Kentucky + Million Hearts 2022
What One (Awesome) State Can Achieve

Kentucky Heart Disease and Stroke Prevention Task Force
Frankfort, Kentucky
July 11, 2018

Janet Wright MD FACC
Executive Director, Million Hearts

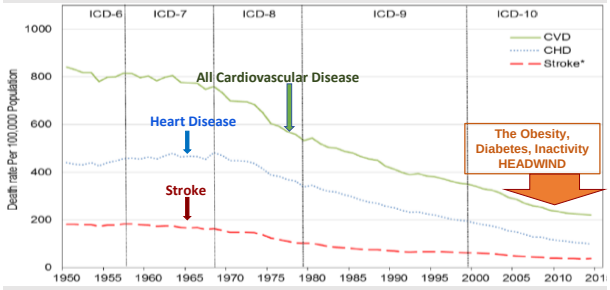
Today's Objectives

- Million Hearts 2022 overview
- Lightning Round: Burning Questions and Feedback
  - What strikes you about this framework?
  - How could you use it to accelerate progress in Kentucky's cardiovascular and cerebrovascular health and care?
  - What "pieces" of Million Hearts 2022 would you like to hear about in more detail?
- The Gauntlet

Million Hearts® 2012—2016

- Improved BP control and Cholesterol management
- Issuance of trans-fat and sodium policies
- Target will likely be hit for tobacco prevalence
- By 2014, nearly **115,000 CV events** were prevented
- We estimate that **up to 500K events** will have been prevented when final data are available in 2019
- Million Hearts = 120 partners, 20 federal agencies, all 50 states, and the District of Columbia

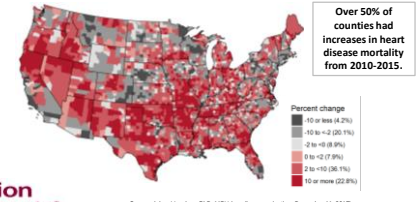
Heart Disease and Stroke Mortality Trends, 1950-2015



Source: Mensah GA, et al. Decline in Cardiovascular Mortality–Possible Causes and Implications. *Circ Res.* 2017;120:366-380.

Heart Disease Mortality Rates

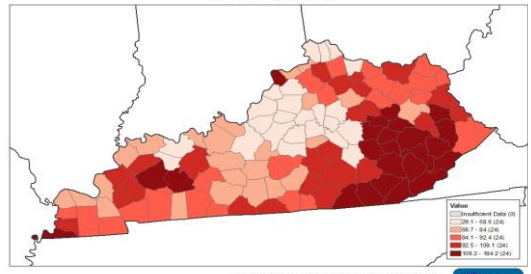
County-level percent change in heart disease death rates, Ages 35-64, 2010-2015



Over 50% of counties had increases in heart disease mortality from 2010-2015.

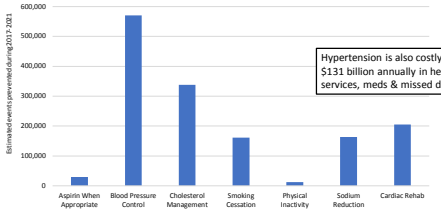
Source: Adam Vaughan, PhD, MPH (email communication, December 11, 2017); Vaughan et al. Widespread recent increases in county-level heart disease mortality across age groups. Annals of Epidemiology. 2017;27:796-800

Avoidable Heart Disease and Stroke Death Rate per 100,000, All Races/Ethnicities, Both Genders, 2014-2016



This map was created using the Interactive Atlas of Heart Disease and Stroke, a website developed by the Centers for Disease Control and Prevention, Division for Heart Disease and Stroke Prevention. http://www.cdc.gov/dhdsp/maps/atlas

Major Contributors to "the Million"



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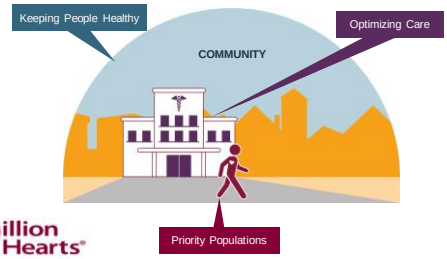
Notes: Describes the estimated number of events prevented if Million Hearts objectives are gradually achieved during 2017-2021. The events included closely aligns with those outlined in Ritchey et al. JAHA. 2017;6(1). The total no. of expected events prevented does not equal the sum of events prevented by risk factor type as those totals are not mutually exclusive. The "aspirin when appropriate" intervention reflects aspirin use for secondary prevention only.

