Saving Lives. Protecting People.

"Population Health Readiness"

Wayne H. Giles, MD, MS

September 9, 2015

Centers for Disease Control and Prevention
Division of Population Health

Learning Objectives

- Describe the many different levels of Population Health
- Discuss the drivers & opportunities available to improve Population Health
- Identify the CDC's and other Federal initiatives designed to support Population Health

CDC Strategic Directions

Improve health security at home and around the world

Better prevent the leading causes of illness, injury, disability, and death

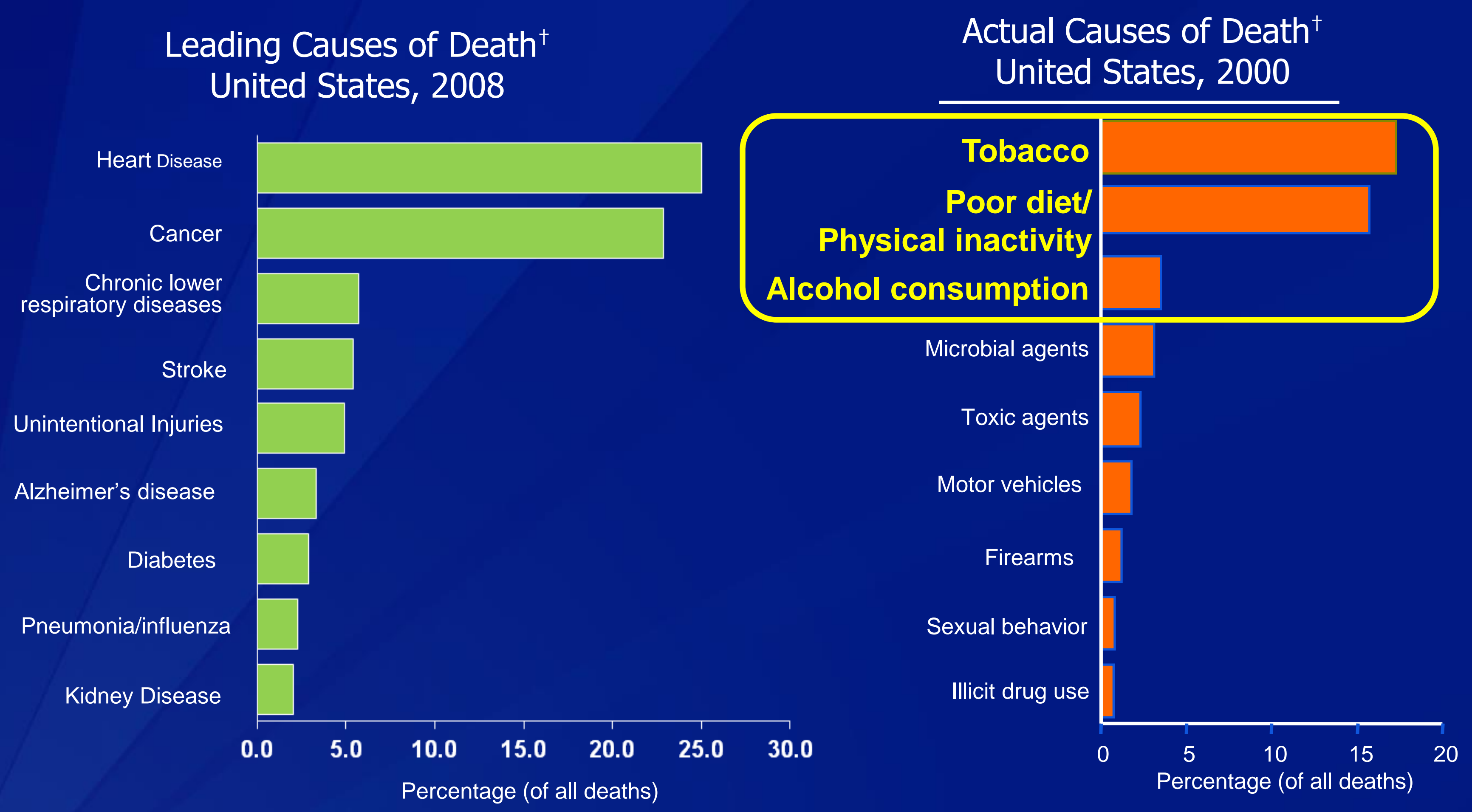
Strengthen public health/ health care collaboration

Definition of Population Health

- **Kindig et al (adapted)**
  - Population health includes factors that influence health outcomes of individuals, including the distribution and equity of such outcomes across various segments of society

(Kindig et a. Am J Public Health. 2003;93:380-383).

What are the Drivers?



* Minino AM, Murphy SL, Xu J, Kochanek KD. Deaths: Final data for 2008. National vital statistics reports; vol 59 no 10. Hyattsville, MD: National Center for Health Statistics. 2011.

† Mokdad AH, Marks JS, Stroup DF, Gerberding JL. Actual causes of death in the United States, 2000. JAMA. 2004;291(10):1238-1246.

Heart Disease Death Rates, 2000-2006
Adults Ages 35+, by County

New York City

Age-Adjusted Average Annual Deaths per 100,000	Number of Counties
195 - 382	632
383 - 430	648
431 - 473	629
474 - 522	624
523 - 747	606
Insufficient Data	2

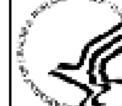
Rates are spatially smoothed to enhance the stability of rates in counties with small populations.

