Science, Connection, Action

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Chief, Epidemiology & Surveillance Branch, DHDSP

CSTE Occupational Health Surveillance Subcommittee Meeting
December 4, 2013
Epidemiology and Surveillance are at the core of our mission…

• Monitor the health of populations through the timely collection, analysis, interpretation, and dissemination of programmatically relevant health information.

• Collaborate with health departments, other Federal Agencies (e.g., NIH, NHTSA, FDA, USDA, CMS), practitioners, and partners (e.g., AHA).
CDC’s Five Public Health Priorities

- **Strengthen surveillance and epidemiology**
- Support state, tribal, and local health departments
- Advance evidence-based health policies
- Prevent illness, injury, disability, and premature death
- Improve global health
Repeated Calls for Improved National CVD Surveillance
Imperative to Improve Surveillance Data

• No national system to quantify and track the incidence and recurrence of myocardial infarction or stroke.

• No data on the prevalence and control of major risk factors, such as hypertension and hyperlipidemia, at the state level and among the most vulnerable populations.

• Despite steady decline in CVD mortality since 1960’s, little data exist to describe which prevention and treatment strategies are having the greatest impact.

• Some conditions are increasing or remain high – obesity, diabetes & chronic lung disease.
DHDSP Priorities

Aspirin use, Blood Pressure and Cholesterol Control, and Smoking (ABCs)

Hypertension

Sodium Consumption Reduction

Surveillance
Next Steps for CDC

• Foster collaboration with other Federal Agencies
• Build upon existing CDC surveillance activities
• Develop and test new survey questions/modules
• Identify new indicators and data sources
• Enhance state and local surveillance capacity
• Focus on geographic disparities in incidence and prevalence; and health outcomes, risk factors, clinical care data
• Publish timely & relevant surveillance data
  • Scientific Publications
  • Data Trends & Maps Website
The CDC Division for Heart Disease and Stroke Prevention's Data Trends & Maps online tool allows you to search for and view health indicators related to Heart Disease and Stroke Prevention. You can search on the basis of a specific location or a health indicator.

View all indicators for one location

View health indicators for the nation, a region, a state, or other locations. To view national data, click the View National Data link. To choose a specific location, make a selection in the dropdown menu or click a location on the map.

View National Data | Select Location: State, Region, or Other Locations

View one indicator for all locations

View health indicators for all states and locations which have data available. To choose a health indicator, first select an Indicator Category then select an Indicator.

Indicator Category
Select Indicator Category

Indicator
Select Indicator

Fast facts

High LDL Cholesterol by Race/Ethnicity

LDL cholesterol is the principal target of diet and drug therapy.
Enhanced Interactive Atlas of Heart Disease and Stroke

Expanded heart disease and stroke morbidity and mortality outcomes

County-level maps that link with Data Trends and Maps website

Maps of social determinants of health

Responsive to State Health Department needs
- More age groups
- County rates that are both spatially smoothed and unsmoothed
- And more

Overlay capabilities
- Congressional Boundaries
- Health Care Facilities (hospitals, FQHCs)

Easy to update and add additional data at reduced cost
National Efforts

• National Sodium Reduction Monitoring and Surveillance (FDA, USDA & NIH)
• National Survey Redesign (NCHS, NIH, FDA & USDA)
  – National Hospital Discharge Survey (NHDS)
  – National Ambulatory Medical Care Survey (NAMCS)
  – National Hospital Ambulatory Medical Care Survey (NHAMCS)
  – National Health and Nutrition Examination Survey (NHANES)
• HP2020 Process
• Winnable Battles & Million Hearts
Enhance State & Local Surveillance Capacity

- Support Cardiovascular Health Exam Surveys and other sentinel surveillance efforts
- Collaborated with CSTE to fund data linkage projects
- Provide technical assistance – quarterly calls, training, and resource manuals and materials
- Obtain input on development and implementation of surveillance systems
- Encourage dissemination of state and local data
- Support Behavioral Risk Factor Surveillance System (BRFSS) Modules (CVD & Sodium)
Cardiovascular Health Examination Survey(s)

  - 4 States: Kansas, Washington, Arkansas, Oklahoma
  - Allowed great flexibility in model to implement survey
  - Desire to develop model for local level data collection
- Purpose
  - Assess Healthy People objectives for heart disease / stroke
  - Increase scientific capacity of state programs
  - Inform state- and local-level interventions and policies
- Value of data
  - Marked differences in risk factor estimates
  - Confirm data assumptions
  - RE-direction of programmatic resources
Mississippi Delta Cardiovascular Health Examination Survey (Delta CHES)

