



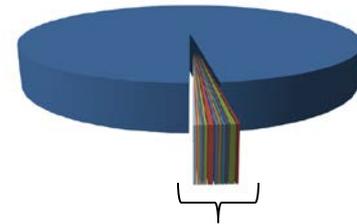




# *Who's Leading the Leading Health Indicators?*

- **Leading Health Indicators are:**
  - Critical health issues that, if addressed appropriately, will dramatically reduce the leading causes of preventable deaths and illnesses
  - Linked to specific Healthy People objectives
  - Intended to motivate action to improve the health of the entire population

1200 Healthy People objectives



LHIs are a subset of  
Healthy People  
objectives



# *Who's Leading the Leading Health Indicators?*

## **Featured Speakers:**

- **Karen B. DeSalvo, MD, MPH, MSc** – Acting Assistant Secretary for Health, U.S. Department of Health and Human Services
- **Fleetwood Loustalot, PhD, FNP, CDR, US Public Health Service** – Epidemiology, Surveillance and Health Services Lead, Division for Heart Disease and Stroke Prevention, Centers for Disease Control and Prevention
- **Stephanie Coronel-Mockler, MPH, CHES** – Co-Director, Colorado Prevention Center (CPC) Community Health





# Clinical Preventive Services

- Clinical preventive services, such as routine disease screening and scheduled immunizations, are key to reducing death and disability.
- These services prevent illnesses and diseases—from flu to cancer—or detect them in their earlier, more treatable stages, significantly reducing the risk of illness, disability, early death, and medical care costs.



# Clinical Preventive Services – Leading Health Indicators

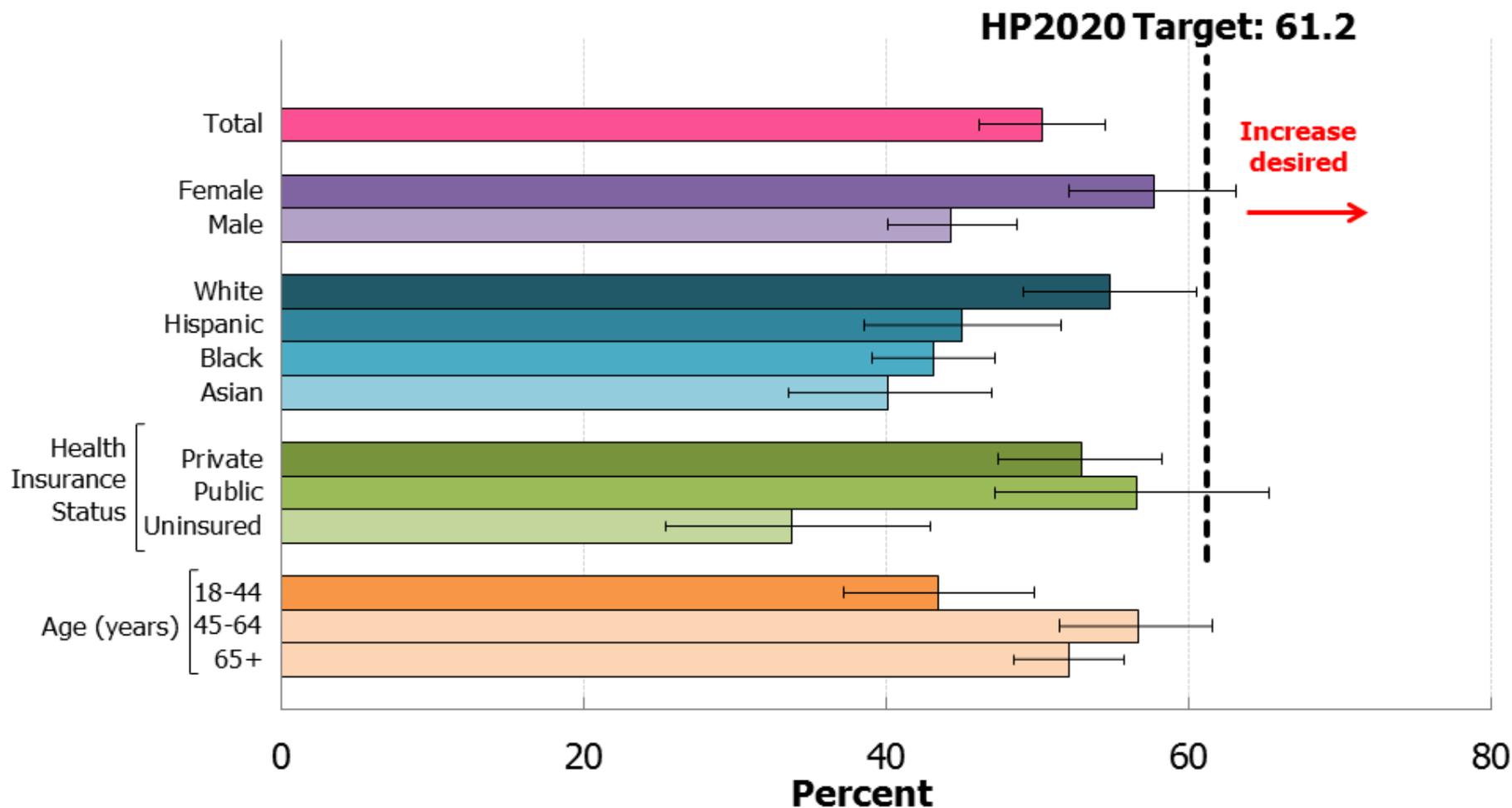
- The Clinical Preventive Services Leading Health Indicators are:
  1. Colorectal Cancer Screening
  2. **Hypertension**
  3. Diabetes
  4. Immunizations