Data sources: *Reflects preliminary findings from simulation modeling conducted using the CVD Policy Model, MedeRealm CVD, and PRISM (unpublished). Baseline risk factor data were determined for aspirin when appropriate using 2015-16 NHANES; BP control and cholesterol management using 2015-16 NHANES; smoking cessation and physical inactivity using 2015 NHIS; and sodium reduction using 2011-12 NHANES. †Cardiac rehab estimates from Ades P, et al. Increasing Cardiac Rehabilitation Participation From 20% to 70%: A Road Map From the Million Hearts Cardiac Rehabilitation Collaborative. Mayo Clin Proc. 2017;92(2):234-242.

Million Hearts® 2022
Aim: Prevent 1 Million Heart Attacks and Strokes in 5 Years



Million Hearts®

Million Hearts® 2022
Objectives and Goals

Keeping People Healthy
Reduce Sodium Intake
Decrease Tobacco Use
Increase Physical Activity

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 due to rising event rates
People who have had a heart attack or stroke
People with mental and/or substance use disorders who smoke

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

Keeping People Healthy

Goals	Effective Public Health Strategies
Reduce Sodium Intake Target: 20%	• Enhance consumers' options for lower sodium foods • Institute healthy food procurement and nutrition policies
Decrease Tobacco Use Target: 20%	• Enact smoke-free space policies that include e-cigarettes • Use pricing approaches • Conduct mass media campaigns
Increase Physical Activity Target: 20% (Reduction of inactivity)	• Create or enhance access to places for physical activity • Design communities and streets that support physical activity • Develop and promote peer support programs

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Optimizing Care

Goals	Effective Health Care Strategies
Improve ABCS* Targets: 80%	***High Performers Excel in the Use of…*** • **Teams**—including pharmacists, nurses, community health workers, and cardiac rehab professionals • **Technology**—decision support, patient portals, e- and default referrals, registries, and algorithms to find gaps in care • **Processes**—treatment protocols; daily huddles; ABCS scorecards; proactive outreach; finding those with undiagnosed high BP or cholesterol, tobacco use, particulate matter exposure • **Patient and Family Supports**—training in home blood pressure monitoring; problem-solving in medication adherence; counseling on nutrition, physical activity, tobacco use, risks of particulate matter; referral to community-based physical activity programs and cardiac rehab
Increase Use of Cardiac Rehab Target: 70%	
Engage Patients in Heart-healthy Behaviors Targets: TBD	

Million Hearts®

*Aspirin use when appropriate, BP control, Cholesterol management, Smoking cessation

Improving Outcomes for Priority Populations

- ✓ Disparate outcome
- ✓ Effective interventions
- ✓ Well-positioned partners

Priority Population	Objectives	Strategies
Blacks/African Americans	• Improving hypertension control	• Deliver guideline-congruent treatment • Problem-solve in med adherence • Advance practice of out-of-readings • Increase access to and participation in community-based activity programs
35-64 year olds	• Improving BP control & statin use • Decreasing physical inactivity	• Implement treatment protocols • Increase access to and participation in community-based activity programs
People who have had a heart attack or stroke	• Increasing cardiac rehab referral and participation • Avoiding exposure to particulates	• Use opt-out referral and CR liaison visits at discharge; ensure timely enrollment • Increase use of Air Quality Index
People with mental and/or substance abuse disorders who smoke	• Reducing tobacco use	• Integrate tobacco cessation into behavioral health treatment • Institute tobacco-free policy at treatment facilities • Tailored quitline protocols

Questions and Input

- What strikes you about this framework?
- How could you use this framework to accelerate progress in Kentucky cardiovascular and cerebrovascular health and care?
- What "pieces" of Million Hearts 2022 would you like hear about in more detail?