- Mississippi Delta Region
  - 18-county region in the northwest portion of state
- Population
  - ~500,000 persons
  - 1/3 live in poverty
  - High CVD and stroke burden

- Delta CHES
  - Population-based, cross-sectional study
  - Representative sample of non-institutionalized adults
  - In-home assessment and measurement
  - Target sample of 1,300 - Ongoing
Mississippi Delta Cardiovascular Health Examination Survey (Delta CHES)

- Recruitment and Eligibility Screening
  - Mixed method – telephone and in-home

- Data Collection (In-home)
  - Questionnaire
    - Sociodemographics, health risks/behaviors
    - Policy / Environmental perceptions and influences
  - Measurement
    - Blood pressure and other anthropometrics
    - Laboratory measures (cholesterol, glucose, cotinine, Hemoglobin A1C, CBC, metabolic panel)
  - Mail Items
    - Food frequency questionnaire, pedometer
CDC’s Sodium Monitoring and Surveillance Plan

Monitoring and Surveillance

- USDA
  - Food and Nutrient Databases
- Commercial Databases
  - Gladson
  - UMN
  - Publix
  - Nielsen
- State and Local Agencies
  - NYC DOHMH
  - LA County DOH

FDA

CDC/NCHS
- NHANES
- NHIS

CDC/NCCDPHP
- BRFSS
- CVH Exam

CDC/NCHM and Porter Novelli
- HealthStyles
- DocStyles
- ConsumerStyles
Key Questions

• How much sodium is in the foods we eat?
• How much sodium do we consume?
• What are consumer and health care provider knowledge, attitudes, and behaviors about sodium?
• Are we improving related health outcomes?
Million Hearts®

Goal: Prevent 1 million heart attacks and strokes by 2017

• US Department of Health and Human Services 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
Heart Disease and Stroke
Leading Killers in the United States

• More than 1.5 million heart attacks and strokes each year
• Cause 1 of every 3 deaths
  – 800,000 deaths
  – Leading cause of preventable death in people <65
  > $300B in health care costs and lost productivity
• Greatest contributor to racial disparities in life expectancy

NCHS Data Brief, June 2013.
200,000 Preventable Deaths from Heart Disease and Stroke

• Many of the deaths caused by heart disease and stroke are preventable

• Preventable deaths are those attributed to lack of preventive health care or timely and effective medical care
Key Components of Million Hearts®

Keeping Us Healthy
Changing the environment

Excelling in the ABCS
Optimizing care

Health Disparities

Focus on the ABCS

Health tools and technology

Innovations in care delivery

## Targets for the Environment

<table>
<thead>
<tr>
<th>Intervention</th>
<th>Pre-Initiative Estimate</th>
<th>2017 Population-wide Goal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Smoking prevalence</td>
<td>21%</td>
<td>19%</td>
</tr>
<tr>
<td>Sodium reduction</td>
<td>~ 3.5 g/day</td>
<td>20% reduction</td>
</tr>
<tr>
<td>Trans fat reduction</td>
<td>~ 1% of calories</td>
<td>50% reduction</td>
</tr>
</tbody>
</table>

Sources: National Health Interview Survey, National Health and Nutrition Examination Survey
## Targets for the ABCS

<table>
<thead>
<tr>
<th>Intervention</th>
<th>Pre-Initiative Estimate</th>
<th>2017 Population-wide Goal</th>
<th>2017 Clinical Target</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aspirin when appropriate</td>
<td>47%</td>
<td>65%</td>
<td>70%</td>
</tr>
<tr>
<td>Blood pressure control</td>
<td>46%</td>
<td>65%</td>
<td>70%</td>
</tr>
<tr>
<td>Cholesterol management</td>
<td>33%</td>
<td>65%</td>
<td>70%</td>
</tr>
<tr>
<td>Smoking cessation</td>
<td>23%</td>
<td>65%</td>
<td>70%</td>
</tr>
</tbody>
</table>

Sources: National Ambulatory Medical Care Survey, National Hospital Ambulatory Care Survey, National Health and Nutrition Examination Survey
Awareness and Treatment among Adults with Uncontrolled Hypertension

35.8 MILLION
ADULTS WITH UNCONTROLLED HYPERTENSION

14.1M
16.0M
5.7M

- Aware and treated
- Aware and untreated
- Unaware

Partnerships and Support
Public Partners

- Centers for Disease Control and Prevention (co-lead)
- Centers for Medicare & Medicaid Services (co-lead)
- Agency for Community Living
- Agency for Healthcare Research and Quality
- Federal Occupational Health
- Food and Drug Administration
- Health Resources and Services Administration
- Indian Health Service
- National Institutes of Health, National Heart Lung and Blood Institute
- National Institute of Neurological Diseases
- National Prevention Strategy, National Quality Strategy
- Office of the National Coordinator for HIT
- Office of Personnel Management
- Substance Abuse and Mental Health Services Administration
- Veteran’s Health Administration
- State and Local governments
I got your stupid email with your stupid link to that stupid scientific study.

