Getting Serious About CVD Prevention:

*Tips and Traumas from Million Hearts*

Reducing Variation and Optimising Care

Public Health England

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Executive Director, Million Hearts
Disclosure

The opinions expressed by the speaker do not necessarily reflect the opinions of the US Department of Health and Human Services, the Centers for Disease Control and Prevention, or the Centers for Medicare and Medicaid Services. Use of trade names is for identification only and does not imply endorsement.
Today’s Objectives

• Describe what, why, how of Million Hearts
• Summarize results and lessons learned
• Bond so we can make progress together
"Depend upon it Sir, when a man knows he is to be hanged in a fortnight, it concentrates his mind wonderfully."

Deadlines Motivate

Samuel Johnson
Million Hearts 2012-2016 Framework

Keeping Us Healthy
Changing the environment

Excelling in the ABCS
Optimizing care

Focus on the ABCS*
Health information technology
Innovations in care delivery

*Aspirin, Blood pressure control, Cholesterol management, Smoking cessation
Delays on TF, sodium New Chol GLs New Hypertension Recs Increasing diabetes and obesity

Engage stakeholders, implement evidence-based strategies

1M fewer events
Heart Disease and Stroke Mortality Trends, 1950-2015

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
Million Hearts 1.0
Will We Prevent the ‘Million’?
Million Hearts® 2012-2016

• Improvements in Aspirin, BP control, Cholesterol; progress in artificial trans-fat and sodium policies
• Target likely achieved for tobacco prevalence
• Millions covered by systems reporting on the ABCS
• By 2014, ~115,000 CV events were prevented
• We estimate that up to half a million events total will have been prevented when final data are in
• Million Hearts® = 120 official partners, 20 federal agencies, all 50 states, and the District of Columbia
Million Hearts 1.0
Lessons Learned

• Choose a simply-stated, time-limited, specific aim
• Leverage the complementary assets of public health and health care
• Focus on a small set of evidence-based, high-impact strategies and as few measures as possible
• Set a large table with options for implementation
Million Hearts 1.0
Lessons Learned

• Find and feed those who motivate, equip, and lead
• Communicate 24/7 and via multiple vehicles
• Parse data by its highest purpose
• Adapt quickly when guidelines & measures change
• Recognize high performance--generates great returns
Million Hearts
Hypertension Control Champions

• 59 Champions over 5 years
• Achieved control rates at/above 70%
• Serve more than 15 million adults
• Range from small and solo practices to large systems
• 2018 Program announced soon
Precise BP Measurement: Rounding

- Last recorded systolic BP – 163,000 patients, age 18–85, with hypertension, across three medical groups:

- Last recorded systolic BP – 70,000 patients, age 18–85, with hypertension, in two other medical groups:

Data: AMGA Measure Up Pressure Down
Precise BP Measurement: 
*Odds are Out*

Bars are colored by the last digit of systolic BP. Blue represents a last digit of zero, which would include patients with an SBP of 100, 110, 120, 130, 140, etc. Lighter colors correspond to even numbers, darker colors to odd numbers.
Precise BP Measurement: *Before and After.....What?*

Distributions of BP measurements at one site—a neurology clinic

12/01/12-09/30/13
N=1028
Congratulations

2015 Hypertension Control Champions

Full list of Champions at millionhearts.hhs.gov

million Hearts®

Broadway Internal Medicine, NYC
Technique is Critical....and Rare

- Proper patient positioning is important for accuracy both at home and in the office.
- Devote eternal vigilance to good technique.

Source: Target BP: How to measure your blood pressure at home
Customizable templates and exemplar protocols

- Hypertension control
- Cholesterol management
- Tobacco assessment and treatment

Expands the care team able to assist in achieving control

Standardizes the content and delivery of lifestyle modification advice

Lends clarity, efficiency, and cost-effectiveness to selection of meds

Specifies intervals and processes for follow up

Million Hearts®
Who is Hiding in Plain Sight?

