provider and one care team member to serve as champions, these individuals will learn about SMBP and train others
- If possible, budget for 2-3 SMBP loaner devices (approximately $75) per physician.
- Plan time for :
  - Training staff on SMBP (1 hour)
  - Training patients on SMBP (5-6 minutes per patient)
  - Ensuring device accuracy, if the patient is using their own device (approximately 5 minutes)
  - Averaging and documenting patient's SMBP readings (5 minutes)
  - Preparing the device for the next patient, if implementing a loaner program (5 minutes)

Considerations Before Initiating an SMBP Program

Design processes to include:

- How will patients be identified as candidates for SMBP?
- Who will train the patients on proper self-measurement?
- How will you get the readings (and the device, if using a loaner program) back from the patient? Is an appointment required? With who?
- Who will be responsible for averaging, documenting and notifying the healthcare provider of the SMBP average?
- How will follow-up occur?

For organizations developing a loaner program:

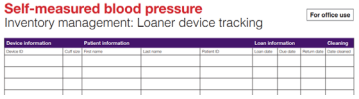
- Who will be responsible for disinfecting the returned loaner devices?
- Where will the loaner devices be stored? (clean and dirty storage needed)

Building a SMBP Program

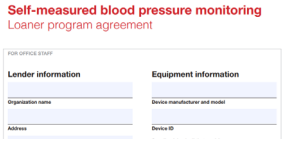
Building a SMBP program

Loaner vs patient owned devices

- Patients with HTN should be encouraged to purchase their own SMBP device
- If possible, patients without a confirmed diagnosis of hypertension or who cannot afford their own device should be offered a loaner device



Inventory management



Loaner agreement

Building a SMBP program

Recommending devices for purchase

- Recommend/choose a validated, automated upper arm BP device (preferably with memory and averaging)
  - Do not recommend/use a wrist cuff (unless brachial readings impossible)
  - Finger devices should never be used

Building a SMBP program

Appropriate fitting cuff is essential

- Train staff to measure patient's arm to ensure accurate cuff size is purchased/used
- While the patient is standing, measure from the acromion process of the scapula to the olecranon process at the elbow
- Note the midpoint and measure the circumference of the arm at the midpoint

Targetbp.org
Photo courtesy of National Health and Nutrition Examination Survey (NHANES) Physician Examination Manual September 2011

Building a SMBP program

Checking a home BP device for accuracy in a patient

Even a device that has passed an accepted validation test may not provide accurate readings in every patient – and may not be properly sized

- Every SMBP device must be tested in the office for accuracy in the individual using it
- The device is brought it and multiple readings are taken using the office standard method of testing and alternated with the patient self-measuring on their device. The readings are then compared. If the difference between devices is >10 mmHg the device should be replaced.
- Accuracy checks should be done after purchase and then annually

Device Accuracy Testing

Self-measured blood pressure

Device accuracy test[1]

A patient's self-measured blood pressure (SMBP) monitoring device should be tested before it is used as part of an SMBP program. Also test the device annually or any time blood pressure readings are questionable.

Step 1

Complete the table below.
Care team should take five blood pressure readings using a combination of the patient's SMBP device and the office's method of blood pressure measurement.

Measurement	Device	Systolic blood pressure (SBP)
A	Patient's	
B	Patient's	
C	Office's	
D	Patient's	
E	Office's	

SBP Example
133
132
141
134
139

Step 2

Part 1: Average measurements B and D

Part 2: Compare average of B and D to measurement C

Part 3: If the *difference* is ...

- **Less than 5 mm Hg,** this device can be used for SMBP
- **Between 6 and 10 mm Hg,** proceed to Step 3
- **Greater than 10 mm Hg,** *replace* the device before proceeding with your SMBP program

Example
Part 1: (132 + 134) / 2 = 133
Part 2: 133 - 141 = 8 (note: if the difference is a negative number, ignore the negative sign)
Part 3: Difference is 8, which is between 6 and 10 mm Hg, so proceed to Step 3

Step 3

Part 1: Average measurements C and E

Part 2: Compare average of C and E to measurement D

Part 3: If the *difference* is ...

- **Less than or equal to 10 mm Hg,** this device can be used for SMBP
- **Greater than 10 mm Hg,** *replace* the device before proceeding with your SMBP program

Example
Part 1: (141 + 139) / 2 = 140
Part 2: 140 - 134 = 6 (note: if the difference is a negative number, ignore the negative sign)
Part 3: Difference is 6, which is less than or equal to 10 mm Hg, so proceed with SMBP program

1. Eguchi et al. A Novel and Simple Protocol for the Validation of Home Blood Pressure Monitors in Clinical Practice. *Blood Press Monit.* 2012;17(5):210-213.

Patients that Benefit from SMBP

Which Patients Benefit From SMBP?

- Patients without a diagnosis of HTN:
  - Patients with high office BPs who are suspected of having HTN (to make Dx)
  - Suspected white coat hypertension
  - Suspected masked hypertension
- Patients with a diagnosis of HTN
  - Any patient- increase engagement, adherence to treatment or improve BP control
  - To assess treatment effect on BP control
  - Difficult to control BPs to determine if treatment resistant HTN is present

Training Patients to Properly Self-measure

Training Patients to Properly Self-measure

- Find out what they know about SMBP and if they have any concerns about it
- Provide general information about hypertension
- Tell them how often and when to measure
  - Two sets of measurements twice a day
  - One set in the morning and one in the evening, preferably before taking antihypertensive medications
  - Each set consists of two measurements performed one minute apart
  - This should be done for seven consecutive days (minimum of three days or 12 readings)

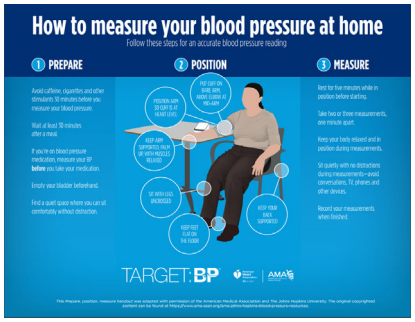
Training Patients to Properly Self-measure

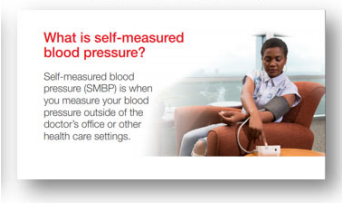
- Teach them how to **prepare** themselves for the measurement
  - Avoid caffeine, exercise and smoking for 30 minutes before the measurement
  - Empty bladder, if needed, then rest for 5 minutes sitting comfortably
- Show them how to use the device and properly put the BP cuff on their designated BP arm
- Tell them how to **position** themselves during the measurement
  - Sit with back supported, legs uncrossed and feet flat on the floor
  - Rest arm on a firm, flat surface with the cuff at the level of the heart with palm facing up
  - No talking, reading, texting or watching TV during the measurement

Training Patients to Properly Self-measure

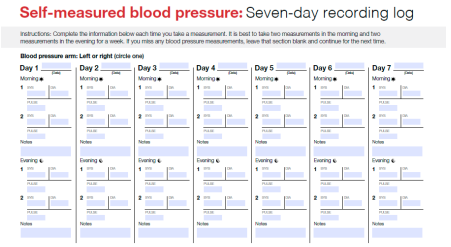
- Show them how to document their BP immediately after each reading
- Provide instructions on what to do if their BP is too high, too low or if they are experiencing associated symptoms
- Tell them how to communicate their results back to the practice after the week is complete
- Use teach back and return demonstration to ensure patient understanding

Patient Training Tools

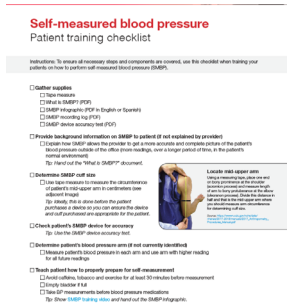




Patient Training Tools Cont.