I don’t care about your so-called “facts.” I know I’m right!

Winning an argument never feels like winning.
Million Hearts® Science Activities

- Knowledge translation
  - “Asks” for clinicians, public health, employers, payers
  - Self-measured blood pressure monitoring
  - Hypertension treatment protocols

- Surveillance and monitoring
  - Projecting and monitoring events prevented
  - ABCS monitoring
  - CDC/CMS “Epi Exchange”
  - Prescription patterns
Million Hearts® Science Activities (cont’d)

• Evaluation
  – Logic models, evaluation plan, technical assistance

• Publications
  – MMWRs, manuscripts with partners
  – Perspectives, viewpoints

• Health Information Technology
  – Clinical quality measures alignment
  – Clinical decision support tools
Choosing Million Hearts® Measures

- Began January 2011
- CDC, CMS, ONC
- Used existing measures initiatives
  - Meaningful Use, Physician Quality Reporting System
  - Other measures initiatives
- Chose measures that
  - Were evidence-based (and where possible NQF approved)
  - Supported the MH goals
  - Best reflected progress toward population health outcomes in reasonable timeframes
## Clinical Quality Measures (CQMs)

<table>
<thead>
<tr>
<th>ABCS</th>
<th>Domain</th>
<th>Measure</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Aspirin When Appropriate</td>
<td><strong>Ischemic Vascular Disease (IVD): Use of Aspirin or Another Antithrombotic</strong>&lt;br&gt;Percentage of patients aged 18 years and older with Ischemic Vascular Disease (IVD) with documented use of aspirin or other antithrombotic</td>
</tr>
<tr>
<td>B</td>
<td>Blood Pressure Screening</td>
<td><strong>Preventive Care and Screening: Screening for High Blood Pressure</strong>&lt;br&gt;Percentage of patients aged 18 and older who are screened for high blood pressure</td>
</tr>
<tr>
<td>B</td>
<td>Blood Pressure Control</td>
<td><strong>Hypertension: Controlling High Blood Pressure</strong>&lt;br&gt;Percentage of patients aged 18 through 85 years of age who had a diagnosis of hypertension (HTN) and whose blood pressure (BP) was adequately controlled (&lt;140/90) during the measurement year</td>
</tr>
</tbody>
</table>
## CQMs (cont’d)

<table>
<thead>
<tr>
<th>ABCS</th>
<th>Number</th>
<th>Measure</th>
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</thead>
<tbody>
<tr>
<td><strong>C</strong></td>
<td>Cholesterol Management</td>
<td><strong>Preventive Care and Screening: Cholesterol – Fasting Low Density Lipoprotein (LDL) Test Performed AND Risk-Stratified Fasting LDL</strong> Percentage of patients aged 20 through 79 years who had a fasting LDL test performed and whose risk-stratified fasting LDL is at or below the recommended LDL goal.</td>
</tr>
<tr>
<td><strong>C</strong></td>
<td>Cholesterol Management – Diabetes</td>
<td><strong>Diabetes Mellitus: Low Density Lipoprotein (LDL-C) Control in Diabetes Mellitus</strong> Percentage of patients aged 18 through 75 years with diabetes mellitus who had most recent LDL-C level in control (less than 100 mg/dL)</td>
</tr>
<tr>
<td><strong>C</strong></td>
<td>Cholesterol Management – Ischemic Vascular Disease</td>
<td><strong>Ischemic Vascular Disease (IVD): Complete Lipid Panel and Low Density Lipoprotein (LDL-C) Control</strong> Percentage of patients aged 18 years and older with Ischemic Vascular Disease (IVD) who received at least one lipid profile within 12 months and who had most recent LDL-C level in control (less than 100 mg/dL)</td>
</tr>
<tr>
<td><strong>S</strong></td>
<td>Smoking Cessation (assessment and intervention)</td>
<td><strong>Preventive Care and Screening: Tobacco Use: Screening and Cessation Intervention</strong> Percentage of patients aged 18 years or older who were screened about tobacco use one or more times within 24 months AND who received cessation counseling intervention if identified as a tobacco user</td>
</tr>
</tbody>
</table>
### Baseline CQM Alignment

