Million Hearts 2022: A Compelling Call to Action

Accessible version: https://www.youtube.com/watch?v=_rTpoWxOHOk

February 20, 2018
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Scientific publications about this topic at:
cdc.gov/library/sciclips

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CDC PUBLIC HEALTH GRAND ROUNDS

Million Hearts 2022: A Compelling Call to Action

February 20, 2018
Million Hearts® 2022: Focusing Action for Impact

Janet S. Wright, MD, FACC
Executive Director, Million Hearts®
Division for Heart Disease and Stroke Prevention, CDC
Center for Clinical Standards and Quality, CMS
Heart Disease and Stroke in the U.S.

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

Burden of Heart Disease and Stroke
National Data, 1950–2015

Heart Disease Mortality Rates

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

Over 50% of counties experienced increases in heart disease mortality from 2010–2015.

Percent change
-10 or less (4.2%)
-10 to < -2 (20.1%)
-2 to < 0 (8.9%)
0 to < 2 (7.9%)
2 to < 10 (36.1%)
10 or more (22.8%)

Million Hearts® 2012–2016

- Improvements in Aspirin, Blood pressure control, Cholesterol management; progress in artificial trans-fat and sodium policies
- Target likely hit for tobacco prevalence
- By 2014, ~115,000 cardiovascular events were prevented, relative to expected number if 2011 rates had remained stable
- We estimate that up to half a million total events may have been prevented
- Million Hearts® effort involved 120 official partners, 20 federal agencies, and all 50 states and the District of Columbia
Million Hearts 1.0 Lessons Learned

- Simply-stated, time-limited, and specific aim
- Leverage complementary assets of public health and health care
- Focus on a small set of evidence-based strategies and measures
Million Hearts 1.0 Lessons Learned

- Set a large table with options for implementation
- Champions motivate, equip, and lead the work
- Communicate via multiple vehicles, frequently
- Adapt quickly when guidelines and measures change
- Recognizing high performance generates great returns
Relative Contributions to “the Million”

Reflects preliminary findings from simulation modeling conducted using the CVD Policy Model, ModelHealth:CVD, and PRISM (unpublished). Baseline data were determined for: aspirin when appropriate using 2013-14 NHANES; BP control and cholesterol management using 2011-14 NHANES; smoking cessation and physical inactivity using 2015 NHIS; and sodium reduction using 2011-12 NHANES.


The events included closely align with those outlined in Ritchey et al. JAMA. 2017;6(5). The total number 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 secondary prevention only.
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

<table>
<thead>
<tr>
<th>Keeping People Healthy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reduce sodium intake</td>
</tr>
<tr>
<td>Decrease tobacco use</td>
</tr>
<tr>
<td>Increase physical activity</td>
</tr>
</tbody>
</table>
## Million Hearts® 2022 Priorities

### 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

**ABCS: Aspirin use when appropriate, Blood pressure control, Cholesterol management, Smoking cessation**
## Million Hearts® 2022

### Priorities

#### 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
- 35–64 year-olds
- People who have had a heart attack or stroke
- People with mental illness or substance use disorders who use tobacco

ABCS: Aspirin use when appropriate, 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>Target: 20%</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>Target: 20%</td>
<td>• Use pricing approaches</td>
</tr>
<tr>
<td><strong>Increase Physical Activity</strong></td>
<td>• Conduct mass media campaigns</td>
</tr>
<tr>
<td>(Reduction of inactivity)</td>
<td>• Create or enhance access to places for physical activity</td>
</tr>
<tr>
<td></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>
</thead>
</table>
| Improve ABCS  
Targets: 80% |  |
| Increase Use of Cardiac Rehab  
Target: 70% | *High performers excel in the use of...*  |
| Engage Patients in Heart-healthy Behaviors  
Targets: TBD |  |

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

ABCS: Aspirin use when appropriate, Blood pressure control, Cholesterol management, Smoking cessation
### Improving Outcomes for Priority Populations