# Clinical Preventive Services – Leading Health Indicators

- The leading modifiable (controllable) risk factors for heart disease and stroke are:
  - **High blood pressure** (hypertension)
  - High cholesterol
  - Cigarette smoking
  - Diabetes
  - Poor diet and physical inactivity
  - Overweight and obesity

# Blood Pressure Control, Adults 18+ Years with Hypertension, 2011–2014



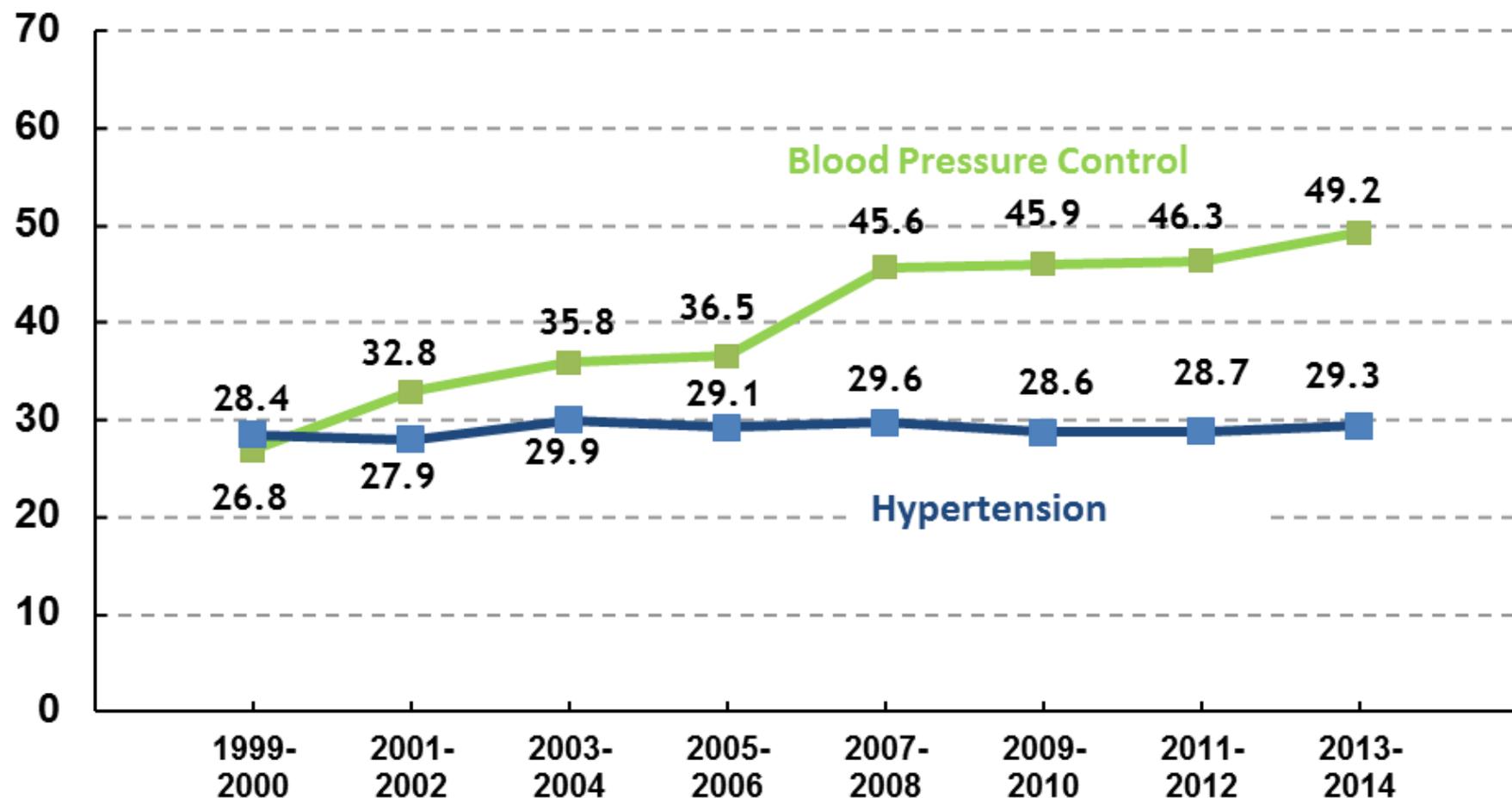
Notes: — is 95% confidence interval. Blood pressure control is defined as systolic blood pressure <140 mmHg and diastolic blood pressure <90 mmHg among adults with hypertension. Hypertension is defined among adults, excluding pregnant women, as systolic blood pressure ≥140 mmHg or diastolic blood pressure ≥90 mmHg or taking blood pressure lowering medication. Data (except those by insurance status) are for adults aged 18 years and over unless otherwise stated. Data by health insurance status are for adults aged 18-64 years. Data (except those by age group) are age adjusted to the 2000 standard population. Data by age group are not age adjusted. The categories Asian, Black and White exclude persons of Hispanic origin. Persons of Hispanic origin may be any race. Respondents were asked to select one or more races. Data for the single race categories are for persons who reported only one racial group. Target does not apply to age groups.