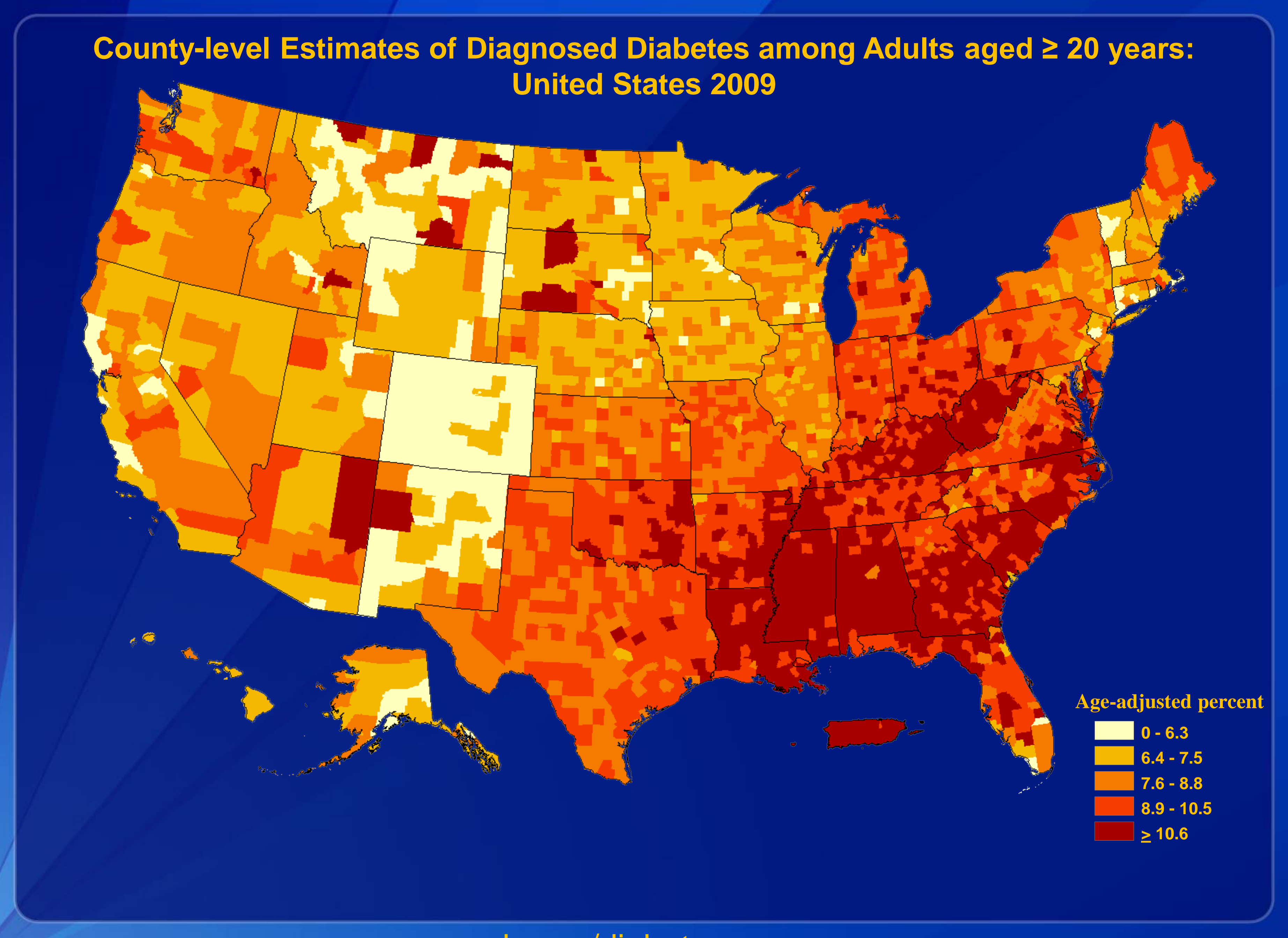
ICD-10 codes for heart disease: I00-I09, I11, I13, I20-I51