Seven-day recording log



Patient training checklist

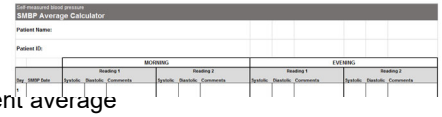
Obtaining and Interpreting Results

Obtaining Results

- Have patients provide you with all the readings they took over the week. This can be done via:
  - Telephone
  - Secure fax
  - Online through secure patient portal or telemedicine website
  - Bring device to the office for staff to review measurements or download if measurement storage is available
  - Follow-up office visit

Average, Document and Relay Readings

- Average readings into a single systolic and single diastolic BP



SMBP Average Calculator

- Document average

- Relay readings to provider for interpretation

Interpreting SMBP Results

In-office BP average	SMBP average	Classification	Management
Less than 120/80	Less than 120/80	Normal blood pressure	Recheck BP in office in one year
120–139/80–89	120–134/80–84	Elevated BP/ Prehypertension	Healthy lifestyle changes and recheck SMBP every 3–6 months
Less than 140/90	Greater than or equal to 135/85	Masked hypertension	Manage as sustained hypertension due to increased cardiovascular risk or consider 24-hour ambulatory BP monitoring (ABPM)
Greater than or equal to 140/90	Less than 135/85	White coat hypertension	Recheck SMBP every six months
Greater than or equal to 140/90	120–134/80–84	White coat hypertension and Elevated BP/ prehypertension	Healthy lifestyle changes and recheck SMBP every 3–6 months
Greater than or equal to 140/90	Greater than or equal to 140/90	Sustained hypertension	Manage per hypertension guideline recommendations or treatment protocol used at your organization

Based on JNC-7 definitions

Interpreting SMBP Results

In-office BP average	SMBP average	Classification	Management
Less than 120/80	Less than 120/80	Normal blood pressure	Recheck BP in office in one year
120–129/less than 80	120–129/less than 80	Elevated BP	Healthy lifestyle changes and recheck SMBP every 3–6 months
Less than 130/80	Greater than or equal to 130/80	Masked hypertension	Manage as sustained hypertension due to increased cardiovascular risk or consider 24-hour ambulatory BP monitoring (ABPM)
Greater than or equal to 130/80	Less than 130/80	White coat hypertension	Recheck SMBP every six months
Greater than or equal to 130/80	120–129/less than 80	White coat hypertension and elevated BP	Healthy lifestyle changes and recheck SMBP every 3–6 months
Greater than or equal to 130/80	Greater than or equal to 130/80	Sustained hypertension	Manage per current hypertension guideline recommendations

Based on 2017 ACC/AHA definitions

Providing Clinical Support

Key Elements of Clinical Support

When added to SMBP, additional clinical support strengthens it's utility and effectiveness

1. Delivery of the additional support must involve a trained clinician (e.g., physician, NP, PA, RN, MA, pharmacist or other health educator)
2. Regular communication of SMBP data to care team
3. A feedback loop between patient and care team in which support and advice are customized based on the patient's reported information

Centers for Disease Control and Prevention. Self-Measured Blood Pressure Monitoring: Actions Steps for Clinicians. Atlanta, GA

Examples of Clinical Support

One-on-one counseling
- Telephone calls from RNs or pharmacists to manage medications
- Counseling sessions in person with pharmacists

Web-based or telephone support based on patient-reported SMBP readings
- Computer telephone-based feedback system
- Secure patient website training plus pharmacist care management via web communication
- Access to web-based tools for med refill requests, text and e-mail reminders to measure BP or for appointments, secure messaging with clinician or staff

Patient Education
- RNs providing telephone-based education on lifestyle changes to lower BP
- Small group classes on SMBP technique and lifestyle changes in the clinical or community setting

Centers for Disease Control and Prevention. Self-Measured Blood Pressure Monitoring: Actions Steps for Clinicians. Atlanta, GA: Centers for Disease Control and Prevention, US Dept of Health and Human Services; 2014

Common Questions

What SMBP Device Do You Recommend?

Recommend:
- a validated*, fully automatic upper arm cuff
- a device with memory whenever possible
- device that meets patient specific needs-large display

Do not recommend:
- a finger or wrist cuff - except in cases where arm circumference >52 cm (then recommend wrist cuff)

Remember:
- Appropriate sized cuffs must used for BP measurements to be accurate. Always measure the patient's arm before recommending any device.

*Validated does not mean that a device will be accurate for every patient. Make sure your patients bring in devices to be tested for accuracy
https://hypertension.ca/hypertension-and-you/managing-hypertension/measuring-blood-pressure/devices/

Do Insurance Companies Pay for Devices?

- Some do – many do not
- In some States Medicaid pays for devices and some private payers reimburse
- Have the patient call their insurer to find out

What if a Patient Cannot Afford a Device?

- Consider a loaner program if appropriate
- Contact a manufacture for discounts online or coupons
- 80% of devices in the US are purchased at retail pharmacies – check for coupons
- Many validated upper arm devices can be found for under $40
- Avoid extra memory, Bluetooth and other bells and whistles which can be costly

How Reliable Are Patient's Recordings of Their SMBP?

- According to peer reviewed literature – patients falsify their readings up to 21-33% of the time in some studies*
- It is better to use memory, whenever possible, for this reason
- When in doubt, consider 24 hour ABPM

*Diabetes Care 2014;37:e24–e25 | DOI: 10.2337/dc13-1821

Do SMBP Readings Count Towards Performance Measures?

- Up until this year, self-measured BPs have been excluded from quality measures. The 2019 HEDIS measure for controlling BP does allow for them if they have been electronically stored and transmitted to the provider.
- Because SMBPs are not currently accepted in quality measures, high office BPs in patients who are controlled at home will not count as controlled if the office BP is above goal.
- This may creates a disincentive to use SMBP, in spite of the fact that it is better for patient care
- The AMA, AHA, CDC, Million Hearts and several organizations are working to solve this problem

What is the Best Protocol to Use to Measure?

- There is no one protocol that is the standard-there are many guidelines
- Overall, these guidelines agree that the mean of two BPs in the AM and PM for 1 week is preferred
- A minimum of three days is acceptable if you obtain 12 measurements

Final Reminder

Prior to initiating SMBP, always make sure

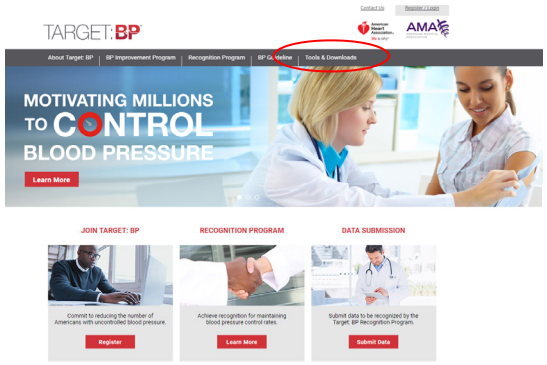
1) The SMBP cuff is sized correctly and the device reads accurately in the INDIVIDUAL prior to relying on the SMBP measurements to make clinical decisions
2) Patients are trained on how to properly self-measure
3) There is a clearly defined individualized plan between the patient and the clinical team
4) Patients must know exactly what to do if their BP is
   - Too high, too low, or if they are having warning symptoms

4) A shared care plan can be used to help patients know
   - When and how often to communicate with or return to the office for follow-up
   - How to communicate BPs back to the care team

SMBP Training Video

https://targetbp.org/tools_downloads/self-measured-blood-pressure-video/

Targetbp.org



Questions?