SOURCE: National Health and Nutrition Examination Survey (NHANES), CDC/NCHS.

**Obj. HDS-12**

# Hypertension Prevalence and Blood Pressure Control, Adults 18+ Years, 1999-2000 through 2013-2014

Percent



Note: Blood pressure control is defined as systolic blood pressure <140 mmHg and diastolic blood pressure <90 mmHg among adults aged 18 years and over with hypertension. Hypertension is defined among adults, excluding pregnant women, as systolic blood pressure  $\geq$ 140 mmHg or diastolic blood pressure  $\geq$ 90 mmHg or taking blood pressure lowering medication. Data are age-adjusted to the 2000 standard population.

Source: National Health and Nutrition Examination Surveys (NHANES), CDC, NCHS.

**Obj. HDS-12**





# Federal Agency Activities Supporting Hypertension Control

**Fleetwood Loustalot, PhD, FNP**

CDR, US Public Health Service

Epidemiology, Surveillance and Health Services Lead  
Division for Heart Disease and Stroke Prevention  
Centers for Disease Control and Prevention



# Federal Partners/Contributors

- **National Institute of Neurological Disorders and Stroke (NINDS)**
  - Katie Jakubs Pahigiannis, PhD
- **National Heart, Lung, and Blood Institute (NHLBI)**
  - Joylene John-Sowah, MD, MPH
- **Centers for Disease Control and Prevention (CDC)**
  - Yuling Hong, MD, PhD
  - Fleetwood Loustalot, PhD, FNP
  - Angela Thompson-Paul, PhD
  - Kimberly Hurvitz, MHS
- **Office of the Associate Secretary of Health (OASH)**
  - Emmeline Ochiai



# Hypertension Control Efforts Across Federal Agencies

- Healthy People 2020 Heart Disease and Stroke Workgroup co-led by the:
  - National Institute of Neurological Disorders and Stroke (NINDS)
  - National Heart, Lung, and Blood Institute (NHLBI)
  - Centers for Disease Control and Prevention (CDC)
- Diverse activities supporting hypertension prevention and control efforts including:
  - Raising Awareness
  - Generating Evidence
  - Promoting Action



# Raising Awareness



# The Heart Truth<sup>®</sup>

- National campaign to promote awareness of heart disease and its risk factors among women and educate and motivate them to take action to prevent the disease and control its risk factors
- Sponsored by the National Heart, Lung, and Blood Institute, the National Institutes of Health
- Significant amount of program materials and resources for workplaces, communities, researchers and other partners are available at [www.hearttruth.gov](http://www.hearttruth.gov)



# Hypertension and Brain Health

- **Observational evidence** suggests a link between hypertension in midlife and cognitive decline and dementia in later life.
- **Stroke** (clinical or silent) increases risk of dementia, and **white matter disease** in the brain increases risk of cognitive impairment. **Hypertension** is a major risk factor for stroke and white matter disease.
- Many Americans are aware of the link between hypertension and stroke and heart disease, but **most are not aware of the potential harm to brain health.**

