

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

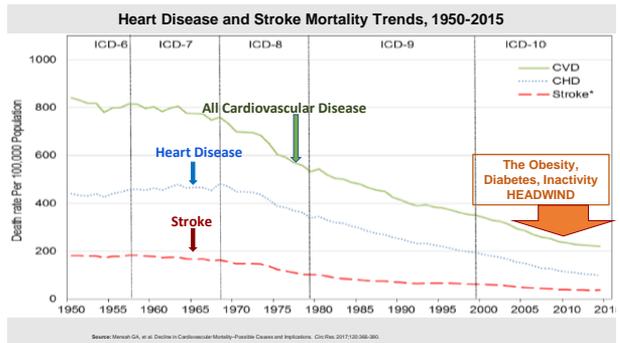
Today's Objectives

- 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



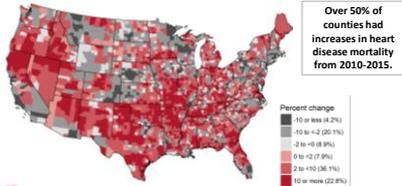
Million Hearts® 2012—2016

- 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



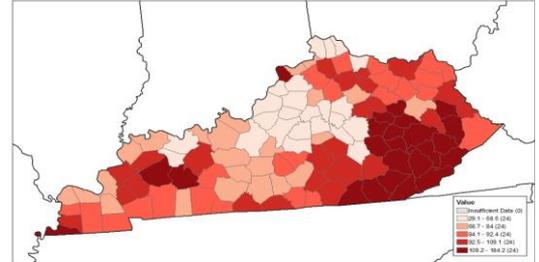
Heart Disease Mortality Rates

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



Source: Adam Vaughan, PhD, MPH (email communication, December 11, 2017); Vaughan et al. Unpublished report presented to county-level heart disease mortality across age groups. *Annals of Epidemiology*. 2017;27:756-60

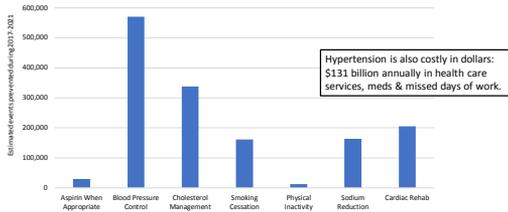
Avoidable Heart Disease and Stroke Death Rate per 100,000, All Races/Ethnicities, Both Genders, 2014-2016



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://interactive.cdc.gov/heartdisease>



Major Contributors to "the Million"



Hypertension is also costly in dollars: \$131 billion annually in health care services, meds & missed days of work.



Million Hearts® 2022

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



Million Hearts® 2022 Objectives and Goals

Keeping People Healthy	Optimizing Care
Reduce Sodium Intake	Improve ABCS*
Decrease Tobacco Use	Increase Use of Cardiac Rehab
Increase Physical Activity	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



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

Keeping People Healthy

Goals	Effective Public Health Strategies
Reduce Sodium Intake Target: 20%	<ul style="list-style-type: none"> Enhance consumers' options for lower sodium foods Institute healthy food procurement and nutrition policies
Decrease Tobacco Use Target: 20%	<ul style="list-style-type: none"> Enact smoke-free space policies that include e-cigarettes Use pricing approaches Conduct mass media campaigns
Increase Physical Activity Target: 20% (Reduction of inactivity)	<ul style="list-style-type: none"> Create or enhance access to places for physical activity Design communities and streets that support physical activity Develop and promote peer support programs



Optimizing Care

Goals	Effective Health Care Strategies
Improve ABCS* Targets: 80%	<p><i>High Performers Excel in the Use of...</i></p> <ul style="list-style-type: none"> 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	



*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	<ul style="list-style-type: none"> Improving hypertension control 	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> Improving BP control & statin use 	<ul style="list-style-type: none"> Implement treatment protocols Increase access to and participation in community-based activity programs
People who have had a heart attack or stroke	<ul style="list-style-type: none"> Increasing cardiac rehab referral and participation Avoiding exposure to particulates 	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> Reducing tobacco use 	<ul style="list-style-type: none"> 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. Hamen, PhD; Karen Lui, RN, MS; Kimberly Newlin, ANP; Donald S. Shepard, PhD; and Randal J. Thomas, MD, MS

The mission of the Million Hearts initiative is to prevent 1 million cardiovascular events over 5 years. Coupled with the Million Hearts focus on achieving more than 70% performance in the "ABCs" of aspirin, blood pressure control, cholesterol management, and smoking cessation, we outline the cardiovascular events that would be prevented and a road map to achieve more than 70% participation in cardiac rehabilitation (CR)/secondary prevention programs by the year 2022. Cardiac rehabilitation is a well-recommended of the American Heart Association and the American College of Cardiology after myocardial infarction or coronary revascularization, promotes the ABCs along with lifestyle counseling and is associated with decreased total mortality, cardiac mortality, and hospitalizations. However, current participation rates for CR in the United States generally range from only 20% to 30%. This road map focuses on interventions, such as electronic medical record-based prompts and staffing liaison that increase referrals of appropriate patients to CR, increase enrollment of appropriate individuals into CR, and increase adherence to long-term CR. We also calculate that increasing CR participation from 20% to 70% would save 25,000 lives and prevent 180,000 hospitalizations annually in the United States.