Data Source: National Vital Statistics System and the U.S. Census Bureau

Alaska

Hawaii



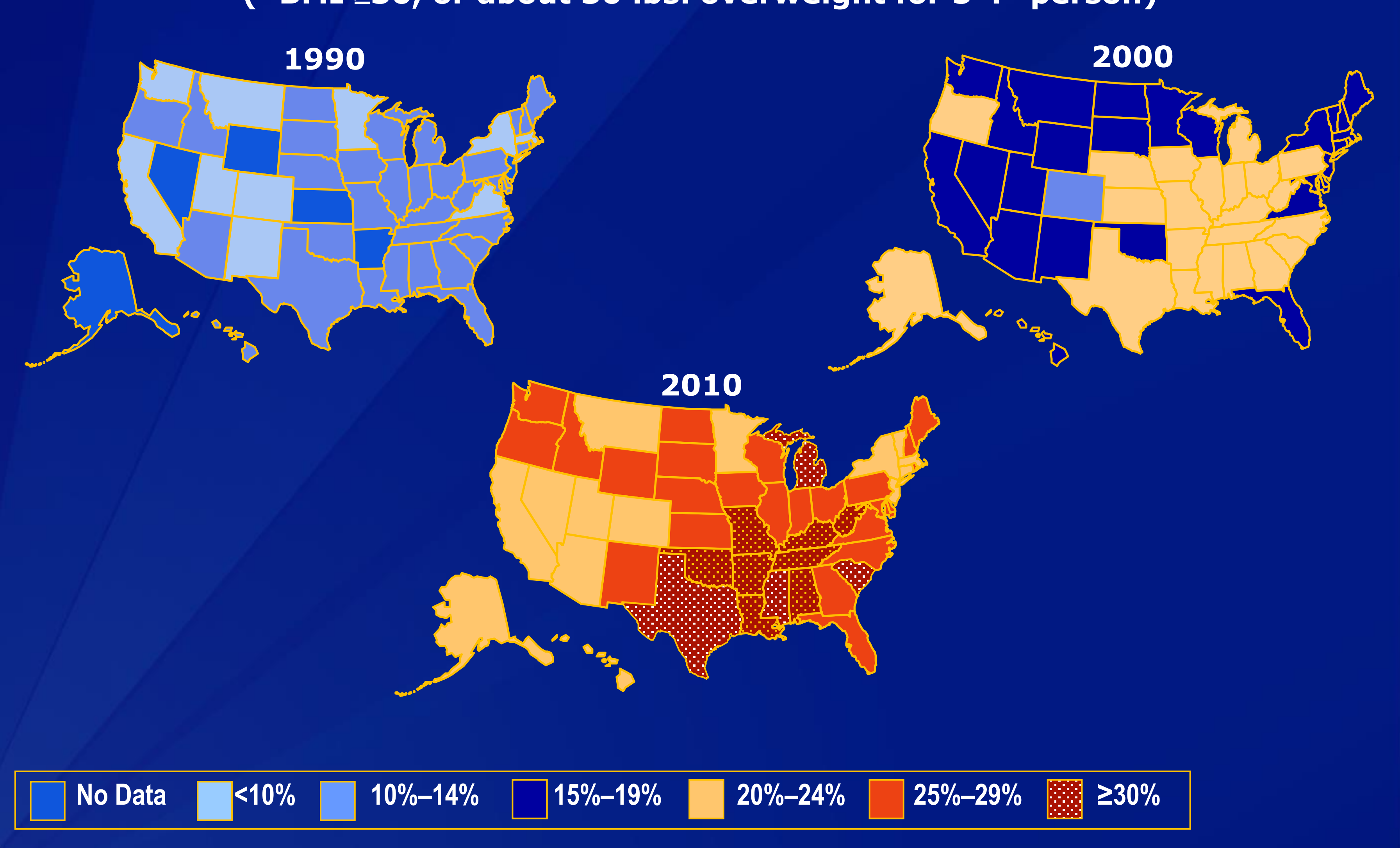


www.cdc.gov/diabetes

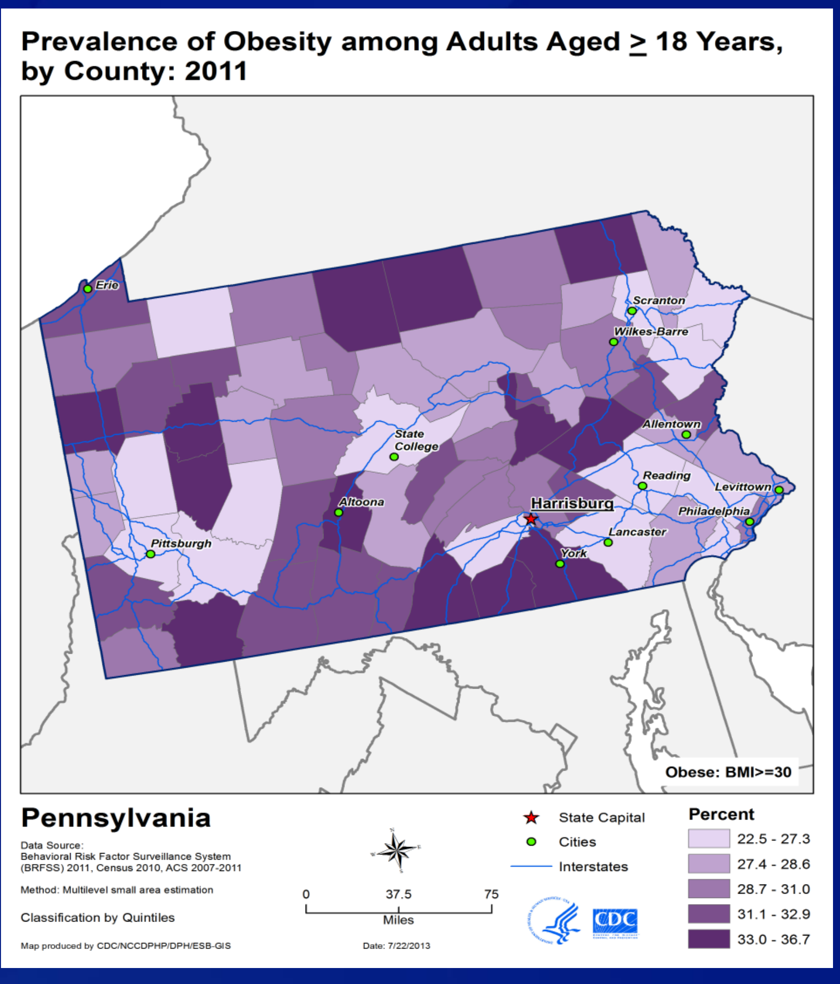
Obesity Trends* Among U.S. Adults

BRFSS, 1990, 2000, 2010

(*BMI ≥30, or about 30 lbs. overweight for 5’4” person)

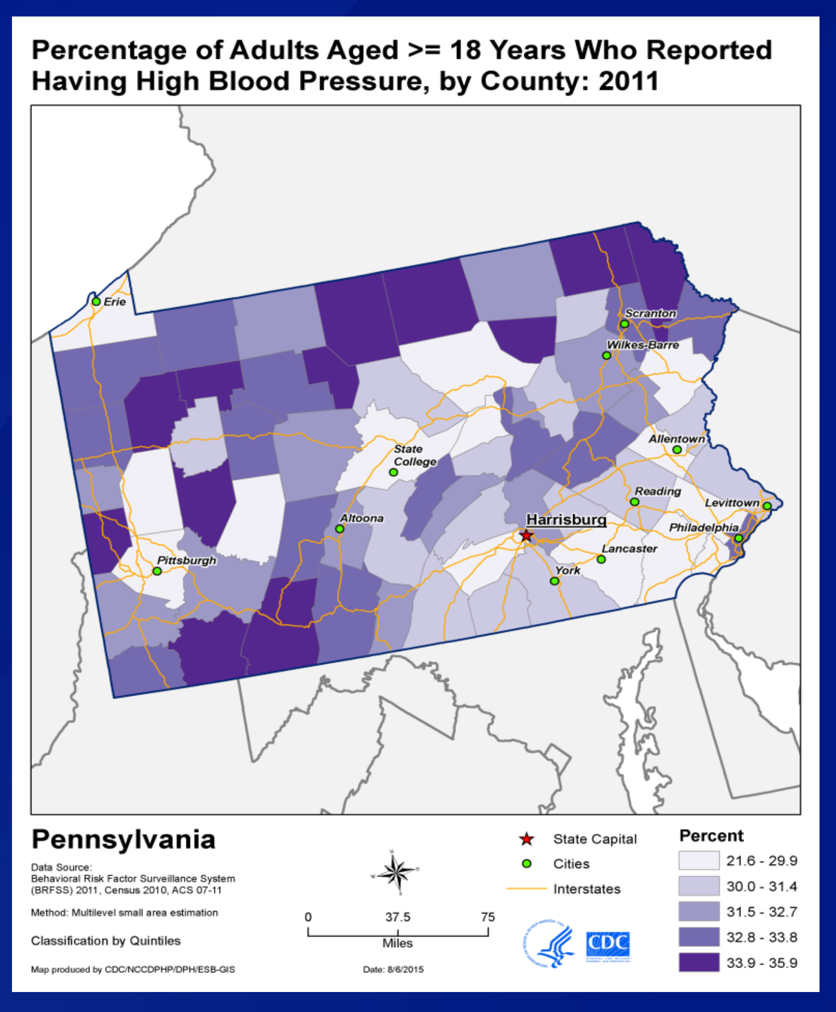


Map: Obesity (Pennsylvania)