<table>
<thead>
<tr>
<th>Priority Population</th>
<th>Intervention Needs</th>
<th>Strategies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Blacks/African Americans with hypertension</td>
<td>• Improving hypertension (HTN) control</td>
<td>• Targeted protocols</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Medication adherence strategies</td>
</tr>
<tr>
<td>35–64 year olds where event rates are rising</td>
<td>• Improving HTN control and statin use</td>
<td>• Targeted protocols</td>
</tr>
<tr>
<td></td>
<td>• Increasing physical activity</td>
<td>• Community-based program enrollment</td>
</tr>
<tr>
<td>People who have had a heart attack or stroke</td>
<td>• Increasing cardiac rehab referral and participation</td>
<td>• Automated referrals, hospital CR liaisons, convenient referrals</td>
</tr>
<tr>
<td></td>
<td>• Avoiding exposure to air pollution</td>
<td>• Air Quality Index tools</td>
</tr>
<tr>
<td>People with mental illness or substance abuse disorders who use tobacco</td>
<td>• Reducing tobacco use</td>
<td>• Integrating tobacco cessation into behavioral health treatment</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Tobacco-free mental health and substance use treatment campuses</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Tailored quitline protocols</td>
</tr>
</tbody>
</table>
What’s New in Million Hearts® 2022

Physical Activity

Cardiac Rehabilitation

Priority Populations

Million Hearts® 2022
Creating Livable, Prosperous and Healthy Communities

Leslie A. Meehan, MPA AICP
Director, Office of Primary Prevention
Tennessee Department of Health
Office of the Commissioner
What Drives our Health?

Health care is necessary—but not sufficient—for good health.
“Most chronic diseases and conditions are a normal response by normal people to an abnormal environment.”

—David Mowat, Canadian Partnership Against Cancer
The Built Environment: Our Streets Should Be Public Assets

- Limited sidewalks
- No bicycle lanes
- Fast food, not fresh food
- Predatory lending
- Signs and electrical wires
The Role of Transportation


- Adult Obesity
- VMT (in millions of miles)

Year

Adult Obesity %
0 5 10 15 20 25 30 35 40 45

VMT (millions)
0 500,000 1,000,000 1,500,000 2,000,000 2,500,000 3,000,000 3,500,000

CDC – NHANES; U.S. Department of Transportation, Federal Highway Administration
What Public Health Can Do to Improve the Built Environment

- **Tennessee Department of Health**
  - Plans
  - Staff
  - Grants
  - Cross-sector communication
  - Clinic to community
  - Data collection and analysis

- **Ten leading causes of death in TN**
  all related to physical inactivity

- **Quantifying public opportunities**
  to walk, bicycle, and play
Primary Prevention as the Tennessee Department of Health (TDH) Way
<table>
<thead>
<tr>
<th>Topic</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Youth Obesity</td>
<td>39.2% of public school students have an overweight or obese BMI</td>
</tr>
<tr>
<td>Infant Mortality</td>
<td>7 Death rate of infants per 1,000 live births</td>
</tr>
<tr>
<td>Reading Level</td>
<td>48.8% of 3rd graders are reading at their grade level</td>
</tr>
<tr>
<td>Physical Inactivity</td>
<td>28.4% of adults report not exercising in the past month</td>
</tr>
<tr>
<td>Teen Pregnancy</td>
<td>16.5 Birth rate per 1,000 teenage women</td>
</tr>
<tr>
<td>ED use for Primary Care</td>
<td>16.8 discharges per 1,000 for ambulatory care sensitive conditions</td>
</tr>
<tr>
<td>Water Fluoridation</td>
<td>88.1% of TN residents have access to fluoridated water</td>
</tr>
<tr>
<td>Median Income</td>
<td>$43,321 Tennessee personal per capita income</td>
</tr>
<tr>
<td>Drug Overdoses</td>
<td>21,577 fatal and non-fatal drug overdoses in 2015</td>
</tr>
<tr>
<td>Frequent Mental Distress</td>
<td>13.7% of adults report 14+ days of mental stress out of 30 days</td>
</tr>
<tr>
<td>Parks &amp; Greenways</td>
<td>69% of people have access to exercise opportunities</td>
</tr>
</tbody>
</table>
Job description: As communities grow, healthy development coordinators promote access to healthy foods and physical activity.
Access to Health through Healthy Active Built Environments Grants
12 state agencies work together to improve prosperity, quality of life, and health through policy, funding, and programming to create livable communities.

A health in all policies approach to primary prevention.