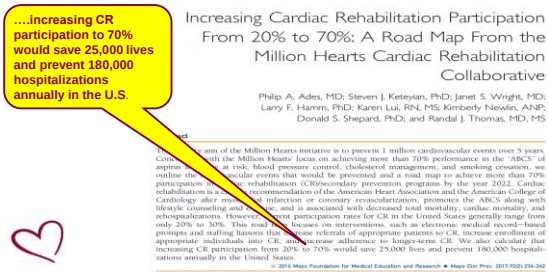
New in Million Hearts 2022

- Physical activity
- **Cardiac Rehab**
- Engaging Patients in Heart-healthy Behaviors
  - **Self-measured Blood Pressure Monitoring**
- "Priority Populations"
- Particle pollution

Cardiac Rehab Saves Lives and Improves Health

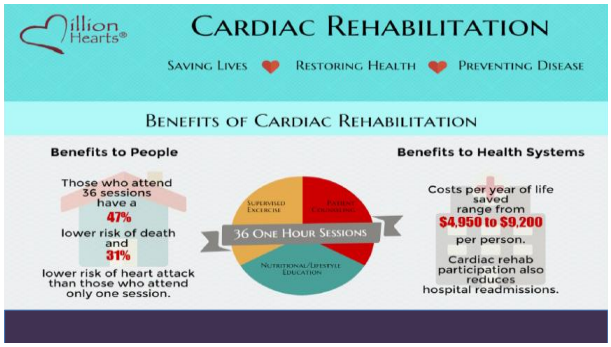
Road-tested Strategies to Boost Participation

….increasing CR participation to 70% would save 25,000 lives and prevent 180,000 hospitalizations annually in the U.S.



Increasing Cardiac Rehabilitation Participation From 20% to 70%: A Road Map From the Million Hearts Cardiac Rehabilitation Collaborative

Philip A. Ades, MD; Steven J. Keteyian, PhD; Janet S. Wright, MD; Larry F. Hamm, PhD; Karen Lui, RN, MS; Kimberly Newlin, ANP; Donald S. Shepard, PhD; and Randal J. Thomas, MD, MS



Cardiac Rehabilitation:

What is it?

Comprehensive, team-delivered out-patient programs that

- Limit the effects of cardiac illness
- Reduce the risk for sudden death or re-infarction
- Control cardiac symptoms
- Stabilize or reverse the atherosclerotic process
- Enhance psychosocial and vocational status

Typically administered in 36 sessions over ~12 weeks

Cardiac Rehabilitation:

Who Benefits?

Strong evidence of benefit---and good insurance coverage---for individuals who have

- Had a heart attack.[1]
- Stable angina.[2]
- Received a stent or angioplasty.[3]
- Heart failure with ejection fraction ≤ 35%.[4]
- Undergone bypass, valve, or a heart, lung, or heart-lung transplant surgery.[5-6]

Cardiac Rehabilitation:
What is the Impact?

- **Reduces:**
  - Death from ***all*** causes by 13-24%[7]
  - Death from ***cardiac*** causes by 26-31%[7]
  - Hospitalizations by **31%**[7]
- **Improves:**
  - Medication adherence
  - Functional status, mood, and Quality of Life scores[7-11]
- **More is Better**
  - 36 vs fewer sessions reduces risk of heart attack and death[12]
  - 25 sessions is generally considered a healthy "dose"[13]

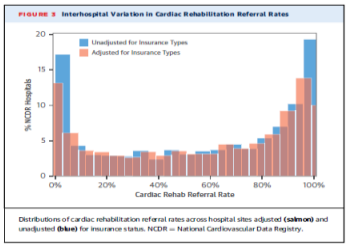
Cardiac Rehabilitation:
Is Referral the Problem?

- **Referral to CR varies by qualifying condition**
  - ~80% for patients with a heart attack[14]
  - ~60% for patients who undergo angioplasty[15]
  - ~10% for patients with heart failure[16]

The strength of the physician's endorsement is the greatest predictor of CR participation.[17]

CR Referral After Cardiac Stent
Striking Variation across Hospitals

- 60% overall referral rate
- The **HOSPITAL** was the most important factor for predicting referral rate
- Ranges from 0 to 100%



Aragam et al, J Am Coll Cardiol 2015 May 19; 65 (19): 2079

CR Referral:
What are the System-Level Barriers?