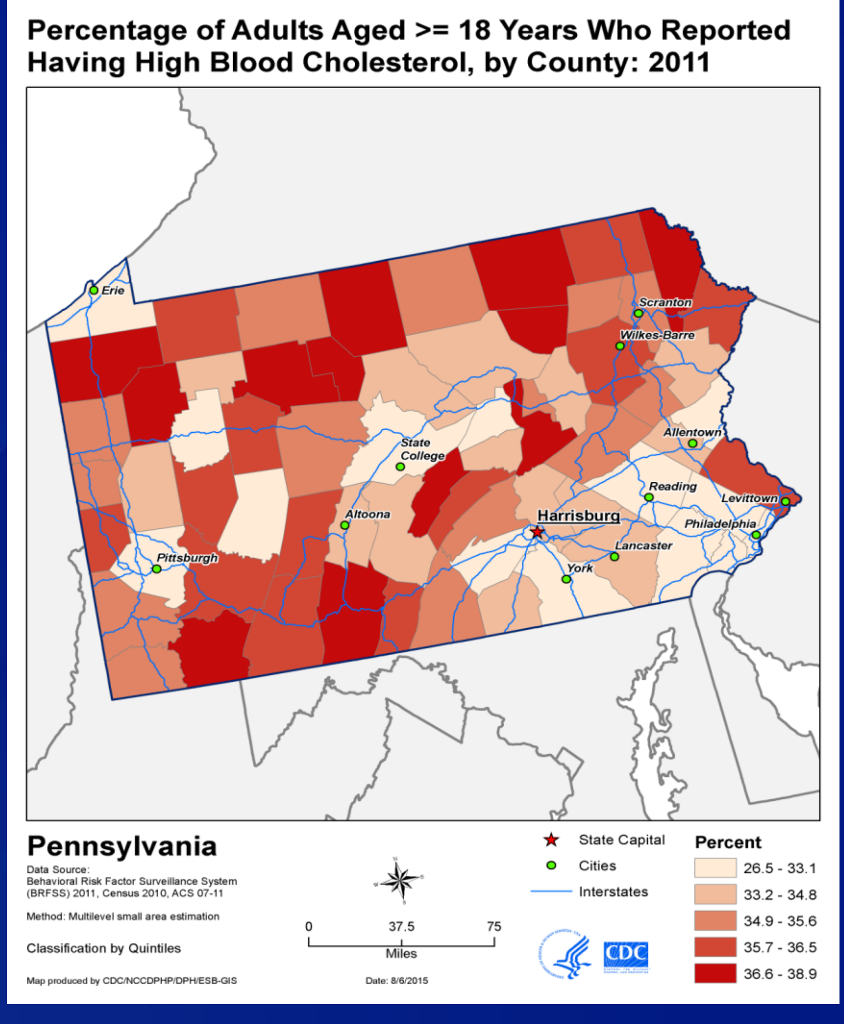


Graphs are state- and indicator-specific. State vs. US comparison, and racial/ethnic and education disparities depicted. Some estimates suppressed due to small sample sizes.

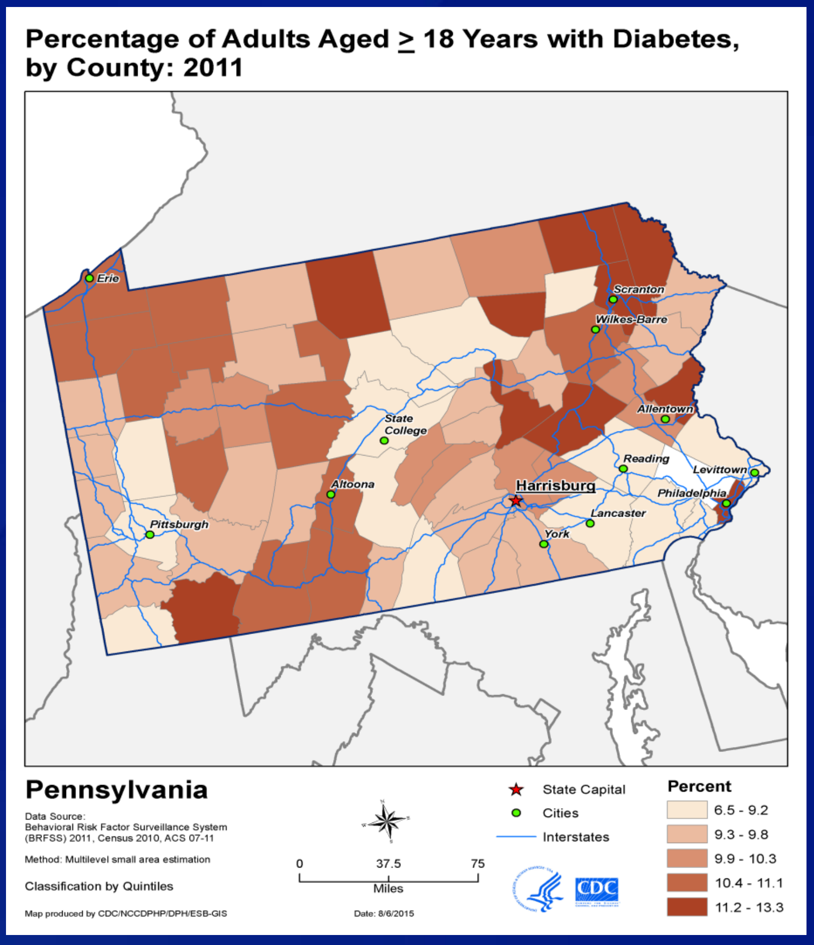
Map: Blood Pressure (Pennsylvania)



Map: Cholesterol (Pennsylvania)