Learn how all contribute to quality of life.
Clinic to Community—Exercise as Medicine

<table>
<thead>
<tr>
<th>Park Rx</th>
<th>Check the appropriate activity, time, and frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Walk</td>
<td>10 Minutes 1 Day/Week</td>
</tr>
<tr>
<td>Hike</td>
<td>20 Minutes 2 Days/Week</td>
</tr>
<tr>
<td>Run</td>
<td>30 Minutes 3 Days/Week</td>
</tr>
<tr>
<td>Bike</td>
<td>1 Hour 5 Days/Week</td>
</tr>
<tr>
<td>Paddle</td>
<td>1+ Hours 6 Days/Week</td>
</tr>
<tr>
<td>Other</td>
<td></td>
</tr>
</tbody>
</table>

Notes:

Unlimited Refills

Signature of Prescriber

For more information visit www.hhspehealth.com
Partnering with CDC and U.S. Department of Transportation
Middle Tennessee Transportation and Health Study

- 11,000 participants
- Health questions included
  - Height
  - Weight
  - Amount of time getting physical activity
  - Amount of time spent sitting
  - Diet
  - Overall quality of health
Health Priority Areas

High rates in 3 of following:

- Poverty
- Unemployment
- Household without a car
- Aging (over age 65)
Population Health Models with Increased Walking and Biking

Hypothetical Scenario Based on Modeled Data

AT: Active transportation
## Integrated Transportation and Health Impact Model

<table>
<thead>
<tr>
<th>Moderate</th>
<th>Δ Disease Burden</th>
<th>Δ Premature Deaths / Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cardiovascular Diseases</td>
<td>-3.1% ↓</td>
<td>85.6</td>
</tr>
<tr>
<td>Diabetes</td>
<td>-3.0% ↓</td>
<td>9.3</td>
</tr>
<tr>
<td>Depression</td>
<td>-1.1% ↓</td>
<td>0.0</td>
</tr>
<tr>
<td>Dementia</td>
<td>-1.3% ↓</td>
<td>11.6</td>
</tr>
<tr>
<td>Breast Cancer</td>
<td>-1.2% ↓</td>
<td>2.2</td>
</tr>
<tr>
<td>Colon Cancer</td>
<td>-1.1% ↓</td>
<td>2.0</td>
</tr>
<tr>
<td>Road Traffic Crashes</td>
<td>0.0% ↔</td>
<td>0.0</td>
</tr>
<tr>
<td>Total</td>
<td>-1.0% ↓</td>
<td>112.3</td>
</tr>
</tbody>
</table>

Savings: $116 million per year in healthcare costs
RADM Susan Orsega, Chief Nurse of the U.S. Public Health Service, calls on her colleagues to go into uncomfortable places and be nimble engineers.
ABCS Improvement in the Real World

George S. Schroeder, MD
Family Physician
Plymouth Family Physicians
## Million Hearts® 2022 ABCS Clinical Quality Measures

<table>
<thead>
<tr>
<th>Measure</th>
<th>Measure Description</th>
</tr>
</thead>
</table>
| **Aspirin When Appropriate**    | 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 (NQF 0068/Quality ID 204)  
                                                                                                         |
| **Blood Pressure Control**      | **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 (NQF 0018/Quality ID 236)  
                                                                                                         |
| **Cholesterol Management**      | **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 (CMS 347v1/Quality ID 438) |
| **Smoking Cessation**           | **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 (NQF 0028/Quality ID 226)  
                                                                                                         |
Meet Plymouth Family Physicians

- Community of 8,500 in rural Wisconsin
- Independent practice since 1985

- Plymouth Team:
  - 2 physicians
  - 5 medical assistants
  - 1 medical records manager
  - 2 receptionists
  - 1 business manager

- AHRQ EvidenceNOW participant
- 2017 Million Hearts Hypertension Control Champion
Our Road To Continuous Quality Improvement

- Independent physician driven practice
- 20 years into our electronic medical records (EMR) system
- EMR-affiliated practice-based research network
- Access to actionable performance data reports
Primary (Care) Practices Research Network (PPRNet)

- 24 years old, Medical University of South Carolina affiliated
- Funded through 15 federal grants from NIH and AHRQ
- 150+ primary care practices
- Ongoing monthly data extracts of 70 clinical markers
- Culture of continuous quality improvement
Back To The ABCS