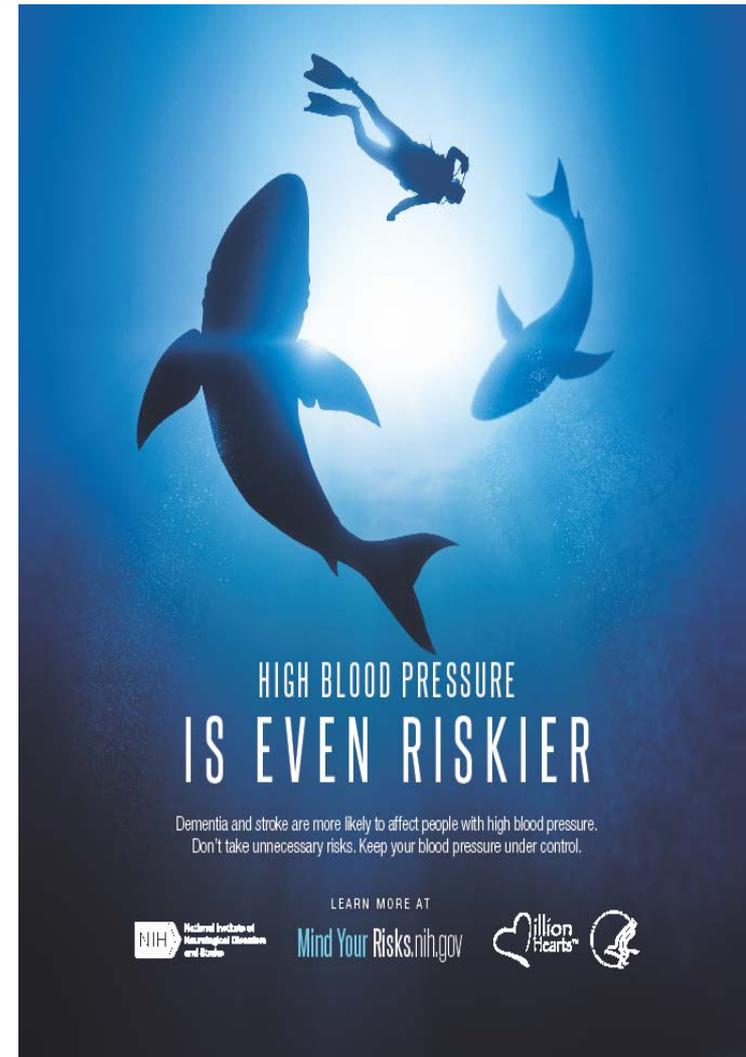


# Mind Your Risks<sup>SM</sup>

NINDS-led **public education campaign** in partnership with Million Hearts<sup>®</sup>, the National Institute on Aging and NHLBI.

## Campaign goals:

- Raise awareness that controlling blood pressure in mid-life may decrease risk for dementia
- Provide scientific evidence for doctors to discuss this topic with patients
- Promote existing blood pressure management tools



[www.mindyourrisks.nih.gov](http://www.mindyourrisks.nih.gov)



# Million Hearts<sup>®</sup>

- 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
- Includes community and clinical interventions
- Hypertension control is a central theme and significant resources are available for partners

<http://millionhearts.hhs.gov/>





# Generating Evidence



# Hypertension Control: Randomized Controlled Trials

- *Systolic Blood Pressure Intervention Trial (SPRINT)*
  - Collaboration across NIH, including the NHLBI, NINDS, National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK), and the National Institute on Aging (NIA)
  - Highlight: a lower blood pressure target ( $>120$  mmHg systolic) reduced the rates of cardiovascular events, in adults 50+ without diabetes
- *SPRINT- Memory and Cognition in Decreased Hypertension (SPRINT- MIND)*
  - NHLBI, NINDS, NIDDK and NIA collaborating
  - Seeks to understand the impact of lowered blood pressure target on memory and cognitive function
  - Ongoing (end date 12/2018)



# Hypertension Control: Effectiveness and Implementation Trials

- NHLBI sponsored the *Home Blood Pressure Telemonitoring and Case Management to Control Hypertension* study
  - Promoted community efforts to achieve blood pressure control through in-home monitoring with the collaboration of pharmacists and primary care
  - Aimed to evaluate the long term feasibility, and other critical factors for translating this intervention into practice
  - Telemonitoring at home and pharmacist case management achieved better control compared with usual care



# Hypertension Control: Comparative Effectiveness Trials

- NINDS, NHLBI partnering with the Patient Centered Outcomes Research Institute (PCORI)
  - Sponsoring two trials to evaluate hypertension control strategies at the health system and/or community level
  - Aim to improve hypertension control among high risk racial and ethnic minority groups (AL/NC, MD)
  - Approaches include peer coaching, clinic-based approaches, collaborative stepped care model