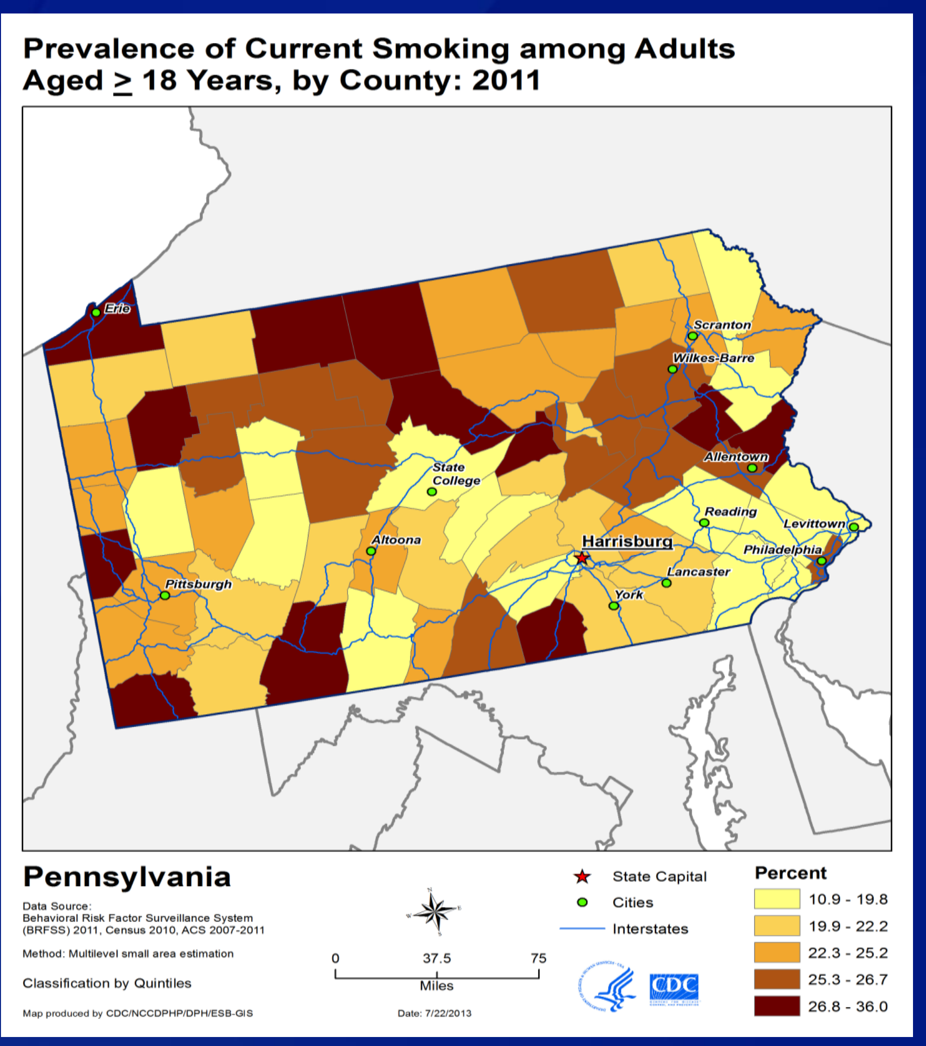


Map: Diabetes (Pennsylvania)

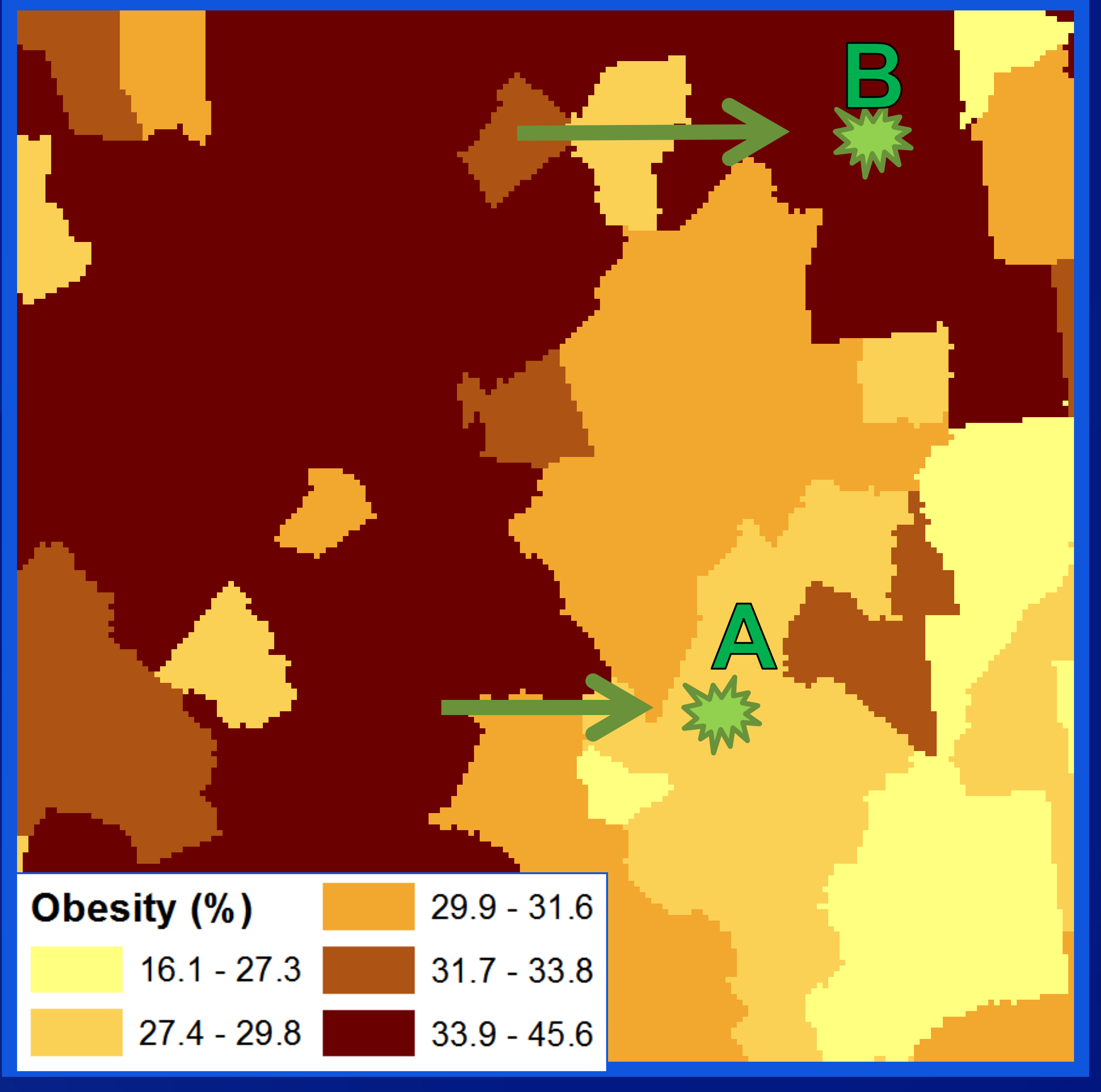


Portable Network Graphics (.PNG) file format. One graphic file per mapped measure for each state. Total of 12 or 15 maps per state.