CARDIAC REHABILITATION
SAVING LIVES ♥ RESTORING HEALTH ♥ PREVENTING DISEASE

BENEFITS OF CARDIAC REHABILITATION

<p>Benefits to People</p> <p>Those who attend 36 sessions have a 47% lower risk of death and 31% lower risk of heart attack than those who attend only one session.</p>		<p>Benefits to Health Systems</p> <p>Costs per year of life saved range from \$4,950 to \$9,200 per person. Cardiac rehab participation also reduces hospital readmissions.</p>
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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 scores⁷⁻¹¹
- **More is Better**
 - 36 vs fewer sessions reduces risk of heart attack and death¹²
 - 25 sessions is generally considered a healthy "dose"¹³



Cardiac Rehabilitation: Is Referral the Problem?

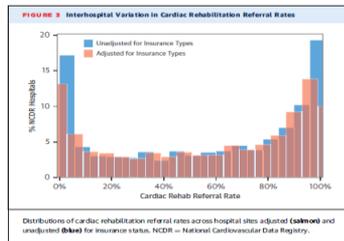
- **Referral to CR varies by qualifying condition**
 - ~80% for patients with a heart attack¹⁴
 - ~60% for patients who undergo angioplasty¹⁵
 - ~10% for patients with heart failure¹⁶

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 orders¹⁷



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

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?

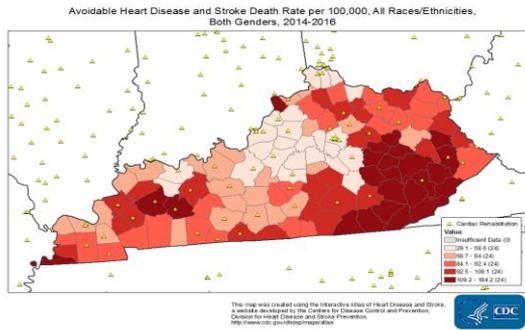
What Barriers do Patients Face?

Participation barriers include

- Logistics
 - Transportation/parking
 - Convenient hours
 - Proximity of programs
- Cost-sharing
- Competing responsibilities
- Cultural and language issues¹⁸

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



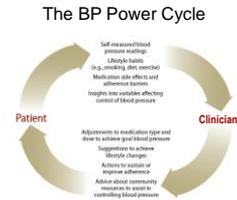
Engaging Patients in Heart-healthy Behaviors

- **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



2017 Guidelines SMBP Recommendations

Recommendation for Out-of-Office and Self-Monitoring of BP	
COR	LOE
I	A ⁺
1. Out-of-office BP measurements are recommended to confirm the diagnosis of hypertension (Table 13) and for titration of BP-lowering medication, in conjunction with telehealth counseling or clinical interventions (1-4).	
SA indicates systematic review.	
Recommendation for Monitoring Strategies to Improve Control of BP in Patients on Drug Therapy for High BP	
COR	LOE
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

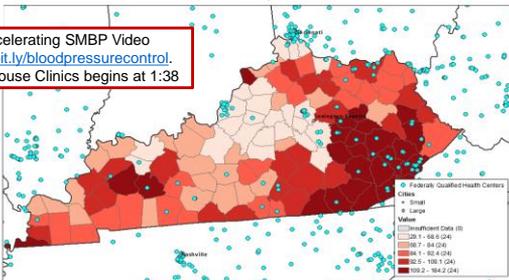


Kentucky SMBP Best Practices

- 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



This map was created using the Interactive Atlas of Heart Disease and Stroke, a website developed by the Centers for Disease Control and Prevention.

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 AQJ 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/022907>

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](#)



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/022907>



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



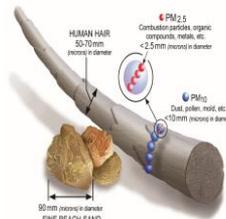
Million Clicks for Million Hearts®

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



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](#)



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., Ciardel Byler, Pharm.D., Eric Muhammad, B.A., Joel Handler, M.D., Jeffrey Bretler, M.D., Mohamad Rashid, M.B., Ch.S., Brent Hsu, B.S., Davontae Foss-Drew, B.A., Norma May, B.A., Anthony E. Reid, M.D.,* and Robert M. Elashoff, Ph.D.

ABSTRACT

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

Lessons

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

MillionHearts.org | 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