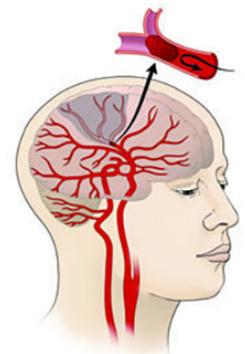


# Promoting Action

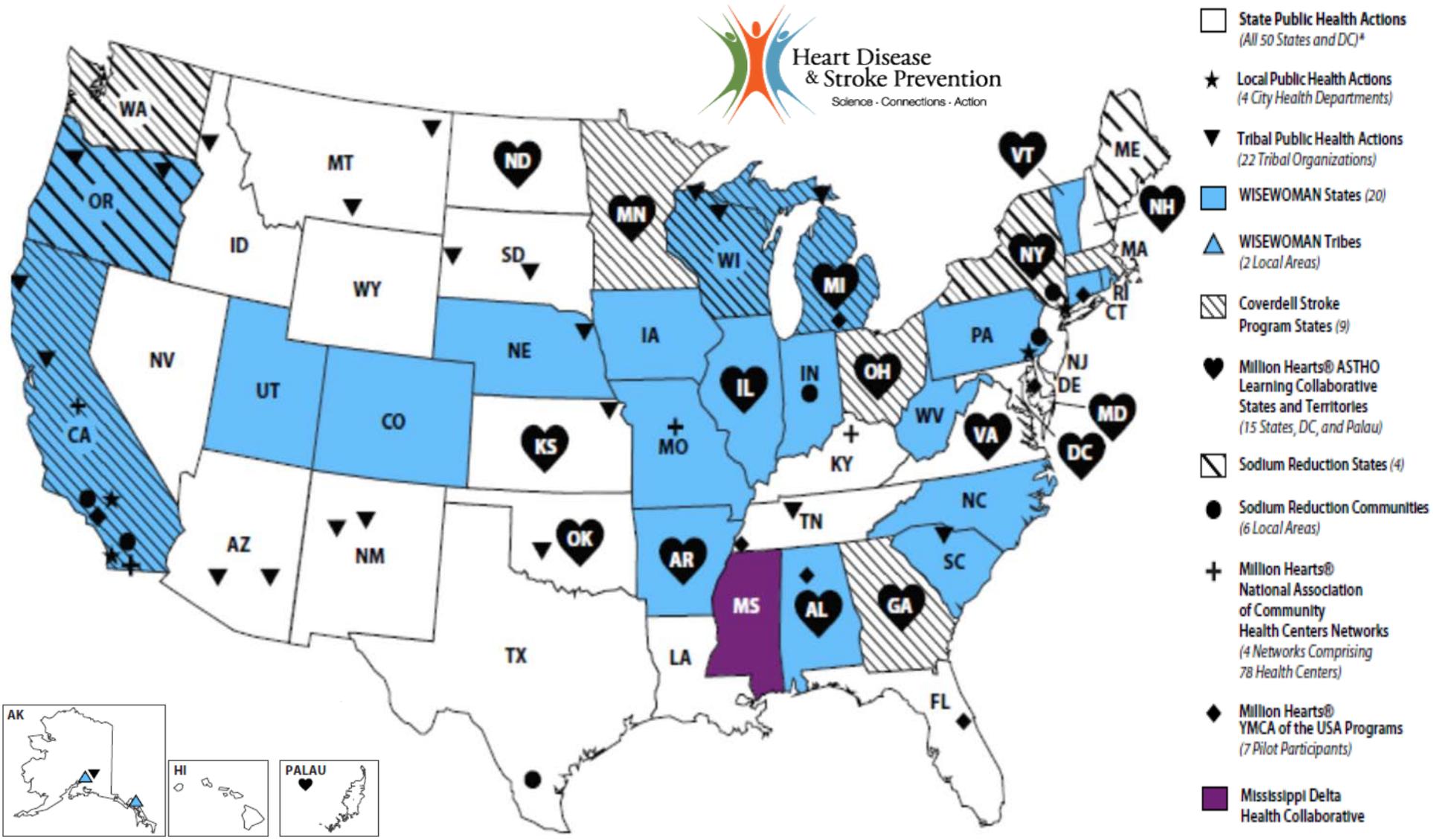


# Programs Addressing Stroke and Hypertension Disparities

- **NINDS Stroke Prevention Intervention Research Program**
  - Stroke prevention, hypertension control interventions in minority communities  
(LA, NY, FL/PR, KPNC/UCSF)
  - Multi-level: health systems, healthcare providers, communities, patients
  - Stakeholder engagement, dissemination and implementation efforts



# State and Community Programs





# Improving Blood Pressure Control

- Significant evidence is available to promote improvements in hypertension control at the population level and in diverse settings. We should:
  - Increase general awareness of the risk of hypertension
  - Promote the rapid utilization and incorporation of new evidence into treatment
  - Integrate systems-level changes in the health care systems, such as standardized hypertension treatment with protocol-driven care using diverse models of care
  - Improve community and clinical linkages to more broadly address a complex condition like hypertension
    - *Interventions Engaging Community Health Workers*



**CPC**  
COMMUNITY HEALTH

Colorado  
Heart Healthy Solutions

*Keep the Beat*



# Colorado Heart Healthy Solutions

Stephanie Coronel-Mockler, MPH  
Co-Director, Community Health,  
Colorado Prevention Center