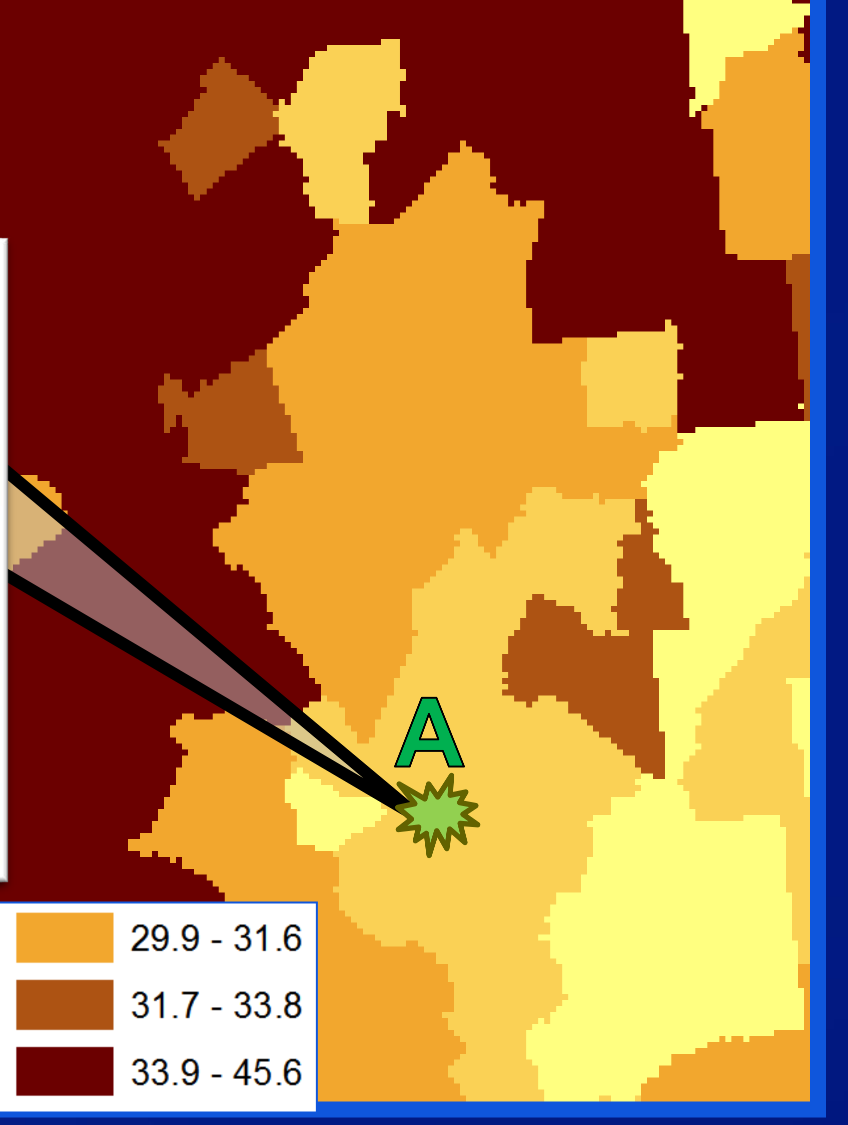
Map: Smoking Prevalence (Pennsylvania)



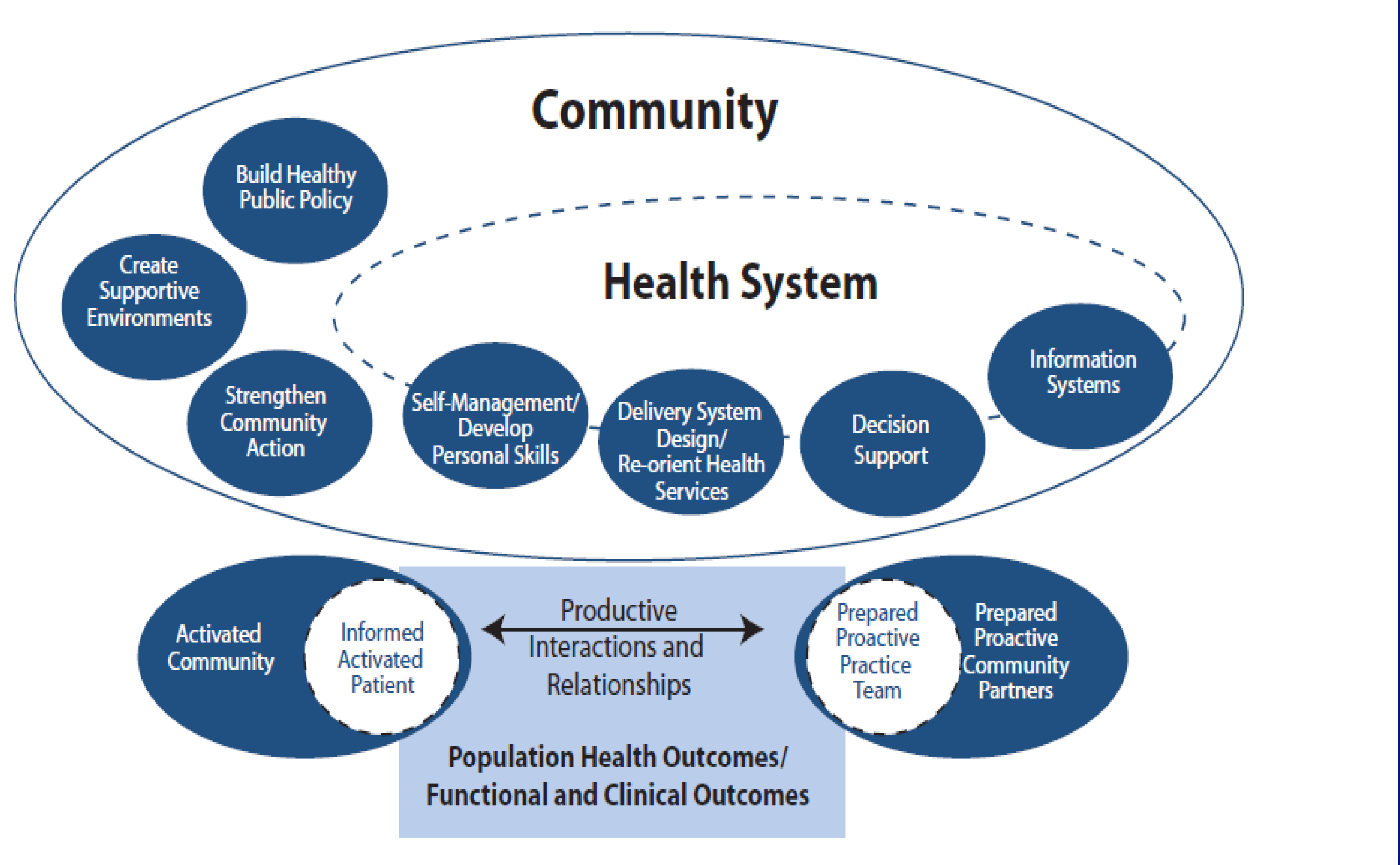
The *context* in which people make decisions about their health often depends on the risks and the resources in their neighborhoods.