Referral barriers include

- Lack of awareness of the value of CR
- No clear, consistent signal to patients and families
- CR program is not integrated into CV services
- Eligible patients are not systematically identified
- No automated electronic referral process
  - "Opt-in vs Opt-out" hospital discharge orders[17]

CR Participation:
Who does—and does not--participate?

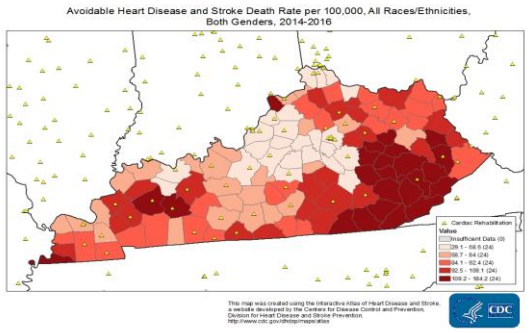
- **Participation rates vary by diagnosis**
  - Higher for heart attack (~14%) and bypass surgery (31%)[19]
  - Lower for patients with heart failure (<3%)[20]
- **Lower participation rates among**
  - People of color
  - Women
  - Elderly
  - People with co-morbidities or low socio-economic status[19, 21]
- **Significant geographic variation**[22, 23]

CR Participation:
What Barriers do Patients Face?

Participation barriers include

- Logistics
  - Transportation/parking
  - Convenient hours
  - Proximity of programs
- Cost-sharing
- Competing responsibilities
- Cultural and language issues[18]

Only **20% to 30%** of eligible people in the U.S. are participating in cardiac rehabilitation.[18]



Million Hearts CR Collaborative
2018-2021 Action Plan Objectives

- ***Increase awareness of the value of CR*** among health systems, clinicians, patients and families, employers, payers
- ***Increase use of best practices*** for referral, enrollment, and participation; address knowledge gaps.
- ***Build equity*** in CR referral, participation, and program staffing
- ***Increase sustainability*** of CR programs through innovations in program design, delivery, and payment
- ***Measure, monitor, report progress*** to the 70% aim

Engaging Patients in Heart-healthy Behaviors

- **Self-Measured BP Monitoring**
- Participation in
  - Diabetes Prevention Program
  - Chronic Disease Self-Management Program
  - Cardiac Rehab
- In consideration
  - Shared Decision-making around statin use
  - Keeping a Physical Activity log and sharing with clinical team

Self-Measured BP Monitoring

- Strong evidence for SMBP + clinical support for achieving control
  - 1:1 counseling
  - Group classes
  - Web-based or telephonic support
- Good evidence for SMBP for confirming diagnosis

The BP Power Cycle

2017 Guidelines SMBP Recommendations

Recommendation for Out-of-Office and Self-Monitoring of BP
References that support the recommendation are summarized in Online Data Supplement 3 and Systematic Review Report.

COR	LOE	Recommendation
I	A[SR]	1. Out-of-office BP measurements are recommended to confirm the diagnosis of hypertension (Table 11) and for titration of BP-lowering medication, in conjunction with telehealth counseling or clinical interventions (1-4).

SR indicates systematic review.

Recommendation for Monitoring Strategies to Improve Control of BP in Patients on Drug Therapy for High BP
References that support the recommendation are summarized in Online Data Supplement 29.

COR	LOE	Recommendation
I	A	1. Follow-up and monitoring after initiation of drug therapy for hypertension control should include systematic strategies to help improve BP, including use of HBPM, team-based care, and telehealth strategies (1-6).

SMBP Implementation Challenges

- Lack of a standard definition, protocol
- Distrust of readings
- Health IT limitations
- Patient-generated data are not used in quality metrics
- Coverage for or access to BP monitors
- Reimbursement for clinician time to
  - Train patients and families
  - Validate monitors
  - Interpret home readings and provide timely advice

Progress to the Ideal System?