Contact

Laken Barkowski, RN, BSN, MSHS
laken.barkowski@ama-assn.org

Outpatient Initiatives to help you and your patients:

Target: BP
and
Check. Change. Control.-Cholesterol

North Dakota Hypertension Summit
March 21, 2019

PRESENTERS AND AGENDA

- Mindy Cook, RN, BSN - Sr. Director, Quality & Systems Improvement
- Lori Hall, MA – VP, Community Impact & Rural Health

- Why Focus on Hypertension and High Cholesterol?
- Target: BP and Check. Change. Control.-Cholesterol — What are they?
- Getting to Improvement – The M.A.P. Process
- Registration and Data Submission
- Recognition
- Tools and Resources

American Heart Association.

TARGET: BP™

American Heart Association.

AMA

TARGET: BP™

American Heart Association. life is why

AMA

The American Heart Association & American College of Cardiology updated the guidelines for hypertension control - November 2017

Notably, the guidelines eliminate the diagnosis of pre-hypertension and identifies anything greater than 130 or 80 as Stage 1 hypertension.

Blood Pressure Categories

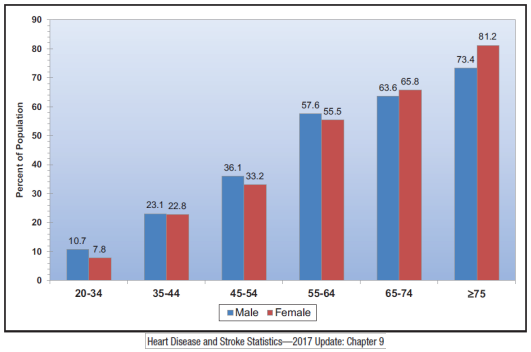
BLOOD PRESSURE CATEGORY	SYSTOLIC mm Hg (upper number)		DIASTOLIC mm Hg (lower number)
NORMAL	LESS THAN 120	and	LESS THAN 80
ELEVATED	120 – 129	and	LESS THAN 80
HIGH BLOOD PRESSURE (HYPERTENSION) STAGE 1	130 – 139	or	80 – 89
HIGH BLOOD PRESSURE (HYPERTENSION) STAGE 2	140 OR HIGHER	or	90 OR HIGHER
HYPERTENSIVE CRISIS (consult your doctor immediately)	HIGHER THAN 180	and/or	HIGHER THAN 120

103 million people have HBP – almost 50%

Heart disease and stroke risk is doubled at 130/80 compared to blood pressure below 120/80.

Guideline for the prevention, detection, evaluation, and management of high blood pressure in adults: a report of the American College of Cardiology/American Heart Association Task Force on Clinical Practice Guidelines. November 13, 2017. *Hypertension*

Prevalence of HBP



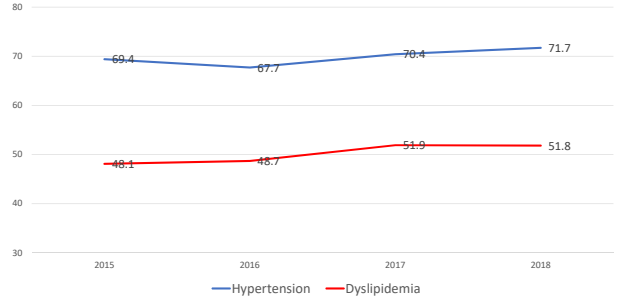
Heart Disease and Stroke Statistics—2017 Update: Chapter 9

TARGET: BP™

American Heart Association. life is why

AMA

ND GWTG Stroke Patient Risk Factors

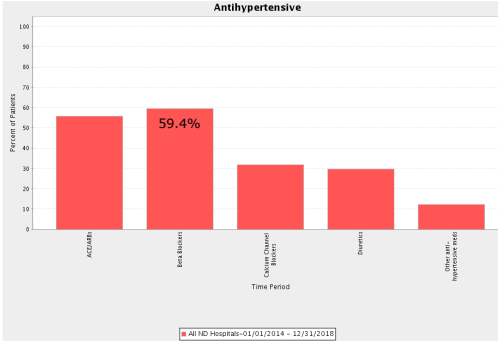


TARGET: BP™

American Heart Association. life is why

AMA

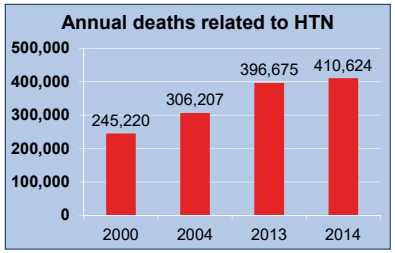
ND GWTG Stroke - Antihypertensive
Rate of prescription of different types of anti-hypertensive medications at discharge for ischemic stroke or TIA patients



TARGET: BP | American Heart Association | AMA

Of adults with hypertension:
46% are uncontrolled

Most adults with uncontrolled HTN **have** health insurance and a usual source of care



Source: CDC, AHA

TARGET: BP | American Heart Association | AMA

What is Target: BP?

- A **call to action** motivating **health systems, clinics, and providers** to prioritize blood pressure control
- **Recognition** for healthcare providers who attain high levels of blood pressure control in their patient populations
- A source for **tools and assets** for healthcare providers to use in practice, including the AHA/ACC/CDC Hypertension Treatment Algorithm and the AMA's M.A.P. Checklist

TARGET: BP | American Heart Association | AMA

http://targetbp.org/

Who is our Target Audience?

- Primary Care System – Focus on underserved patients
  - **Federally Qualified Health Centers (FQHCs)**
  - Practice/Clinic with mission to serve publicly insured, underinsured, or uninsured (Community Health Centers)
  - Private Clinical System (non-FQHC)
- Government Agency or Organization providing care to patients

TARGET: BP | American Heart Association | AMA

Why should a clinic participate?

- Systems are needed to drive control rates
- Helps clinics meet required performance metrics
- Alignment with AHA and AMA, nationally-recognized leaders
- **Free** tools and resources
- **Free** webinars and CME/CEU opportunities
- **Recognition** from the AHA
- ***Improved health and care of patients!***

http://targetbp.org/

TARGET: BP | American Heart Association. | AMA

GETTING TO IMPROVEMENT
THE M.A.P. PROCESS

The M.A.P. framework

- **M**easure blood pressure accurately
- **A**ct rapidly to manage uncontrolled hypertension
- **P**artner with patients, families and communities to promote self-management

Actionable data | Evidence-based tools | Team-based Care

TARGET: BP | American Heart Association. | AMA

Whelton PK, et al.
2017 High Blood Pressure Clinical Practice Guideline

2017 ACC/AHA/AAPA/ABC/ACPM/AGS/APhA/ASH/ASPC/NMA/PCNA Guideline for the Prevention, Detection, Evaluation, and Management of High Blood Pressure in Adults

A Report of the American College of Cardiology/American Heart Association Task Force on Clinical Practice Guidelines

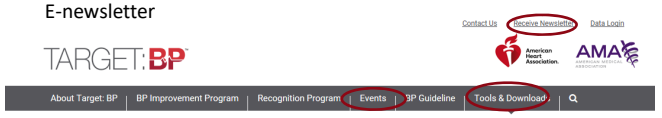
WRITING COMMITTEE MEMBERS
Paul K. Whelton, MB, MD, MSc, FAHA, *Chair*
Robert M. Carey, MD, FAHA, *Vice Chair*

TARGET: BP | American Heart Association. | AMA

TOOLS & RESOURCES

RESOURCES—WEBSITE – WWW.TARGETBP.ORG

Patient education tools
Provider education tools
Webinars – CME/CEU courses
E-newsletter



TOOLS & DOWNLOADS

These tools and resources are designed to help your practice improve blood pressure control for all of your patients. Resources include interactive tools, fact sheets, podcasts, webinars, and videos, along with handouts you can give your patients.