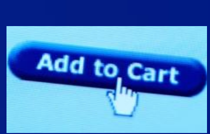
PLACE MATTERS



Expanded Chronic Care Model



Growing Challenges



Improving the Health of Attributed/Accountable Populations

State

Health System

Physician

State Population
State Employees
Medicaid Beneficiaries
Dual-Eligible Beneficiaries

Health Care Delivery System
Inpatients/Outpatients
Residents in Regions/Communities
ACO Enrollees

Patients (ambulatory/hospitalized)
Attributed in population based models
Dual-Eligible Beneficiaries

Categorization of Population Health Activities

- Bucket #1: Traditional Clinical Approaches
- Bucket #2: Innovative Patient-Centered Care
- Bucket #3: Community-Wide Health

#1: Traditional Clinical Approaches

Focused on Preventive care

Million Hearts –The Clinical Components

Aspirin	People at increased risk of cardiovascular events who are taking aspirin	**47%**
Blood pressure	People with hypertension who have adequately controlled blood pressure	**46%**
Cholesterol	People with high cholesterol who are effectively managed	**33%**
Smoking	People trying to quit smoking who get help	**23%**

MMWR. 2011;60:1248-51

#2: Innovative Patient-Centered Care

Focused on Preventive care

Community Health Workers

- Links health systems and communities
- Facilitates access to and improve quality and cultural competence of medical care
- Builds individual and community capacity for health by:
    - Increasing health knowledge and self-sufficiency of the patients
    - Serving as community health educators
    - Providing social support
    - Advocating for the health care needs of patients and communities

#2: Community-Wide Health

Focused on Preventive care

Million Hearts: Community-Wide Components

COMMUNITY PREVENTION
Reduce need for treatment

Tobacco control

Sodium reduction

Trans fat elimination

CDC Supports Bucket 3: Partnerships to Improve Community Health (PICH)

- PICH (39 Awardees)
  - Multi-sectoral community coalitions in:
    - Large Cities and Urban
    - Small Cities and Counties
    - American-Indian tribes

Examples of Activities:

- Boston Public Health Commission - implement citywide strategies to improve built environment - opportunities for walking & biking

Scenario – Patient with asthma

- Bucket 1 – Diagnosis, rx action plan, medications, clinical guidance.
- Bucket 2 – Community health worker does home visit; assesses triggers, counsels patient; offers limited remediation.
- Bucket 3 – Community standards on housing; limits to indoor and outdoor pollutants; reductions in smoking rates.

Emerging Opportunity: Worksite Wellness

National Healthy Worksite Program (NHWP) – 2011-2015

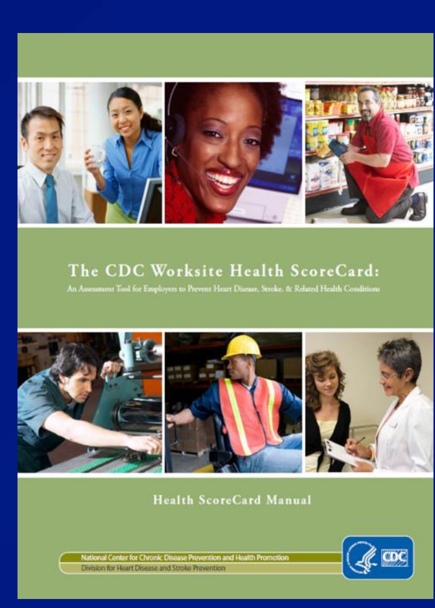
A Comprehensive Workplace Health Program to Address Physical Activity, Nutrition, and Tobacco Use in the Workplace established and evaluated comprehensive workplace health programs to improve the health of workers and their families.

The main program goals included:

- Reducing the risk of chronic disease among employees through science-based workplace health interventions and promising practices.
- Promoting sustainable and replicable workplace health activities such as establishing a worksite health committee, having senior leadership support, and forming community partnerships and health coalitions.
- Promoting peer-to-peer business mentoring.

What is The CDC Worksite Health ScoreCard?

A tool designed to help employers assess *evidence-based health promotion interventions* in their worksites to prevent heart disease, stroke, and related chronic conditions.



Available at:
http://www.cdc.gov/workplacehealthpromotion
http://www.cdc.gov/healthscorecard/index.html
http://www.cdc.gov/hsc

How is the HSC Organized?