Finding Patients with Undiagnosed Hypertension

Implement a plan for addressing the identified population

Compare to local, state, or national prevalence data

Search EHR data for patients that meet clinical criteria

Establish clinical criteria for potential undiagnosed HTN

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

Patient

Clinician

Self-measured blood pressure readings
Lifestyle habits (e.g., smoking, diet, exercise)
Medication side effects and adherence barriers
Insights into variables affecting control of blood pressure

Adjustments to medication type and dose to achieve goal blood pressure
Suggestions to achieve lifestyle changes
Actions to sustain or improve adherence
Advice about community resources to assist in controlling blood pressure
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

....increasing CR participation from 20% to 70% would save 25,000 lives and prevent 180,000 hospitalizations annually in the United States.
Simulation Modeling for Million Hearts® Planning

- **Original Million Hearts® Initiative**
- **First 5-year Period**
- **Second 5-year Period**

**CVD Policy Model**

**Prevention Impacts Simulation Model (PRISM)**

**HealthPartners ModelHealth™: CVD Microsimulation Model**

**Risk Factors Assessed**
- Aspirin use for secondary CVD prevention
- Blood pressure control
- Cholesterol management
- Smoking prevalence
- Secondhand smoke exposure
- Mean daily sodium intake reduction
- Obesity prevalence
- Diabetes incidence
- Diabetes management
- Particulate matter
- Poor fruit and vegetable diet
- Excess junk food
- Inadequate physical activity
Relative Contributions to “the Million”

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. JAHÄ. 2017;6(5). 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.

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

- Keeping People Healthy
- Optimizing Care
- Priority Populations
# Million Hearts® 2022

## Priorities 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

<table>
<thead>
<tr>
<th>Population</th>
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<tbody>
<tr>
<td>Blacks/African-Americans with Hypertension</td>
</tr>
<tr>
<td>35-64 year olds due to rising event rates</td>
</tr>
<tr>
<td>People who have had a heart attack or stroke</td>
</tr>
<tr>
<td>People with mental illness or substance use disorders who smoke</td>
</tr>
</tbody>
</table>

*Aspirin, Blood pressure control, Cholesterol management, Smoking cessation*
## Keeping People Healthy

<table>
<thead>
<tr>
<th>Goals</th>
<th>Effective Public Health Strategies</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Reduce Sodium Intake</strong></td>
<td>• Enhance consumers’ options for lower sodium foods</td>
</tr>
<tr>
<td>20% Target</td>
<td>• Institute healthy food procurement and nutrition policies</td>
</tr>
<tr>
<td><strong>Decrease Tobacco Use</strong></td>
<td>• Enact smoke-free space policies that include e-cigarettes</td>
</tr>
<tr>
<td>20% Target</td>
<td>• Use pricing approaches</td>
</tr>
<tr>
<td></td>
<td>• Conduct mass media campaigns</td>
</tr>
<tr>
<td><strong>Increase Physical Activity</strong></td>
<td>• Create or enhance access to places for physical activity</td>
</tr>
<tr>
<td>20% Target</td>
<td>• Design communities and streets that support physical activity</td>
</tr>
<tr>
<td></td>
<td>• Develop and promote peer support programs</td>
</tr>
</tbody>
</table>
### Optimizing Care

<table>
<thead>
<tr>
<th>Goals</th>
<th>Effective Healthcare Strategies</th>
</tr>
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</table>
| **Improve ABCS**<sup>*</sup>  <br> 80% Targets | *High Performers Excel in the Use of.......*  
- **Technology** – decision support, patient portals, e- and default referrals, registries, and algorithms to find gaps in care  
- **Teams** – including pharmacists, nurses, community health workers, cardiac rehab professionals  
- **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 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**  <br> 70% Target | |
| **Engage Patients in Heart-healthy Behaviors**  <br> Targets TBD | |

*Aspirin, Blood pressure control, Cholesterol management, Smoking cessation*
<table>
<thead>
<tr>
<th>Priority Population</th>
<th>Objectives</th>
<th>Strategies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Blacks/African Americans</td>
<td>• Improving hypertension control</td>
<td>• Implement tailored protocols</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Problem-solve in med adherence</td>
</tr>
<tr>
<td>35-64 year olds</td>
<td>• Improving HTN control and statin use</td>
<td>• Implement tailored protocols</td>
</tr>
<tr>
<td></td>
<td>• Decreasing physical inactivity</td>
<td>• Increase access to and participation in community-based activity programs</td>
</tr>
<tr>
<td>People who have had a heart attack or stroke</td>
<td>• Increasing cardiac rehab referral and participation</td>
<td>• Use opt-out referral and CR liaison visits at discharge; ensure timely enrollment post-discharge</td>
</tr>
<tr>
<td></td>
<td>• Avoiding exposure to particulate matter</td>
<td>• Increase use of Air Quality Index tools</td>
</tr>
<tr>
<td>People with mental illness or substance</td>
<td>• Reducing tobacco use</td>
<td>• Integrate tobacco cessation into behavioral health treatment</td>
</tr>
<tr>
<td>abuse disorders</td>
<td></td>
<td>• Institute tobacco-free policy at mental health and substance use treatment facilities</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Tailored quitline protocols</td>
</tr>
</tbody>
</table>
“Somebody needs to do something. It’s just incredibly pathetic that it has to be us.”