- ✓Compelling case for accuracy and OOO readings
- ❑Billing codes or value-based contracting
- ❑Performance measure(s) that consider OOO readings
- ❑EZ, smart connection between patients and clinicians
- ❑Exemplars and implementation guidance
- ❑Activation of people with HTN to "own" their BPs

National SMBP Steering Committee and Forum

- Vision: SMBP will be accessible to everyone for diagnosis and management of hypertension
- National leaders--researchers, clinicians, public health experts, community organizations—are developing the roadmap
- Those committed to advancing SMBP are welcome to join the quarterly Million Hearts SMBP Forum

Million Hearts® Accelerating SMBP in Kentucky

Health Center Teams
- ARcare/KentuckyCare
- Shawnee Christian Health Center
- White House Clinics

Local YMCAs
- YMCA of Greater Louisville
- Central Kentucky YMCA

Local Public Health
- Purchase District Health Department

State and Regional Organizations
- Kentucky Health Center Network
- Kentucky State Alliance of YMCAs
- Kentucky Dept. for Public Health

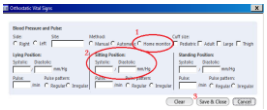
SMBP Measures	Total Patients (Jul '17 – May '18)
Recommendation of SMBP	716
Use of SMBP among HTN Patients	477
Referral to Community Program (e.g. Y BPSM)	39

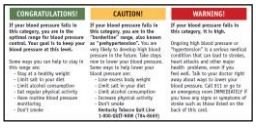
"We were really excited with the early success of our program. We saw a **5% increase** in the number of patients whose blood pressure was controlled over a relatively short implementation period."

Stephanie Moore, MPA, CMPE, CEO, White House Clinics

Kentucky SMBP Best Practices

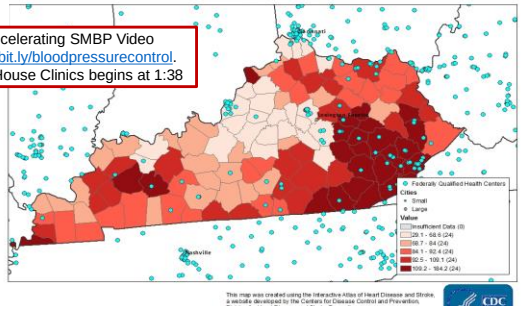
- Develop a written protocol with detailed EHR screen shots
- Train ALL staff on executing the protocol → ensure a "warm handoff"
- Train and use CHWs to:
  - Provide education on risk factors and lifestyle changes
  - Document BP measurements and calculate averages
- Use CARE Collaborative BP log and educational materials





Avoidable Heart Disease and Stroke Death Rate per 100,000, All Races/Ethnicities, Both Genders, 2014-2016

Accelerating SMBP Video
http://bit.ly/bloodpressurecontrol.
White House Clinics begins at 1:38



SO…..
What Can Kentuckians Do?

- Individual and Family Member
- Healthcare Professional
- Community Member and Public Health Expert
- Health System Leader
- Employer

You and Your Family

- Aim for at least 150 min/week of physical activity
- Read the labels for sodium and choose wisely
- Know and manage your ABCS
- Check the AQI and mitigate your exposure to PM 2.5
- Attend CR and encourage family and friends to do so

Healthcare Professional

- Prioritize and excel in the ABCS and CR referral

- **Teams**—including pharmacists, nurses, community health workers, and cardiac rehab professionals
- **Technology**—decision support, patient portals, e- and default referrals, registries, and algorithms to find gaps in care
- **Processes**—treatment protocols; daily huddles; ABCS scorecards; proactive outreach; finding patients with undiagnosed high BP, high cholesterol, or tobacco use
- **Patient and Family Supports**—training in home BP monitoring; problem-solving in medication adherence; counseling on nutrition, physical activity, tobacco use, risks of particulate matter; referral to community-based physical activity programs and cardiac rehab

Community Members and Public Health Experts

- Enact pricing strategies and smoke-free space policies, inclusive of e-cigarettes
- Serve or request healthy food at all meetings, in all facilities
- Contribute to healthy design of your community and to accessible, affordable, and safe places to be active
- Improve awareness of the local air quality index
- Build linkages between health systems and community resources