- Start measuring your performance
- Don’t waste time denying the data
- We are not doing as well as we think we are
- Resolving to work harder won’t affect improvement
- You have been working hard all along
- You need to recruit help
Everyone Is A Provider

- Every employee has authority
  - Given by our patients
  - Regardless of their education
- Every personal interchange
- Focus on clinical goals
- Don’t talk about the weather
- Talk about the science of medicine
Educating Your Staff

- Weekly 90-minute noontime meetings
- Quarterly half-day meetings
- Professional education
- Close the office
- Focus entirely on the science
- Avoid the business of medicine
<table>
<thead>
<tr>
<th>Procedure</th>
<th>Recommended For</th>
<th>Due (seq.#)</th>
<th>11/10/2017</th>
<th>06/16/2015</th>
<th>05/20/2015</th>
<th>11/06/2012</th>
<th>10/18/2012</th>
<th>05/10/2012</th>
<th>04/19/2012</th>
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<tbody>
<tr>
<td>Alcohol Screen</td>
<td>Multiple</td>
<td>05/13/2012</td>
<td></td>
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<tr>
<td>Aspirin Therapy</td>
<td>Multiple</td>
<td>05/19/2012</td>
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<tr>
<td>PP</td>
<td>Multiple</td>
<td>05/19/2012</td>
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<tr>
<td>Colonoscopy</td>
<td>MALE 40 TO 043</td>
<td>01/01/2020</td>
<td></td>
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<tr>
<td>Creatinine</td>
<td></td>
<td>11/05/2022</td>
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<tr>
<td>Depression Screen</td>
<td>MALE 40 TO 043</td>
<td>01/01/2010</td>
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<td>cT</td>
<td>MALE 40 TO 043</td>
<td>11/05/2012</td>
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<tr>
<td>Glucose, Fasting</td>
<td>Multiple</td>
<td>05/20/2013</td>
<td></td>
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<tr>
<td>Hepatitis B Serology</td>
<td>MALE 40 TO 043</td>
<td>02/12/2016</td>
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<tr>
<td>Hepatitis A 1, 2, 3</td>
<td>Individ</td>
<td>02/12/2016</td>
<td></td>
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<td></td>
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<tr>
<td>HIV Screening</td>
<td>MALE 40 TO 043</td>
<td>01/01/2010</td>
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<tr>
<td>Influenza</td>
<td>MALE 40 TO 043</td>
<td>R 2</td>
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<tr>
<td>IPV</td>
<td>Individ</td>
<td>03/01/1970</td>
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<tr>
<td>LIPID</td>
<td>MALE 40 TO 043</td>
<td>05/10/2017</td>
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<tr>
<td>MICRONEALBUMIN/CREATINE</td>
<td>Individ</td>
<td>05/13/2012</td>
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<tr>
<td>OPV</td>
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<tr>
<td>Replace/Remove IUD</td>
<td>PARAAGARD</td>
<td>04/13/2022</td>
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<tr>
<td>Tdap</td>
<td>MALE 40 TO 043</td>
<td>01/01/2010</td>
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</tbody>
</table>
Performance Measure Reports: Aspirin / Antiplatelet Agent Application

2.6 IVD Pts >=18 yrs with current Anticoagulant/Anti-platelet Rx

<table>
<thead>
<tr>
<th>Month</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jan 15</td>
<td>65.5</td>
</tr>
<tr>
<td>Feb 16</td>
<td>65.8</td>
</tr>
<tr>
<td>Mar 16</td>
<td>65.7</td>
</tr>
<tr>
<td>Apr 16</td>
<td>65.9</td>
</tr>
<tr>
<td>May 16</td>
<td>65.7</td>
</tr>
<tr>
<td>Jun 16</td>
<td>65.8</td>
</tr>
<tr>
<td>Jul 16</td>
<td>65.9</td>
</tr>
<tr>
<td>Aug 16</td>
<td>65.7</td>
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<td>Sep 16</td>
<td>65.8</td>
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<td>Oct 16</td>
<td>65.9</td>
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<tr>
<td>Nov 16</td>
<td>65.7</td>
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<td>Dec 16</td>
<td>65.8</td>
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<tr>
<td>Jan 17</td>
<td>65.9</td>
</tr>
<tr>
<td>Feb 17</td>
<td>65.7</td>
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<td>Mar 17</td>
<td>65.8</td>
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<td>Apr 17</td>
<td>65.9</td>
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<tr>
<td>May 17</td>
<td>65.7</td>
</tr>
<tr>
<td>Jun 17</td>
<td>65.8</td>
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</tbody>
</table>