Jerry Garcia
Thank you

• More information about Million Hearts 2022 at www.millionhearts.gov
• Reach me at janet.wright@cms.hhs.gov
Discussion
Questions and Insights

- Clarifying questions
- Feedback
- Advice
Million Hearts Resources and Supplemental Materials
Million Hearts® 2022 web content
  • Particle Pollution
  • Physical Activity
  • Tobacco Use
  • Partner Opportunities
  • Cardiac Rehabilitation

EPA’s citizen science mobile app: *Smoke Sense*
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/id/279017
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
‘Undiagnosed’ Resources

• 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

<table>
<thead>
<tr>
<th>Measure</th>
<th>Measure Number</th>
<th>Measure Description</th>
</tr>
</thead>
</table>
| Aspirin When Appropriate        | NQF 0068       | **Ischemic Vascular Disease (IVD): Use of Aspirin or Another Antithrombotic**  
Percentage of patients aged 18 years and older with IVD with documented use of aspirin or other antithrombotic |
| Blood Pressure Control          | NQF 0018       | **Hypertension: Controlling High Blood Pressure**  
% of patients aged 18 - 85 years with a diagnosis of HTN and an office BP of <140/90 during the measurement year |
| Cholesterol Management          | PQRS 438       | **Statin Therapy for the Prevention and Treatment of Cardiovascular Disease**  
% who were prescribed or on statin therapy during the measurement period:  
- Adults aged ≥ 21 years who were previously diagnosed with or currently have an active diagnosis of clinical atherosclerotic cardiovascular disease; OR  
- Adults aged ≥21 years with a fasting or direct LDL-C level ≥ 190 mg/dL; OR  
- Adults aged 40-75 years with a diagnosis of diabetes with a fasting or direct LDL-C level of 70-189 mg/dL |
| Smoking Cessation               | NQF 0028       | **Preventive Care and Screening: Tobacco Use**  
% of patients ≥18 years who were screened about tobacco use one or more times within 24 months and who received cessation counseling intervention if a tobacco user |
| Cardiac Rehab Referral          | NQF 0643 NQF 0642 | **Referral to CR from Inpatient or Outpatient Setting**  
% of patients with an eligible diagnosis who are referred from a hospital (or office) to an early outpatient CR program |
| BMI                             | NQF 0421       | **Screening and Follow-Up**  
% of patients ≥ 18 years with a documented BMI during the current encounter or during the previous six months AND when the BMI is outside of normal parameters, a follow-up plan is documented during the encounter. |
# Million Hearts® Quality Measure Alignment in National Quality Reporting Systems

<table>
<thead>
<tr>
<th>Quality Reporting Initiative</th>
<th>Primary Measures</th>
<th>Secondary Measures</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Aspirin when Appropriate</td>
<td>Blood Pressure Control</td>
</tr>
<tr>
<td>CMS Quality Payment Program</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>AHRQ EvidenceNow</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>ABFM Prime Registry</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>AHA Guideline Advantage</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>ACP Genesis Registry</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>ACC PINNACLE Registry</td>
<td>No</td>
<td>✓</td>
</tr>
<tr>
<td>CMS ACO Shared Savings</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>TCPI</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>CMS Home Health CV Data Registry</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>HRSA Uniform Data System</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Comprehensive Primary Care</td>
<td>No</td>
<td>✓</td>
</tr>
<tr>
<td>IHS RPMS</td>
<td>No</td>
<td>✓</td>
</tr>
<tr>
<td>Medicaid Adult Core Set</td>
<td>No</td>
<td>✓</td>
</tr>
</tbody>
</table>

- ✓ Indicates measure alignment as of February 2017
- † Measure is not identical, but similar and meets stakeholders needs
- ‡ Measure will be added for reporting in 2019 after e-specifications are released in May 2017

NOTE: ABCS measures are in the Cardiology, Internal Medicine, and General Practice/Family Medicine Specialty Measure Sets