Health System Leader

Set Expectations and Equip Your Teams to

- Achieve 80% performance on the ABCS among ambulatory primary care and relevant specialty practices
- Achieve 90% referral to CR programs of those eligible
- Achieve 70% initiation rate among those eligible for CR
- Recognize/reward high performance on ABCS and CR

Million Hearts Employer

- Adopt policies and practices to ensure clean air for employees, visitors, and staff
- Design benefits to enhance employee health:
  - No cost-share for BP, statin, tobacco cessation meds, cardiac rehab
  - Free BP monitors
- Provide on-site BP monitoring with clinical support
- Sponsor walking and other physical activity programs
- Procure and label food consistent with national food service guidelines

Requests and Up-comings

- Join the CR Collaborative and/or the SMBP Forum
- Visit millionhearts.hhs.gov
  - Hypertension Control Change Package
  - SMBP and Hiding in Plain Sight videos and guides
  - Million Hearts microsite for ***evergreen*** clinical resources
- ***Coming soon***
  - Cardiac Rehab Change Package on website this September!
  - Vital Signs in September with Kentucky's "share" of events
  - 2018 Hypertension Champions announced this fall

Thank you

- More on Million Hearts 2022 at millionhearts.hhs.gov
- To join
  - CR Collaborative, contact Haley Stolp at hstolp@cdc.gov
  - SMBP Forum, email MillionHeartsSMBP@nachc.org
- Reach me at janet.wright@cms.hhs.gov

Resources and Additional Data

Million Hearts® Microsite for Clinicians

- Features Million Hearts® protocols, action guides, and other QI tools
- Syndicates **LIVE** Million Hearts® on your website for your clinical audience
- Requires a small amount of HTML code—customizable by color and responsive to layouts and screen sizes
- Content is free, cleared, and continuously maintained by CDC

Available at https://tools.cdc.gov/medialibrary/index.aspx#/microsite/id279017

New Resources

- Million Hearts® 2022 web content
  - Particle Pollution
  - Physical Activity
  - Tobacco Use
  - Partner Opportunities
  - Cardiac Rehabilitation
- EPA's citizen science mobile app:

Smoke Sense

Smoke Sense

Resources for Finding those with Undiagnosed Hypertension

- Maine Center for Disease Control and Prevention **HIPS video** – https://vimeo.com/136615637
- National Association of Community Health Centers – **Consolidated Change Package** - leverages HIT, QI, and care teams to identify hypertensive patients hiding in plain sight
- **Hypertension Prevalence Estimator –** For practices/systems to use to estimate their expected hypertension prevalence
- **Whiteboard animation** – a creative depiction of the "hiding in plain sight" phenomenon and what clinical teams can do
- https://millionhearts.hhs.gov/tools-protocols/hiding-plain-sight/index.html

Million Hearts Clinical Resources and Tools

- Action Guides
  - Hypertension Control: Change Package for Clinicians
  - Self-Measured Blood Pressure Monitoring: Action Steps for Clinicians
  - Identifying and Treating Patients Who Use Tobacco: Action Steps for Clinicians
- Team Protocols for treating Hypertension, Tobacco use, Cholesterol
- Undiagnosed Hypertension
  - Finding Patients "Hiding in Plain Sight" change package
  - Prevalence Estimator Tool
- Making the Most of Health IT
  - Million Hearts® EHR Optimization Guides-how to find and use data on the ABCS
- Clinical Quality Measures
  - Million Hearts® ABCS
  - Million Hearts® Dashboard – quality reporting on the ABCS measures by state
- Other Tools
  - ASCVD Risk Estimator
  - Hypertension Control Champion Success Stories

Million Hearts® for Clinicians Microsite at https://tools.cdc.gov/medialibrary/index.aspx#/microsite/id279017