RESOURCES FOR: Healthcare Professionals | My Patients | See All

TOPIC: All Topics

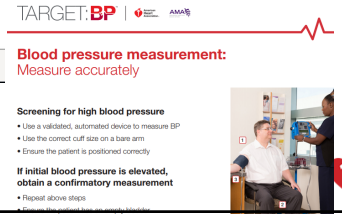
Reset Filters | Filter

RESOURCES – PROVIDER

Use the Treatment Algorithm

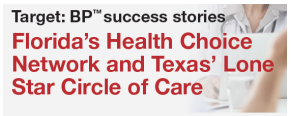
Treat your patients with high BP quickly, using the latest clinical evidence.

Web Link : /tools-downloads/bp-treatment-algorithm-tool/



American Heart Association.

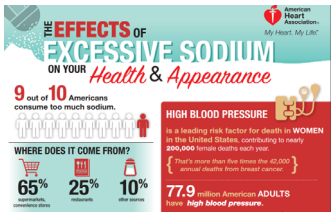
RESOURCES—WEBINARS

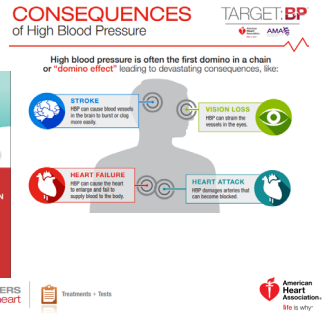


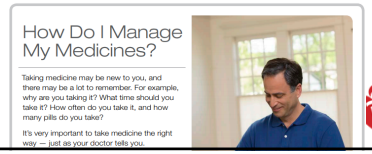
- Lifestyle Interventions for the Prevention and Treatment of Hypertension (CME/CE)
- Importance of Measuring Blood Pressure Accurately (CME/CE)
- Importance of Treating Your Patients' HBP (CME/CE)
- Using Self-Measured BP Monitoring to Diagnose and Manage HBP (CME/CE)

American Heart Association.

RESOURCES – PATIENT







American Heart Association.

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REGISTRATION AND DATA SUBMISSION

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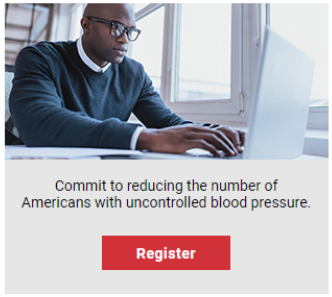
REGISTRATION

JOIN TARGET: BP

REGISTER AT:

WWW.TARGETBP.ORG



143

143

REGISTRATION – INFO NEEDED

ORGANIZATION'S CONTACT INFORMATION

ORGANIZATION'S TOTAL ADULT (18-85 YEARS) PATIENT POPULATION

% PATIENTS THAT ARE A RACE/ETHNICITY OTHER THAN WHITE AND/OR IDENTIFY AS HISPANIC OR LATINO ETHNICITY (ESTIMATE OK)

TOTAL NUMBER OF CLINIC LOCATIONS IN HEALTH SYSTEM (*NOTE:* MAY REGISTER EACH HEALTH CENTER LOCATION INDIVIDUALLY OR AS A SYSTEM OVERALL)

ORGANIZATION'S CHARACTERISTICS, SUCH AS MULTI-SPECIALTY, FEDERALLY QUALIFIED HEALTH CENTER, ETC.

PREVIEW REGISTRATION FORM

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DATA SUBMISSION – FEB. 2-MAY 31!

DATA NEEDED:

ADULT PATIENT POPULATION (PROVIDED AT REGISTRATION)

TOTAL ADULT PATIENTS WITH HYPERTENSION

HYPERTENSIVE PATIENTS WITH HBP UNDER CONTROL

PREVALENCE ESTIMATOR:

ADULT PATIENT POPULATION BY AGE, SEX, AND ETHNICITY

Data Submission

The data submission process should be as seamless as possible. Evaluation data include:

- Total adult patient population
- Total adult patient population by age, sex and ethnicity
- Total number of adult patients with hypertension
- Total number of adult patients with controlled hypertension

Organizations will submit 2018 data in early 2019. Participants will be notified of recognition status in Fall 2019.

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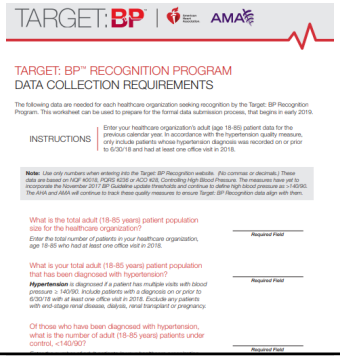
Data Collection Worksheet

Use this sheet to collect data to submit to the Target: BP recognition program.

CLICK ON

DATA COLLECTION WORKSHEET



TARGET: BP™ RECOGNITION PROGRAM

DATA COLLECTION REQUIREMENTS

The following data are needed for each healthcare organization seeking recognition by the Target: BP Recognition Program. This worksheet can be used to prepare for the formal data submission process, that begins in early 2019.

INSTRUCTIONS

Enter your healthcare organization's adult (age 18-85) patient data for the previous calendar year. In accordance with the hypertension quality measure, only include patients whose hypertension diagnosis was recorded on or prior to 6/30/18 and had at least one office visit in 2018.

Note: *Use only numbers when entering into the Target: BP Recognition website. (No commas or decimals.) These data are based on NQF #0018, PQRS #236 or ACO #28, Controlling High Blood Pressure. The measures have yet to incorporate the November 2017 BP Guideline update thresholds and continue to define high blood pressure as >140/90. The AHA and AMA will continue to track these quality measures to ensure Target: BP Recognition data align with them.*

What is the total adult (18-85 years) patient population size for the healthcare organization?

Enter the total number of patients in your healthcare organization, age 18-85 who had at least one office visit in 2018.

Required Field

What is your total adult (18-85 years) patient population that has been diagnosed with hypertension?

***Hypertension** is diagnosed if a patient has multiple visits with blood pressure ≥ 140/90. Include patients with a diagnosis on or prior to 6/30/18 with at least one office visit in 2018. Exclude any patients with end-stage renal disease, dialysis, renal transplant or pregnancy.*

Required Field

Of those who have been diagnosed with hypertension, what is the number of adult (18-85 years) patients under control, <140/90?