<table>
<thead>
<tr>
<th>Measure</th>
<th>PQRS</th>
<th>NQF</th>
<th>MU</th>
<th>HRSA UDS</th>
<th>VA</th>
<th>PQRS CV Prevention Measures Group</th>
<th>PQRS GPRO</th>
<th>CPC</th>
<th>ACOs</th>
</tr>
</thead>
<tbody>
<tr>
<td>A – Aspirin</td>
<td>#204</td>
<td>#0068</td>
<td>S1 opt</td>
<td></td>
<td></td>
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<tr>
<td>B – BP Screening</td>
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</tr>
<tr>
<td>B – BP Control</td>
<td>#236</td>
<td>#0018</td>
<td>S1 opt</td>
<td></td>
<td>✔</td>
<td>✔</td>
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<tr>
<td>C – Cholesterol Control DM</td>
<td>#2</td>
<td>#0064</td>
<td>S1 opt</td>
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<td>C – Cholesterol Control IVD</td>
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<tr>
<td>S – Smoking Cessation</td>
<td>#226</td>
<td>#0028</td>
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### Current CQM Alignment

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<td></td>
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<tr>
<td>B – BP Screening</td>
<td>#317</td>
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<tr>
<td>C – Cholesterol Control</td>
<td>#316</td>
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As of July 2013
Additional Alignment

- National Quality Strategy
- CMS Quality Improvement Organizations
- IHS (BP control)
- CDC Grantee programs at the state and local level
- Medicaid Adult Core Core Measures
- American Heart Association’s The Guideline Advantage
- American College of Cardiology’s PINNACLE
Clinical Decision Support (CDS) Tools

IAA with the Office of the National Coordinator for Health Information Technology (ONC)

• Develop and/or standardize evidence-based CDS tools that align with Million Hearts® electronic clinical quality measures

• Leverage the ONC Health e-Decisions Standards & Interoperability Framework project

• Year 1
  – Blood pressure control
  – Smoking/tobacco assessment and intervention
Communications Overview

- Spreading the Word
  - Collaboration across HHS Agencies
  - 7 DHDSHP Web sites
    - MH Web site (English & Spanish)
- Partnerships
- Targeted Messages/Products
  - Infographics
  - Newsletters
  - Videos
Million Hearts® Resources

- Self-Measured Blood Pressure Monitoring: Action Steps for Public Health Practitioners
- Treatment Protocols for Blood Pressure Control
- Cardiovascular Health: Action Steps for Employers
- Grand Rounds:
  - Million Hearts® Grand Rounds
  - Hypertension Grand Rounds: Detect, Connect, and Control
- Million Hearts® e-Update
- Team up. Pressure down. program
- Visit [http://millionhearts.hhs.gov/](http://millionhearts.hhs.gov/) to find other useful Million Hearts® resources.
Million Hearts® at 26 Months

61,191 likes on Facebook

43,628 subscribers to the Million Hearts® e-Update

27,221 pledges to Be One in a Million Hearts®

85 public- and private-sector partners
Private Support

- Heath care systems
- Clinicians
- Professional organizations
- Commercial payers/purchasers
- Pharmacists/pharmacies
- Employers
- Health advocacy groups
MH in Action
Million Hearts®: A Program Perspective

National

• Framing/Perspective

Regional/State/Community

• Focused attention
• Aligned programs and policies
• Public-Private partnerships
DHDP Programs in the Field

- The Delta Project
- 1305 State Public Health Actions
- WISEWOMAN
- Coverdell
- Sodium Reduction in Communities
Some Promising State Action: **Maryland**

- **Million Hearts Implementation Plan** bringing all stakeholders to a common table
  - Maryland Medical Home that creates incentives for prevention, wellness, and advanced care
  - Community and employer initiatives to transform localities into healthy environments
- **Data-driven approach** with Maryland’s StateStat
Some Promising State Action

- **PA** – Convener/Focus

- **NJ** – Public Reporting of Blood Pressure Control Results
Tulsa Pulse
May 11, 2013

• Beacon Community
• Tulsa Health Department
• Comprehensive Primary Care Site
• Kaiser Family Foundation
• Indian Health Service
• BlueCross BlueShield of Oklahoma
• CommunityCare
• Heart Health Mobile
• 100 Congregations for Million Hearts®
• And more.....
“Million Hearts is a unique opportunity to strengthen the collaboration between health care and public health.”

- Thomas Frieden
Thank You!
Questions?