# Background

- \* Combined, heart disease and stroke was the leading cause of death in Colorado in 2013, accounting for 24% (8,030) of all deaths
- \* Colorado Heart Healthy Solutions was launched in 2008
  - \* Community Health Worker led program
  - \* Focus on at-risk individuals
    - \* defined as those with moderate to high 10-year CVD risk or any uncontrolled risk factor
  - \* Focus on underserved individuals
    - \* Defined as those who face disadvantages such as minorities, the poor, those with less education, un- or under-insured and those who live far from resources (rural and frontier counties)



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Heart Healthy Solutions

*Keep the Beat*



# Program Goal

Improve cardiovascular health of  
adults in Colorado communities

# CHHS Partners 2015-2016

## **Local Public Health Agencies**

Clear Creek County Public Health  
Costilla County Public Health Agency  
Denver Public Health  
Kit Carson County Health & Human Services  
Montezuma County Health Department  
Northwest Colorado Visiting Nurse Assoc  
Tri County Health Department

## **Other Community Organizations**

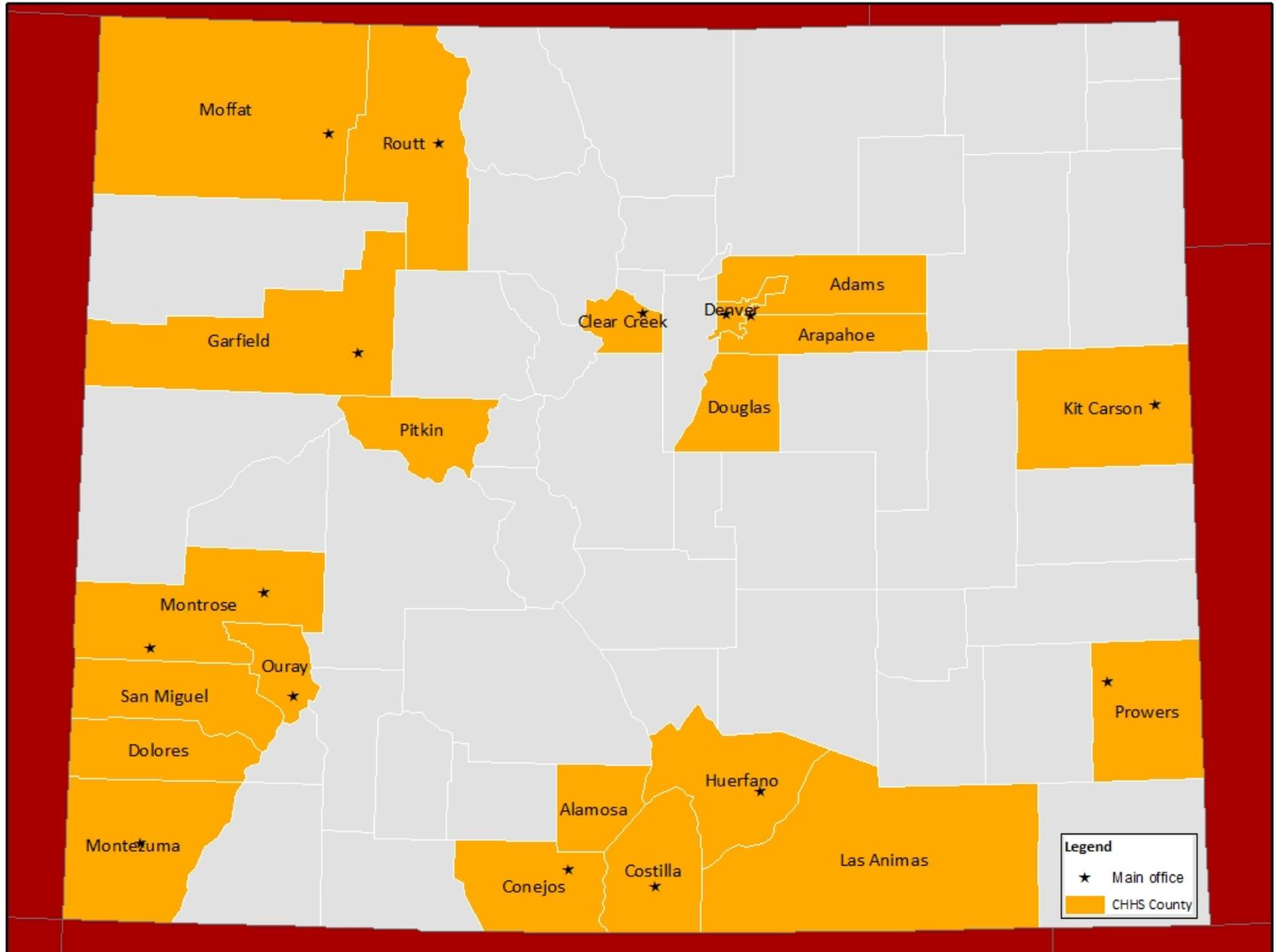
Colorado Alliance for Health Equity and  
Practice  
San Luis Valley Area Health Education Center  
Tri County Health Network