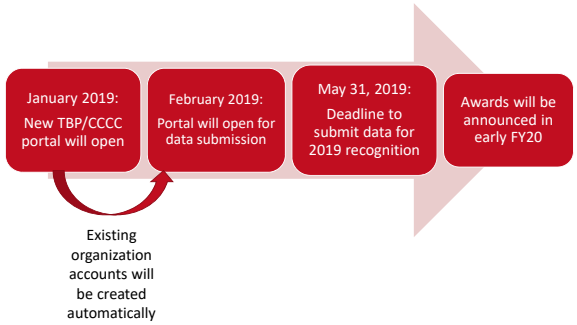
Required Field

146

RECOGNITION

147

REGISTRATION AND DATA SUBMISSION TIMELINE



Existing organization accounts will be created automatically

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2019 RECOGNITION LEVELS

PARTICIPATION STATUS

Recognizes practices that have submitted data and committed to reducing the number of adult patients with uncontrolled blood pressure.

GOLD STATUS

Recognizes practices that have 70 percent or more of their adult patient population with high blood pressure controlled.

NQF Measure #18 defines HTN as ≥140/90

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RECOGNITION RESOURCES

In addition, we're pleased to offer easy-to-use digital recognition resources to help you share your commitment to lowering HBP in your community and showcase your involvement with Target: BP. **Simply click the button below and the download will begin immediately.**

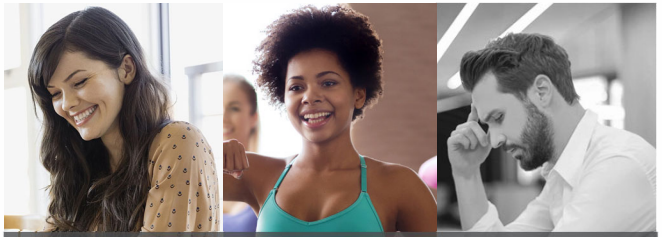
Gold Recognition Resources

Your download includes:

Recognition Resources

150

Check. Change. *Control.* Cholesterol



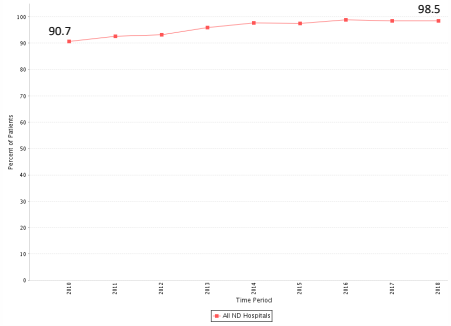
WHY IS CHOLESTEROL MANAGEMENT IMPORTANT?

- HIGH CHOLESTEROL IS A MAJOR RISK FACTOR FOR HEART DISEASE AND STROKE
- NEARLY 1 IN 3 AMERICAN ADULTS HAVE HIGH LDL ("BAD") CHOLESTEROL
- 40% OF AMERICANS HAVE HIGH CHOLESTEROL (OVER 200 MG/DL) – OVER 94 MILLION PEOPLE

American Heart Association

ND GWTG Stroke – Medical History of LDL > 100

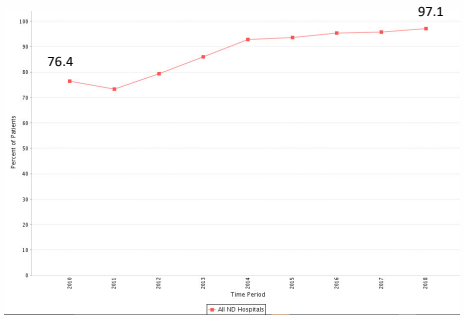
Percent of Ischemic stroke or TIA patients with LDL >= 100 or on cholesterol-reducer prior to admission, who are discharged on cholesterol reducing drugs.



American Heart Association.

ND GWTG Stroke - Statin Prescribed at Discharge

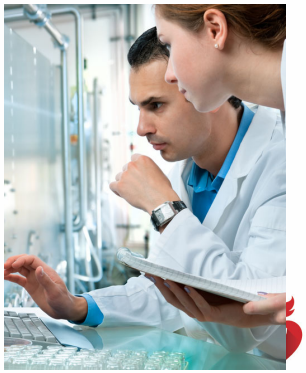
Percent of Ischemic stroke or TIA who are discharged on Statin Medication.



American Heart Association.

Updated Cholesterol Guidelines November 2018:

- Emphasis **on lifetime risk** - high cholesterol at any age can increase risk
- **Healthy lifestyle** remains critical component to prevent and treat high cholesterol
- More **personalized risk assessments** and tailored treatment options for high LDL
- For adults age 20 and older, without cardiovascular disease and not on lipid lowering therapy, either a **fasting or non-fasting** lipid profile is effective



American Heart Association.

What's new?

- In some cases, a **coronary artery calcium (CAC) test** can help health care providers decide whether to start statin therapy when a person's risk may not be clear
- If a person has problems taking a statin or if a statin alone isn't sufficiently lowering LDL cholesterol, there are some **additional drug options**
- Importance of **patient/provider discussion** to make a lifestyle and medication treatment plan that the individual can follow to reduce risk

American Heart Association.

What did not change?

The 2018 guidelines did not make any major changes to, and continue to support, the AHA's current **healthy lifestyle recommendations**

American Heart Association.

Check. Change. Control.Cholesterol

What is it?

Check. Change. *Control.* Cholesterol ™

- Improve awareness, detection and management of high cholesterol
- Educate and empower **consumers** and **patients**
- Provide **healthcare providers** with evidence-based information, tools, and recognition

American Heart Association. Check. Change. Control. Cholesterol™

American Heart Association.

Web site:

www.heart.org/changecholesterol

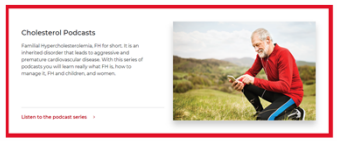
About the Initiative
Everything you need to know about the Check. Change. *Control.* Cholesterol initiative.
More details ›

Stand and Be Counted
Join our Check. Change. *Control.* initiative and receive special recognition for your efforts.
Register ›

Stay in the Know
Keep up-to-date with our informative resources and timely updates about cholesterol.
Learn how ›

American Heart Association.

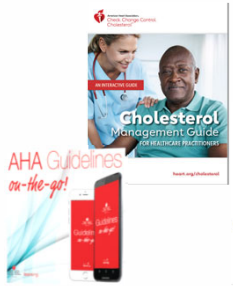
For Patients & Consumers



- My Cholesterol Guide
- Check. Change. *Control.* Calculator
- Cholesterol Animation Library
- Downloadable Sheets
- Cholesterol Podcasts
- Cholesterol Videos
- All of the above and more at www.heart.org/cholesterol

American Heart Association. Check. Change. Control. Cholesterol™ American Heart Association.

For Professionals



- Healthcare Provider Toolkit
- Risk Calculator
- Guidelines on the Go App
- Podcasts
- CME/CE courses
- All of the above and more at Professional Heart Daily www.professional.heart.org/cholesterol

American Heart Association. Check. Change. Control. Cholesterol™ American Heart Association.

Registration and Data Submission

CCCC Recognition Program

National and local recognition for practices and health systems that:

- Register with the program
- Commit to using an ASCVD risk calculator
- Submit adult patient data
- Reach defined recognition levels

Atherosclerotic Cardiovascular Disease (ASCVD) includes several conditions that are caused by the buildup of plaque that narrows blood vessels and can cause cardiovascular diseases.

American Heart Association. Check. Change. Control. Cholesterol™ American Heart Association.

REGISTRATION REQUIREMENTS

TO REGISTER, ORGANIZATIONS NEED:

- The total adult (21-75 years) patient population count
- The total number of clinical providers in the organization
- Percentage of patients that identify as:
  - Race other than White and/or
  - Ethnicity: Hispanic or Latino
- The total number of clinical locations in their health system
- Organization's Electronic Health Record (EHR) system

http://www.heart.org/changecholesterol

American Heart Association.