30 Limits: UCL

LOL Benchmark Median
Performance Measure Reports: Blood Pressure Control

2.3 HTN pts 18-75 yrs with BP measured and most recent < 140/90 in 1 year
Our Blood Pressure Routine

- We see hypertensive patients twice yearly
- BP measurements are expected quarterly
- Refills only follow BP at goal
- Patients are “held hostage” if they are not at goal
- Never flippantly renew meds for patient convenience
- Every hypertensive patient has a follow-up appointment
Chasing Blood Pressure Out of Control

- Patients fall out of control
- Medications renewed at shorter intervals
- Forward message to ourselves to check on patient follow through
- Require more measurements
- Home blood pressure measurements
- Blood pressure lounge
Quiet room connected to our waiting room
True resting blood pressure
Receptionist asks the person to expose their arm and sit comfortably for 5 minutes and starts timer
After timer goes off, a medical assistant is called to come and take the blood pressure
Performance Measure Reports: Cholesterol Management

2.5 Concordance with ACC/AHA Cholesterol Guidelines for ASCVD Risk Reduction

Graph showing percentage of patients meeting cholesterol guidelines over months.
# Patient-Level Report Summary

## PPRNet Clinical Quality Measures:

<table>
<thead>
<tr>
<th>CQM #</th>
<th>Description</th>
<th>Number of eligible patients</th>
<th>Percent meeting criterion</th>
<th>Number not meeting criterion</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Diabetes Mellitus</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Cardiovascular Disease</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.1</td>
<td>Screening for high blood pressure</td>
<td>1348</td>
<td>99.63%</td>
<td>5</td>
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<tr>
<td>2.2</td>
<td>Patients diagnosed with HTN for 3 BP measures ≥ 140/90 in past year</td>
<td>52</td>
<td>100.00%</td>
<td>0</td>
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<tr>
<td>2.3</td>
<td>Controlling high blood pressure (BP)</td>
<td>717</td>
<td>92.05%</td>
<td>57</td>
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<tr>
<td>2.4</td>
<td>Cholesterol abnormalities screening</td>
<td>1079</td>
<td>96.11%</td>
<td>42</td>
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<tr>
<td>2.5</td>
<td>Concordance with ACC/AHA Cholesterol Guidelines for ASCVD Risk Reduction</td>
<td>811</td>
<td>59.31%</td>
<td>330</td>
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<td>2.6</td>
<td>Ischemic Vascular Disease: Use of aspirin or oral anticoagulant Rx</td>
<td>252</td>
<td>91.67%</td>
<td>21</td>
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<td>2.7</td>
<td>Antiplatelet Medication for High Risk Patients</td>
<td>240</td>
<td>72.08%</td>
<td>67</td>
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<tr>
<td>2.8</td>
<td>Patients with atrial fibrillation with current anti-platelet or oral anticoagulant Rx</td>
<td>103</td>
<td>96.12%</td>
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<tr>
<td>2.9</td>
<td>Atrial Fibrillation and Atrial Flutter: Chronic Anticoagulation Therapy</td>
<td>61</td>
<td>77.05%</td>
<td>14</td>
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<td>2.10</td>
<td>Heart Failure (HF): ACE inhibitor or ARB Therapy</td>
<td>49</td>
<td>85.71%</td>
<td>7</td>
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<td>2.11</td>
<td>Heart Failure (HF): Beta-Blocker Therapy</td>
<td>49</td>
<td>73.47%</td>
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<tr>
<td>2.12</td>
<td>Patients screened for abdominal aortic aneurysm</td>
<td>131</td>
<td>93.89%</td>
<td>8</td>
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<td>3. Chronic Kidney Disease</td>
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<tr>
<td>8. Mental Health and Substance Abuse</td>
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<td></td>
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<tr>
<td>8.1</td>
<td>Depression screening (adults)</td>
<td>1621</td>
<td>86.37%</td>
<td>221</td>
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<tr>
<td>8.2</td>
<td>Anti-depressant medication management</td>
<td>475</td>
<td>56.63%</td>
<td>206</td>
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<tr>
<td>8.3</td>
<td>Alcohol misuse: screening</td>
<td>1621</td>
<td>91.12%</td>
<td>144</td>
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</table>