## **Community Health Centers & Hospitals**

Conejos County Hospital  
High Plains Community Health Center  
Mountain Family Health Center  
Spanish Peaks Regional Health Center



# CHHS Communities 2015-2016



# CHHS Team

Community Health Workers, Supervisors & Program Staff



September 2015

# CHHS Model

## Outreach & Screenings

## Community Navigation

## Health Improvements

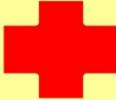
Community outreach with priority given to underserved populations

Health Assessment, Education, & Results Counseling

Individuals with elevated risk factors

Ongoing CHW Services

- Identify health goals
- Create manageable action plans
- Assist with overcoming barriers
- Provide ongoing support to keep individuals on track

  
Referrals to Medical Clinics

Educational support for health care providers

  
Referrals to Community-Based Healthy Living Programs

Improve chronic disease risk factors

Improve diet and physical activity

Increase access to primary care and provider use of evidence-based guidelines



6-12 months

# Outreach, Screening and Referral (OSCAR) System

**Client Demo**

6/17/2010 at CPC



LOW 0% 7.5% 20% HIGH

Recalculate risk at age

Comments

Lifestyle Goals

**Targets**

<input type="radio"/> Total Cholesterol	<200
<input type="radio"/> HDL	>40
<input type="radio"/> Triglycerides	<150
<input type="radio"/> LDL	<160
<input type="radio"/> Systolic Blood Pressure	<140
<input type="radio"/> Diastolic Blood Pressure	<90
<input type="radio"/> BMI	<25
<input type="radio"/> Waist Circumference	<40

Save Cancel

Previous Interview: N/A

Summary and Results



23 BMI LOW 0% 7.5% 20% HIGH

**Your Customized Health Prescription**

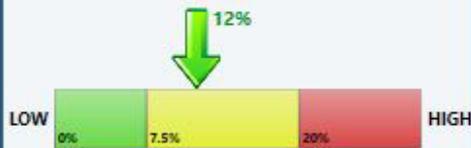
- ♥ You are at MEDIUM risk of having a heart attack or stroke in the next 10 years.
- ♥ 12 of 100 people with your score will have a heart attack or stroke in the next 10 years.
- ♥ Your high cholesterol and high blood pressure is/are increasing your chance of having a heart attack or stroke.
- ♥ Make an appointment with your doctor and ask about the medicines below:  
Statin (for cholesterol)
- ♥ Attention! Your triglyceride level is: 188; goal is less than 150. Schedule an appointment to see your doctor.

General Health Lifestyle Guidance

# Outreach, Screening and Referral (OSCAR) System

## Client Demo

6/17/2010 at CPC



Recalculate risk at age

Comments

Lifestyle Goals

Targets

Save

Cancel

Previous Interview: N/A

Lifestyle Guidance

### How ready are you to make changes to improve your health?

- Not thinking about change
- Thinking about change
- Preparing for change
- Changing
- Maintaining Change

### What would you most like to work on to lower your risks?

- Cut down on smoking
- Improve cholesterol
- Lower blood pressure

### How would you like to lower your risks?

- Lose weight
- See a health care provider
- Increase physical activity
- Improve nutrition

### How important is it?



### Action Plan (try to include how much, when and how often in the action plan)

Summary and Results

Referrals and Follow Up

# CHHS by the Numbers

- \* CHHS has served over **40,000** clients since 2009
- \* conducting over **120,000** discrete interactions (screenings, follow ups, retests)
- \* 88% underserved
- \* 54% did not know their CVD risk