2019 RECOGNITION LEVELS

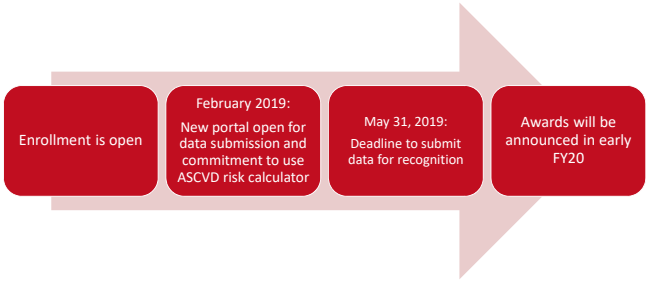
No changes have been made to the recognition levels.

COMMIT TO INCORPORATE ASCVD RISK CALCULATOR INTO PRACTICE

SUBMIT MIPS 438 CHOLESTEROL MANAGEMENT DATA AND ACHIEVE 70% OR GREATER STATIN THERAPY USE WITHIN THE ADULT PATIENT POPULATIONS

American Heart Association.

REGISTRATION AND DATA SUBMISSION TIMELINE



American Heart Association.

QUESTIONS?

PLEASE COMPLETE THE INTEREST QUESTIONNAIRE IN YOUR FOLDER.

LORI HALL
LORI.HALL@HEART.ORG – 734-646-9330

MINDY COOK
MINDY.COOK@HEART.ORG - 218-770-3305

THANK YOU!!

2019 Hypertension Summit

BREAK TIME!

Snacks, Networking and Self-Care

NORTH Dakota | Health
Be Legendary.™

American Heart Association | American Stroke Association

CARDIAC READY COMMUNITY PROGRAM

North Dakota Cardiac Ready Community

NORTH Dakota Be Legendary.

DISCLOSURES

- I have no financial disclosures
- I have no conflicts of interest

North Dakota Cardiac Ready Community

NORTH Dakota Be Legendary.

OBJECTIVES

Understand how the Cardiac Ready Community program started and the main goals of the program

Understand what it means to become a Cardiac Ready Community

Know the steps your community can take to become designated as a Cardiac Ready Community

North Dakota Cardiac Ready Community

NORTH Dakota Be Legendary.

CARDIAC READY COMMUNITY GOAL

- *Designed:* to promote survival from a cardiac event, such as sudden cardiac arrest (SCA) which occurs outside of the hospital setting
- *Goal:* prepare community to respond and assist appropriately when an individual has a cardiac event
- *Community will be able to:*
  - Recognize a cardiac emergency
  - How/when to dial 9-1-1
  - Begin CPR
  - Have public access to Automated External Defibrillators (AEDs)

North Dakota Cardiac Ready Community

NORTH Dakota Be Legendary.

WHY IS THIS IMPORTANT?

- Heart disease is currently the leading cause of death in North Dakota and the United States
- OHCA survival less than 11%
- Bismarck/Mandan: OHCA occurs-
  - 72% Home
  - 17% Healthcare Facility
  - 11% Public location

North Dakota Cardiac Ready Community

NORTH Dakota Be Legendary.

WHY THIS IS IMPORTANT

- Time is muscle!
- For every minute without life-saving CPR and defibrillation, **chances of survival decrease 7-10%**

Time is Critical!

- Brain damage begins in 4–6 min
- Brain damage irreversible in 8–10 min

Circulation must be restored within 4–6 minutes.

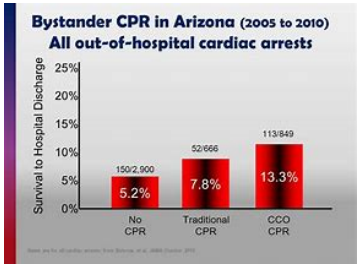
THIS PROGRAM WILL HELP TO INCREASE PUBLIC AWARENESS

HANDS ONLY CPR & AED USE

Triples Survival Chances

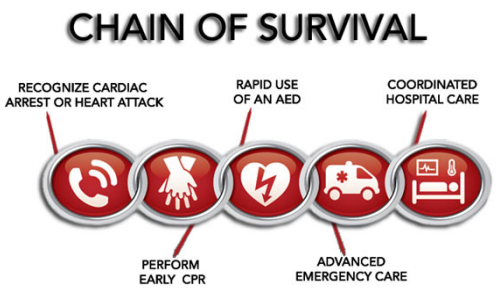
Communities have to be willing to respond

Education key



AMERICAN HEART ASSOCIATION CHAIN OF SURVIVAL

- Criteria supports the AHA Chain of Survival:
  - Immediate recognition of cardiac arrest and activation of the emergency response system
  - Early CPR with an emphasis on high quality chest compressions
  - Rapid defibrillation
  - Effective basic life support with advanced life support intercept
  - Integrated post-cardiac arrest care



North Dakota Cardiac Ready Community

NORTH Dakota Be Legendary.

CRITERIA

- Community Leadership
  - Various lead stakeholders i.e. city officials, clinic personnel, EMS personnel, school board members etc.
- Goal is complete community involvement! All aspects of the community have to work together to prepare community members to respond.
- Each life lost has an impact on the whole community – families, friends, social groups, jobs – we are all interconnected.

North Dakota Cardiac Ready Community

NORTH Dakota Be Legendary.

On Going Community Awareness Campaign

- Educate community with flyers, newspapers, verbal education, social media pages etc.
- Get creative!

COMMUNITY BLOOD PRESSURE CHECKS

- Blood pressure screenings can be held during community events, health fairs, clinic visits etc.
- Educate on their numbers and refer hypertensive patients
- Keep track of how many community members have been screened!

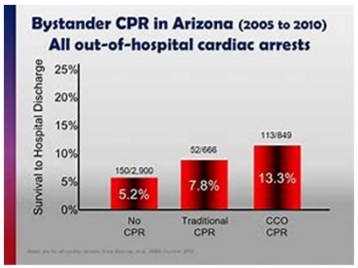
NORMAL BLOOD PRESSURE
*Recommendations: Healthy lifestyle choices and yearly checks.

ELEVATED BLOOD PRESSURE
*Recommendations: Healthy lifestyle changes, reassessed in 3-6 months.

HIGH BLOOD PRESSURE / STAGE 1
*Recommendations: 10-year heart disease and stroke risk assessment. If less than 10% risk, lifestyle changes, reassessed in 3-6 months. If higher, lifestyle changes and medication with monthly follow-ups until BP controlled.

HIGH BLOOD PRESSURE / STAGE 2
*Recommendations: Lifestyle changes and 2 different classes of medicine, with monthly follow-ups until BP is controlled.