58
# Patient-Level Report

<table>
<thead>
<tr>
<th>PPRNet ID</th>
<th>DOB</th>
<th>Sex</th>
<th>Provider</th>
<th>Last BP date</th>
<th>Systolic Value</th>
<th>Diastolic Value</th>
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<tr>
<td>216785</td>
<td>7/17/1949</td>
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<td>SCHROEDER, GEORGE S</td>
<td>8/4/2017</td>
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<td>10/31/1949</td>
<td>male</td>
<td>SCHROEDER, GEORGE S</td>
<td>8/29/2017</td>
<td>140</td>
<td>72</td>
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<tr>
<td>2998</td>
<td>7/30/1951</td>
<td>female</td>
<td>SCHROEDER, GEORGE S</td>
<td>5/30/2017</td>
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<tr>
<td>4834</td>
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<td>SCHROEDER, GEORGE S</td>
<td>11/15/2016</td>
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<tr>
<td>217319</td>
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<td>533</td>
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<td>SCHROEDER, GEORGE S</td>
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<td>213109</td>
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<td>SCHROEDER, GEORGE S</td>
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<td>215775</td>
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<td>SCHROEDER, GEORGE S</td>
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<td>216781</td>
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<td>SCHROEDER, GEORGE S</td>
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<td>9</td>
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<td>90</td>
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<tr>
<td>2077</td>
<td>1/17/1968</td>
<td>female</td>
<td>SCHROEDER, GEORGE S</td>
<td>1/13/2017</td>
<td>148</td>
<td>90</td>
</tr>
</tbody>
</table>
Pearls of Wisdom

- Make performance paramount
- Cultivate and educate the provider in every staff member
- Measure performance concurrently
- Join a practice-based research network
- They will be your QI department
What Works to Prevent Second Heart Attacks

Kathleen Tong, MD
Associate Clinical Professor
Director, Cardiac Rehabilitation Program and Director, Heart Failure Program
University of California, Davis
Indications for Cardiac Rehabilitation (CR)

- CMS reimbursable diagnoses include:
  - Symptomatic coronary artery disease or recent myocardial infarction (MI)
  - Recent coronary stent or coronary artery bypass surgery

- CR is a **Class I** recommendation for MI survivors for prevention of a second heart attack
  - Odds ratio 0.53

A Tale of Two Patients

Patient A
42-year-old woman who presented with a myocardial infarction. She was treated with coronary artery bypass grafting (CABG) 6 weeks ago
- Non-diabetic, non smoker, no family history of CHD, no hypertension
- BMI 22; lost 20 pounds intentionally over the past 2 years
- Registered nurse and mother of two

Patient B
44-year-old man who had chest pain and a positive stress test. Angiography showed single vessel disease and percutaneous intervention (PCI) was done two weeks ago
- Smoker, diabetic, hypertension, family history of premature coronary artery disease
- BMI 33
- Recently began working for a heating and air conditioning company
What Are Patient Concerns?

- Why did this happen to me? Will this happen again?
  - How do I know if I’m having a “heart attack” again?
- Is it safe to exercise?
  - How much can I do?
- Can I go back to work?
  - If I do go back to work, how can I get time off to come to rehab?
- How should I be eating?
- Did stress contribute to my cardiac event?
- Will I always have to take all of these pills and what are they for?
Cardiac Rehabilitation (CR) Addresses Most Concerns

- **Structured and monitored exercise**
- **Formal curriculum**
  - Medication education
  - Symptom recognition
  - Stress management, including a cardiac yoga class
- **Integrated dietician and health and behavior specialist**
- **Smoking cessation services**
- **Transition counseling—how to exercise outside of the CR program**
A Holistic Approach

UC Davis CR nurses are disease case managers
- Patients have comorbidities: diabetes, chronic obstructive pulmonary disease, depression, heart failure