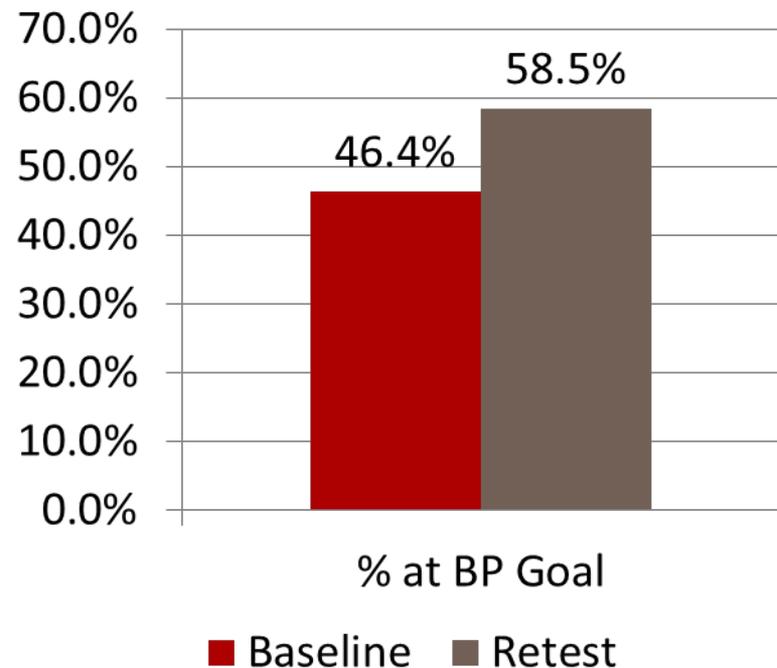
# Selected Program Outcomes

	Mean Baseline Levels for those with Abnormal Risk Factor	Change in Risk Factor
<b>Systolic Blood Pressure (mmHg)</b>	<b>152.6</b>	<b>↓ 10.8</b>
<b>Diastolic Blood Pressure (mmHg)</b>	<b>96.7</b>	<b>↓ 7.3</b>
<b>Total Cholesterol (mg/dL)</b>	<b>235.2</b>	<b>↓ 21.0</b>
<b>LDL Cholesterol (mg/dL)</b>	<b>163.3</b>	<b>↓ 31.4</b>
<b>HDL Cholesterol (mg/dL)</b>	<b>30.8</b>	<b>↑ 6.6</b>
<b>Glucose (mg/dL)</b>	<b>129.9</b>	<b>↓ 16.4</b>

# Leading Health Indicator:

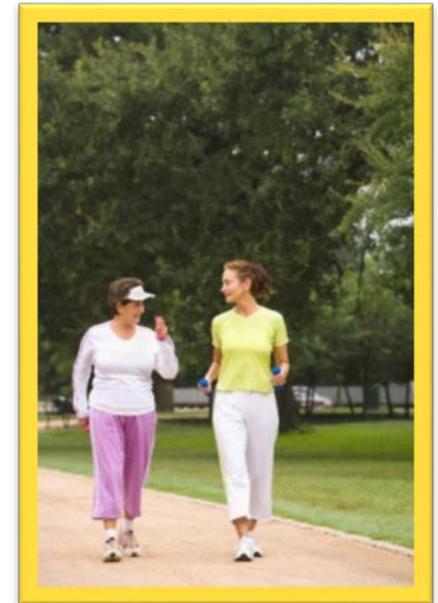
Adults with hypertension whose blood pressure is under control

Participants with hypertension at baseline with at least one retest (n=3069)



# Selected Program Outcomes (cont.)

- \* **21% decreased fat intake**
- \* **22% increase physical activity levels**
- \* **17% of smokers quit smoking**



# Lessons Learned

- \* Statewide program with a local focus
  - Adapted model to fit the needs/priorities of each community
  - \* Employed CHWs through local agencies
  - \* Collaborate and integrate with local resources (medical and lifestyle)
- \* Use of OSCAR to centrally monitor health outcomes and program implementation
  - \* Share data with program stakeholders (CHWs, supervisors, providers, etc.)

# CHHS Funding

- \* Primary Funding: Cancer, Cardiovascular Disease, and Pulmonary Disease Grants Program at the Colorado Department of Public Health and Environment
- \* Caring for Colorado Foundation
- \* The Colorado Health Foundation
- \* Anschutz Family Foundation
- \* Health Resources and Services Administration

# CHHS Program Staff

- \* **Stephanie Coronel-Mockler, MPH**

- \* CHHS Program Director
- \* Co-Director, CPC Community Health
- \* [stephanie.coronel@cpcmed.org](mailto:stephanie.coronel@cpcmed.org)

- \* **Nick Flattery, MPH**

- \* Senior Project Manager

- \* **Mori Krantz, MD**

- \* CHHS Medical Director
- \* Cardiologist, Denver Health
- \* [www.cpccommunityhealth.org](http://www.cpccommunityhealth.org)

- \* **Chris Jones, MPHc**

- \* Associate Project Manager



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# Stay Connected

- Visit **healthypeople.gov** to learn more about the Healthy People 2020 Leading Health Indicators
- To receive the latest information about Healthy People 2020 and related events, visit our website to:  
Join the Healthy People 2020 Consortium
  - Share how your organization is working to achieve Healthy People goals



Follow us on Twitter **@gohealthypeople**



Join our Healthy People 2020 group on LinkedIn



# Healthy People 2020 Progress Reviews



## Targeting Social Influences that Impact Health Literate Communities

Thursday, June 16, 2016  
12:30-2:00 p.m.

[www.HealthyPeople.gov](http://www.HealthyPeople.gov)