CPR/AED TRAINING



- Hands only CPR training done by certified CPR instructor
- Can be done during community events (half time of sporting events), high schools, shopping malls
- Keep track of how many community members are CPR and AED trained

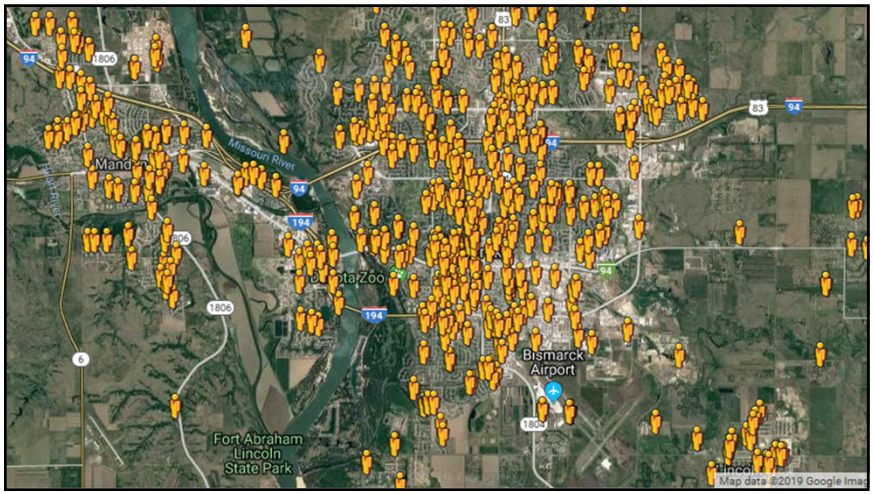
North Dakota Cardiac Ready Community

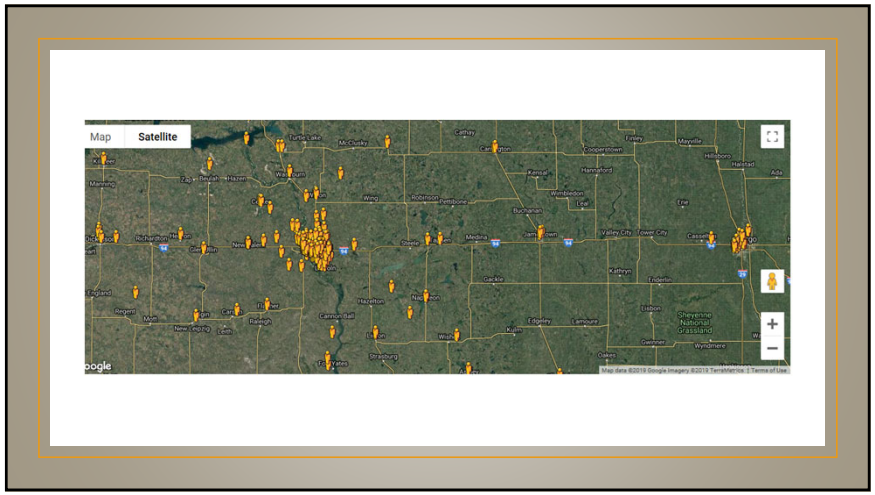
NORTH Dakota Be Legendary.

PULSEPOINT:

BISMARCK

FARGO

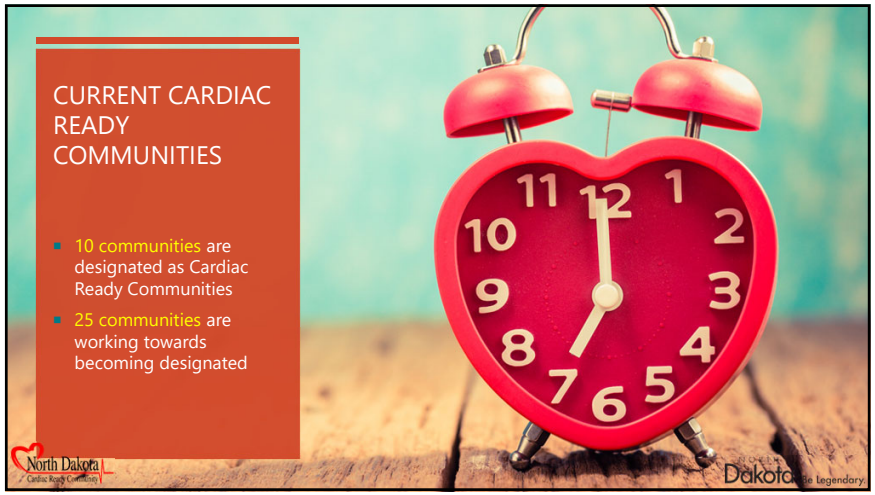




PUBLIC ACCESS AED

- Can take the longest in order to fund for AEDs
- Educate community on what AEDs do, how to use them and where they are located
- Place in public places and high traffic areas
- Bismarck/Mandan and Fargo – PulsePoint
  - Over 200 AEDs registered in the community

CURRENT CARDIAC READY COMMUNITIES



- 10 communities are designated as Cardiac Ready Communities
- 25 communities are working towards becoming designated

North Dakota Cardiac Ready Community

NORTH Dakota Be Legendary.

DESIGNATION

- Once a community has met the minimum set of criteria, they apply for designation
- Once approved through the ND Department of Health, they are given a 3 year Cardiac Ready Community designation
- Highway sign provided to each community designated to display

North Dakota Cardiac Ready Community

NORTH Dakota Be Legendary.

AED GRANT UPDATE

- With a Grant received by the American Heart Association, the Division of Emergency Medical Systems was able to purchase a number of AEDs
- All communities participating in the Cardiac Ready Community program were eligible to apply for the AEDs. These will be distributed in the near future.
- Could be the last step for several communities to become designated

FUTURE OUTLOOK

- Cardiac Ready Campus
  - Currently working on creating criteria for Cardiac Ready Campus
  - May help lead to Cardiac Ready Community
  - UND already working on designation
  - Will have more information as it becomes available
- Looking into incorporating other initiatives such as Stop the Bleed

EDUCATION

- **EMS Rendezvous**
  - April 11-13, 2019
  - Bismarck, ND
- **State Stroke and Cardiac Conference**
  - October 29-30, 2019
  - Bismarck, ND
- **State Trauma Conference**
  - September 25-26, 2019
  - Bismarck, ND

QUESTIONS?

Danielle Schoch
dschoch@nd.gov
701-328-4577

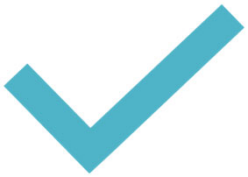
Engaging Patients Through Lifestyle Change Modification

Jennifer Haugen, RDN, CSSD, LD
Integrative Medicine Supervisor
Chad Spradlin, MBA, PES
Health and Wellness Coach- Integrative Medicine

No Disclosures

Learning Objectives

1. Participants will be able to link leading causes of death to lifestyle behaviors.
2. Participants will be able to define the 6 stages of change.
3. Participants will learn coaching strategies to help motivate patients to make lifestyle change.
4. Participants will be able to identify partners in their community and/or health system to support patients lifestyle change goals.



Top 2 Leading Causes of Death in the United States

1. Heart Disease

   Healthy People 2020 Identifies the leading (controllable) risk factors for heart disease and stroke are:
   - *High blood pressure*
   - *High cholesterol*
   - *Cigarette smoking*
   - *Diabetes*
   - *Unhealthy diet and physical inactivity*
   - *Overweight and obesity*

2. Cancer -25% of all deaths in US

   76% of lung cancer deaths are related to combination of low f/v intake, physical inactivity, tobacco use, exposure to environmental smoke, air pollution

Why Lifestyle Change?

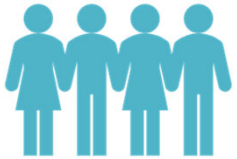
According to the CDC, about 20% to about 40% of deaths from each of these causes (top 5) could be prevented through lifestyle changes such as avoiding tobacco, increasing physical activity and healthier eating.

The report, published in the May 2, 2014 issue of *Morbidity and Mortality Weekly Report*, compared the death rates from these causes in all 50 states from 2008-2010.