Typical session in rehab
- Glucose check before and after exercise for diabetics
- Start monitored exercise
- Presentation on plant-based protein sources (during exercise)
- End exercise then have a group stretch and cool down with a brief meditation exercise
- Reminder of a “Spare the Air” day so patients should exercise indoors
Despite known benefits, participation rates remain low

Approximately 450,000 beneficiaries were eligible for CR in 2013

- Qualifying diagnoses in 2013 included
  - Symptomatic coronary artery disease
  - Myocardial infarction
  - Heart valve replacement
  - Heart transplant

- 20% (90,000) used CR at least once in 12 months
Cardiac Rehabilitation (CR) Utilization Among Medicare Fee-for-service Beneficiaries, 2013

Number of CR Sessions per User

- 12–24 sessions, (23%)
- 1–11 sessions, (19%)
- >25 sessions, (57%)
- 25–36 sessions, (52%)
- >36 sessions, (5%)

How Do We Increase Participation?

- Capture all possible referrals for covered diagnoses
  - Automatic referral integrated into discharge order set
  - Actively seek referrals
  - Provider education (e.g., residents, fellows, NPs, PAs)

- Structured orientation
  - Schedule patients for first exercise session at orientation

- Follow-up calls
  - Touch base with patients who have stopped coming and assess barriers
Why Do Patients Stop Coming?

- Had to go back to work
- Co-pay is $40 per session
  - Private insurance
- “Too far to drive”
- “No ride”
- “I didn’t see the point”
- “They tried to make me a vegan”
Financial barriers
- Philanthropy—co-pay assistance fund
- Raise awareness at the administrative level
  - Managed care plans could consider designating preventive measures such as cardiac rehabilitation (CR) differently from “office visits”

Distance and work
- Much interest in out-of-center CR programs
- Technology platforms exist for this, but reimbursement is a challenge

Patient has no interest
- Enlist allies such as the primary cardiologist and primary care provider
- Assess for depression
- Persist and continue ask patient if they want to go back
Data Supports Cardiac Rehabilitation

- Reduction in second heart attacks
- Reduction in total mortality
  - 13%–24% mortality risk reduction in participants over 1–3 years
- Reduction in hospitalizations
- Increase in physical function

### What Happened to Our Patients?

<table>
<thead>
<tr>
<th>Patient A</th>
<th>Patient B</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>42-year-old woman has completed 18 sessions and is still coming</strong></td>
<td><strong>44-year-old man completed cardiac rehabilitation program</strong></td>
</tr>
<tr>
<td>● She is back at work</td>
<td>● Quit smoking</td>
</tr>
<tr>
<td>● Reports having more confidence about dietary choices and exercising safely</td>
<td>● Improved his exercise tolerance</td>
</tr>
<tr>
<td>● Walking 60 minutes a day</td>
<td>● Went back to work</td>
</tr>
<tr>
<td></td>
<td>● Plans to work out at a private gym after “graduation”</td>
</tr>
</tbody>
</table>
Opportunities in U.S. Adults to Prevent Cardiovascular Disease

Blood Pressure
34 M
Uncontrolled

Cholesterol
35M/42M
Unmanaged

Sodium
215M
Overconsume

Physical Activity
124 M
Underactive

Tobacco Use
36.5 M
Smoke

We Know What Works
Resources and Tools Available on the Million Hearts® Website

- **Action Guides**—Hypertension control; Self-measured blood pressure monitoring (SMBP); Tobacco cessation; Medication adherence
- **Protocols**—Hypertension treatment; Tobacco cessation; Cholesterol management
- **Tools**—Hypertension prevalence estimator; atherosclerotic cardiovascular disease (ASCVD) risk estimator
- **Messages and Resources**—Undiagnosed hypertension, Medication adherence, Health IT, SMBP, Particle pollution, Physical activity, Tobacco use, Cardiac rehabilitation
- **Clinical Quality Measures**
2018 Million Hearts®
Hypertension Control Challenge

Identify clinicians, clinical practices, and health systems that meet the Million Hearts® target* for hypertension control

Application cycle:
February 20, 2018 — April 6, 2018

For more information, go to:
millionhearts.hhs.gov or www.challenge.gov

*At or above 80% hypertension control rate (<140 mmHg systolic and <90 mmHg diastolic) of adult population 18–85