Million Hearts Community Resources and Tools

- Action Guides
  - Self-Measured Blood Pressure Monitoring: Action Steps for Public Health
  - Medication Adherence: Action Steps for Public Health Practitioners
  - Medication Adherence: Action Steps for Health Benefit Managers
  - Cardiovascular Health: Action Steps for Employers
- CDC State Heart Disease and Stroke Prevention Programs
  - State Public Health Actions to Prevent and Control Diabetes, Heart Disease, Obesity and Associated Risk Factors and Promote School Health (1305)
  - Coverdell National Acute Stroke Program
  - WISEWOMAN
  - Sodium Reduction in Communities
  - Building GIS Capacity for Chronic Disease Surveillance
- Million Hearts Cardiac Rehab Collaborative
- Healthy Is Strong
- 100 Congregations for Million Hearts

Million Hearts Consumer Resources and Tools

- Heart Age Predictor
- My Life Check ®
- High Blood Pressure: How to Make Control Your Goal
- Visit Checklist
- Supporting Your Loved One with High Blood Pressure
- Blood Pressure Wallet Card
- Smoke Free (SF)
- Million Hearts Videos (on YouTube)
- Million Hearts E-Cards & Shareables
- Mind Your Risks
- Tips from Former Smokers

Self-Measured BP Resources

Guidance for clinicians on:

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

Tips for Communities to Improve Physical Activity

- Create or enhance access to places for physical activity
- Design communities and streets that support physical activity
- Develop and promote peer support groups

http://www.ca-city.com/complete_streets/fundamentals.html

GirlTrek
Take a walk. Join a movement.

walkpoc

WALK WITH EASE
a program for better living
ARTHRITIS FOUNDATION

Million Clicks for Million Hearts®

- Allentown, PA Health Bureau program
- 10 click-in stations on walking paths around the city
- Participants tap a keytab to track their walks
- PRIZES!

https://www.allentownpa.gov/Health-Bureau/Million-Clicks-for-Million-Hearts

Particle Pollution

- $PM_{2.5}$ refers to particulate matter of 2.5 micrometers or less in diameter
- Exposure is linked to an increase in risk of heart attacks, strokes, and rhythm disorders
- Particle pollution info on Million Hearts website

Image source: EPA, Office of Research and Development
https://www.epa.gov/pm-pollution/particulate-matter-pm-basics#PM

Populations At-Risk Are Known

Susceptible populations include –

- Populations with pre-existing respiratory disease
- Populations with pre-existing cardiovascular disease
- Adults 65 years of age and older
- Populations with lower socio-economic status
- Children & the developing fetus

Populations suspected to be at greater risk –

- Populations with chronic inflammatory diseases (e.g., diabetes, obesity)
- Populations with specific genetic polymorphisms (e.g., GSTM1) mediate physiologic response to air pollution

55

Really Good News: Barbers + Pharmacists Teaming Up with Clinicians

Results
Intervention @ 6 months:
152.8 – **27** = 125.8mm Hg

63.6% reached <130/80

Control @ 6 months:
154.6 – **9** = 145.4mm Hg

11.7% reached <130/80


The NEW ENGLAND JOURNAL of MEDICINE

ORIGINAL ARTICLE

A Cluster-Randomized Trial of Blood-Pressure Reduction in Black Barbershops

Ronald G. Victor, M.D., Kathleen Lynch, Pharm.D., Ning Li, Ph.D., Ciantel Blyler, Pharm.D., Eric Muhammad, B.A., Joel Handler, M.D., Jeffrey Brettler, M.D., Mohamad Rashid, M.B., Ch.B., Brent Hou, B.S., Davontae Foxx-Drew, B.A., Norma Moy, B.A., Anthony E. Reid, M.D., and Robert M. Elashoff, Ph.D.

ABSTRACT

BACKGROUND

Lessons
1. Community care
2. Pharmacists prescribed dual therapy by protocol
3. Frequent contact
4. Aimed for lower target

Margolis KL, n engl j med 378;14 nejm.org April 5, 2018

Victor RG et al, n engl j med 378;14 nejm.org April 5, 2018

What is THIS?

What is JUUL?

- Electronic vaporizer that uses nicotine salts
- Promoted as a "satisfying alternative to cigarettes"
- "By accommodating cigarette-like nicotine levels, JUUL provides satisfaction to meet the standards of smokers looking to switch from smoking cigarettes."
- Available in tobacco, fruit, mint and other flavors
- Every JUUL flavored pod contains nicotine

https://www.juulvapor.com/

JUUL – Nicotine Delivery