The analysis showed if all states had the lowest death rate for each cause, it would be possible to prevent:

- 21% of early cancer deaths, prolonging about 84,500 lives
- 34% of early heart disease deaths, prolonging about 92,000 lives
- 39% of early chronic lower respiratory disease deaths, prolonging about 29,000 lives
- 33% of early stroke deaths, prolonging about 17,000 lives
- 39% of unintentional injury deaths, prolonging about 37,000 lives

Weight loss (as result of lifestyle changes) of 5-10 % produced improvements in cardiovascular risk factors, but greater weight losses were associated with even greater improvement. –NHLIB



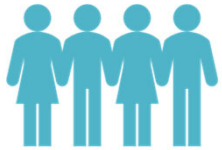
How can we engage our patients in lifestyle modifications to help prevent and control disease?

How well do you know your patient?

- Demographics
- Food security
- Resources and access to resources
  - Fitness center
  - Grocery store/food bank
  - Clinic
  - Technology
  - Health insurance
- Support system (family, friends)

Stages of Change

- Pre-contemplation-No intention
- Contemplation-Change on horizon, 6 months
- Preparation-Getting ready – next 30 days
- Action-Consistently changed, within 6 months
- Maintenance-Staying there more than 6 months
- Relapse – Recycling



Meet at patients place of readiness

What are your thoughts about?

Lets Role play

Partner up, one of you Share something about yourself that you:

- Want to change
- Need to change
- Should change
- Have been thinking about changing

What change are they considering?

- Explain why they should make this change
- Give at least three specific benefits that would result from making the change
- Tell them how they could make the change
- Emphasize how important it is to change
- Persuade them to make the change
- If you meet resistance, repeat the above

Feedback

- What was the experience like?
- What did you like?
- What did you not like?
- What did you notice?
- Did you feel encouraged to make the change?

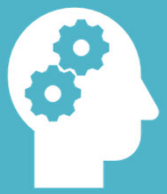
"People tend to resist that which is forced upon them"

"People tend to support what which they helped create"

- Vince Pfaff

Motivational Interviewing

a directive, client-centered counseling style for eliciting behavior change by helping clients to explore and resolve ambivalence.



What makes MI Successful

Relational aspect
- Ambivalence is resolved through empathy and a spirit that instills capability

Technical aspect
Ambivalence is resolved through the selective reinforcement of a client's thoughts and commitment for change

http://www.youtube.com/watch?v=cDDWvj_q-o8

Partnership

Acceptance

Compassion

Evocation

Role Play

Share something about yourself that you:

- Want to change
- Need to change
- Should change
- Have been thinking about changing But haven't changed yet

In other words, share something that you're feeling ambivalent about.

Listener

- Listen carefully with a goal of understanding
- Give no advice
- Ask these open questions and listen with interest
- Why would you want to make this change?
- How might you go about it, in order to succeed?
- What are the three best reasons to do it?
- Give a short summary/reflection of the speaker's motivations for change
- Then ask: "So what do you think you'll do?" and just listen

Feedback

- What was the experience like?
- What did you like?
- What did you not like?
- What did you notice?
- Did you feel encouraged to make the change?

Process of MI

- Engage- Establish a connection, explore strengths and values
- Focusing- Develop a direction that the client chooses
- Evoking- Eliciting patients motivations for change
- Planning- Formulating a specific plan of action, only when the patient is ready

Yes, but… Lifestyle Change is Hard.

Addressing patient one liners.

It's winter and fruits and vegetables aren't good in ND

It have knee problems (or insert other) and can't exercise.

I don't like to sweat.

My husband is the cook and I have to eat what he makes.

Eating healthy is expensive.

I already know what to do..(exercise, diet)..but just don't do it.

What do patients ask for?

- Accountability
- Why's behind change (you are the expert)
- Ideas (meal plan, how to begin with exercise)
- Help to identify realistic short term, medium term and long term goals

Addressing and eliminating barriers

Identify potential barriers

- Cost
  - *Grants/Scholarships*
  - *Food security*
  - *Community based programs (high reach low cost)*
- Demographic Location
  - *Leverage technology*
  - *What is available*
    - School/armory to walk
    - At home Exercise equipment
    - Garden produce

Know your partners/resources and when to refer out

Real Life Example 1

- Betty referred to weight management clinic by cardiology for weight loss prior to procedure. Goal to lose 50lbs.
- Stats: BMI =62.65, A Fib needing ablation procedure.
- Barriers = Limited finances due to medical bills, lives in rural area, limited exercise tolerance
- Currently on a low carb diet because family member was on it and seeing success. Reports feeling tired and joint pain.
- Plan: Start with dietitian – met initially. Decided to journal her food, "move more" and increase F/V intake. Focus on what she can do versus what she cannot.

…3 months later

Betty has lost 37 lbs on way to 50 lbs goal! Current BMI 57.54.

Patient reports not taking naps during the day due to more energy

Joint pain is resolved

Following a balanced calorie controlled plan

Follow up for accountability every 2 weeks where strategies for behavior change are reviewed

Real Life Example 2

Bob is in his 70's. Lives alone. Vision impairment but active. Main goal is to lower glucose to prevent diabetes. Weight loss goal of 20 lbs.

Enters our clinic for biometric screenings (glucose primarily). Knows that he was able to reduce sugars and cholesterol when he lost weight in the past.
Stats: weight 211.5 lbs; glucose 121.

Barriers = dislikes cooking, financial concerns.

Met with Health and Wellness Coach for baseline biometric screening. Met with a Registered Dietitian to discuss current eating patterns and identify where change is needed – fast food, excessive energy intake, and lack of fruits and vegetables. Exercising >60 minutes per day.

Plan: continue exercise routine. RD helps to identify how to cut calories and increase fruits and vegetables in easy ways.

6 months later

Biometric screenings complete
- Glucose 121 to 104
- Weight from 211.5 lbs to goal weight of 179.8 lbs

Continues to exercise daily (1 hour or more) and has incorporate frozen vegetables into his meals and assisted to make healthy easy meals at home from work with RD

Partner up for Patient Centered Care

Health care team (registered dietitian, diabetes educator, physical therapist, occupational therapist, social worker, disease manager, health coach, PCP)

YMCA and other fitness centers and community centers

Food pantries

Public Health Department programs and services

Insurance companies/Accountable Care Organizations (ACO)

Diabetes Prevention Programs

Counselors/Psychology

Conclusion

Meet your patients at their stage of change

Recognize barriers versus excuses

Focus on the positives and what they can do versus what they cannot

Partner up within your community and health system for your patients best chance of success

Small changes make big differences

Resources

2018, MAYO CLINIC, ONSITE TRAINING, MOTIVATIONAL INTERVIEWING

HEALTHY PEOPLE 2020

"EFFECTS ON CARDIOVASCULAR RISK FACTORS OF WEIGHT LOSSES LIMITED TO 5-10%." HTTPS://WWW.NCBI.NLM.NIH.GOV/PMC/ARTICLES/PMC4987606/

"CDC: LIFESTYLE CHANGES CAN REDUCE DEATH FROM TOP 5 CAUSES" HTTPS://WWW.CANCER.ORG/LATEST-NEWS/CDC-LIFESTYLE-CHANGES-CAN-REDUCE-DEATH-FROM-TOP-5-CAUSES.HTML

J Prev Med Public Health. 2010 Nov;43(6):459-71. doi: 10.3961/jpmph.2010.43.6.459. HTTPS://WWW.NCBI.NLM.NIH.GOV/PUBMED/21139406

Thank you for attending the 2019 Hypertension Summit!

Please complete:
Evaluation Form

Tiffany Knauf, Health Systems Coordinator
tknauf@nd.gov 701-328-3222

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