125 Yes/No questions assesses best practice health promotion interventions (policies, programs, environmental supports) in 16 topic areas

- Organizational supports
- Tobacco control
- Nutrition
- Physical activity
- Lactation Support
- Weight management
- Stress management
- Depression
- High blood pressure
- High cholesterol
- Diabetes
- Signs and symptoms of heart attack and stroke
- Emergency response to heart attack and stroke
- Occupational Health & Safety
- Vaccine-Preventable Diseases
- Community Resources

Program Strategies and Interventions

- Health behaviors
- Risk factors
- Current health status

- Relationship with management / coworkers
- Social support

Individual

Interpersonal

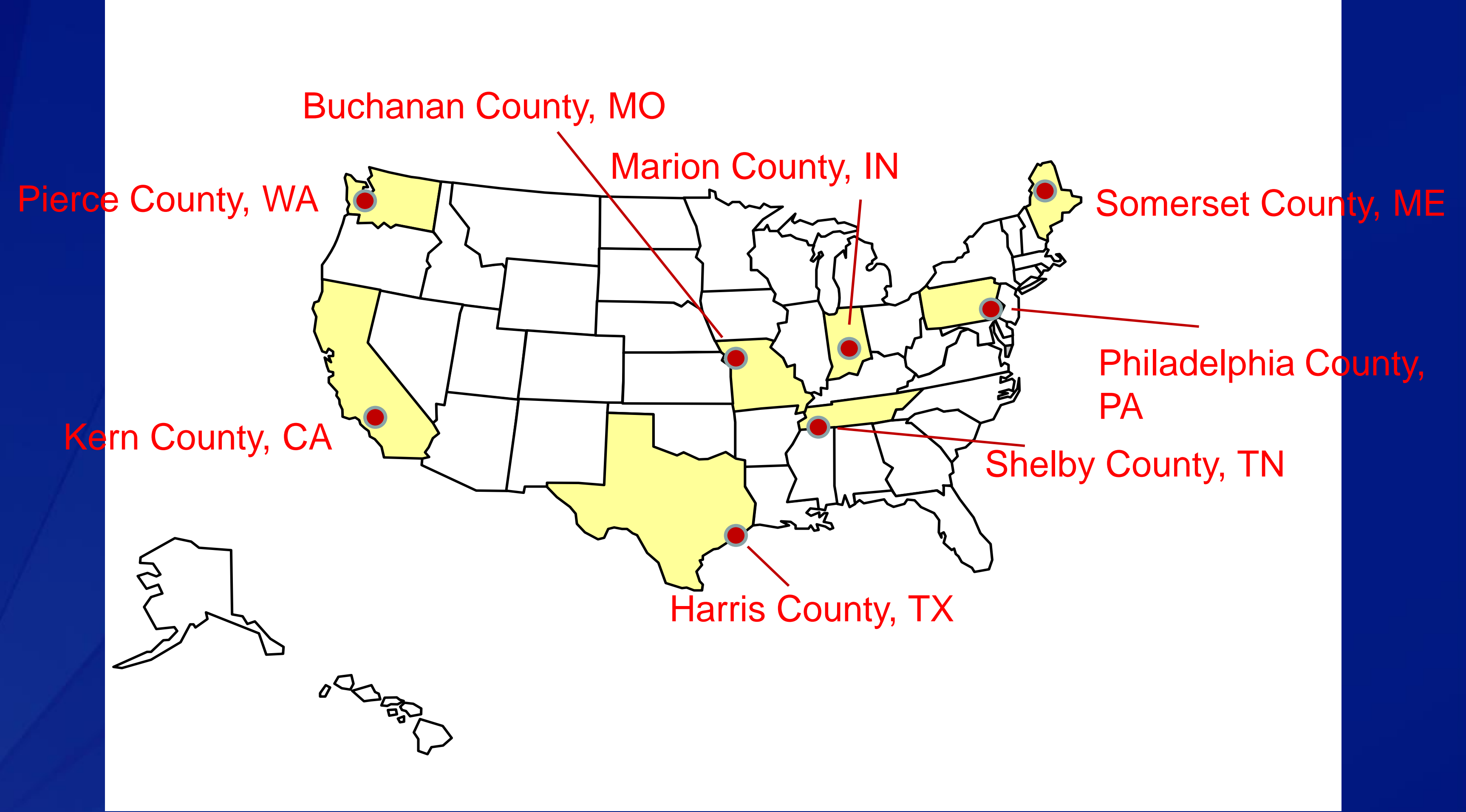
Environment

Organization

- Facilities that support health
- Access and opportunities

•Leadership support
•Culture
•Work climate

NHWP Communities



Changes in Health ScoreCard Score of Active in Philadelphia Employers

Employer Site	Employer Size	Employer Sector	2013 Overall Score	2015 Overall Score
Employer A	Large	Finance, Insurance & Real Estate	128	201
Employer B	Large	Finance, Insurance & Real Estate	128	201
Employer C	Large	Finance, Insurance & Real Estate	131	201
Employer D	Large	Finance, Insurance & Real Estate	126	200

Changes in Health for Philadelphia Employees Who Participated in Both Assessments (2013 & 2015)

Health Issues and Lifestyle Risks	2013	2015
Self-Reported Health Assessment Survey		
Current Smoker	10.0%	7.9%
No/low exercise	55.7%	45.0%
Fruit and Vegetable consumption (5+ per day)	7.9%	10.7%
Biometric Screening		
BMI: % overweight (BMI between 25.0 – 29.9)	37.1%	33.6%
Culture & Climate Survey		
Overall, how safe do you think your workplace is (1 - extremely unsafe to 10 - extremely safe)	7.70	8.11
Overall, how supportive is your company of your personal health, (from 1 - extremely unsupportive to 10 - extremely supportive)?	6.84	7.45

N=140

FEDERAL RESOURCES

What is State Innovation Model (SIM)?

- **Testing the ability of state government to use their regulatory and policy levers to accelerate health transformation**
  - Improve population health
  - Transform healthcare payment & delivery systems
  - Decrease total per capita health care spending
- **Public and private collaboration with multi-payer and multi-stakeholder engagement**
- **Cooperative agreement between awardee and the Innovation Center**
- **Provides technical and financial assistance to provide better care and better health at lower cost through quality improvement to the state population**

SIM Round 2 Awardees

WA
OR
CA
ID
NV
MT
UT
AZ
CO
NM
MN
IA
OK
AR
WI
IL
MI
OH
KY
TN
WV
VA
PA
NY
VT
ME
NH
MA
RI
CT
NJ
DE
MD
HI

Round 1 Model Test States

Round 2 Model Test Awardees

Round 2 Model Design Awardees

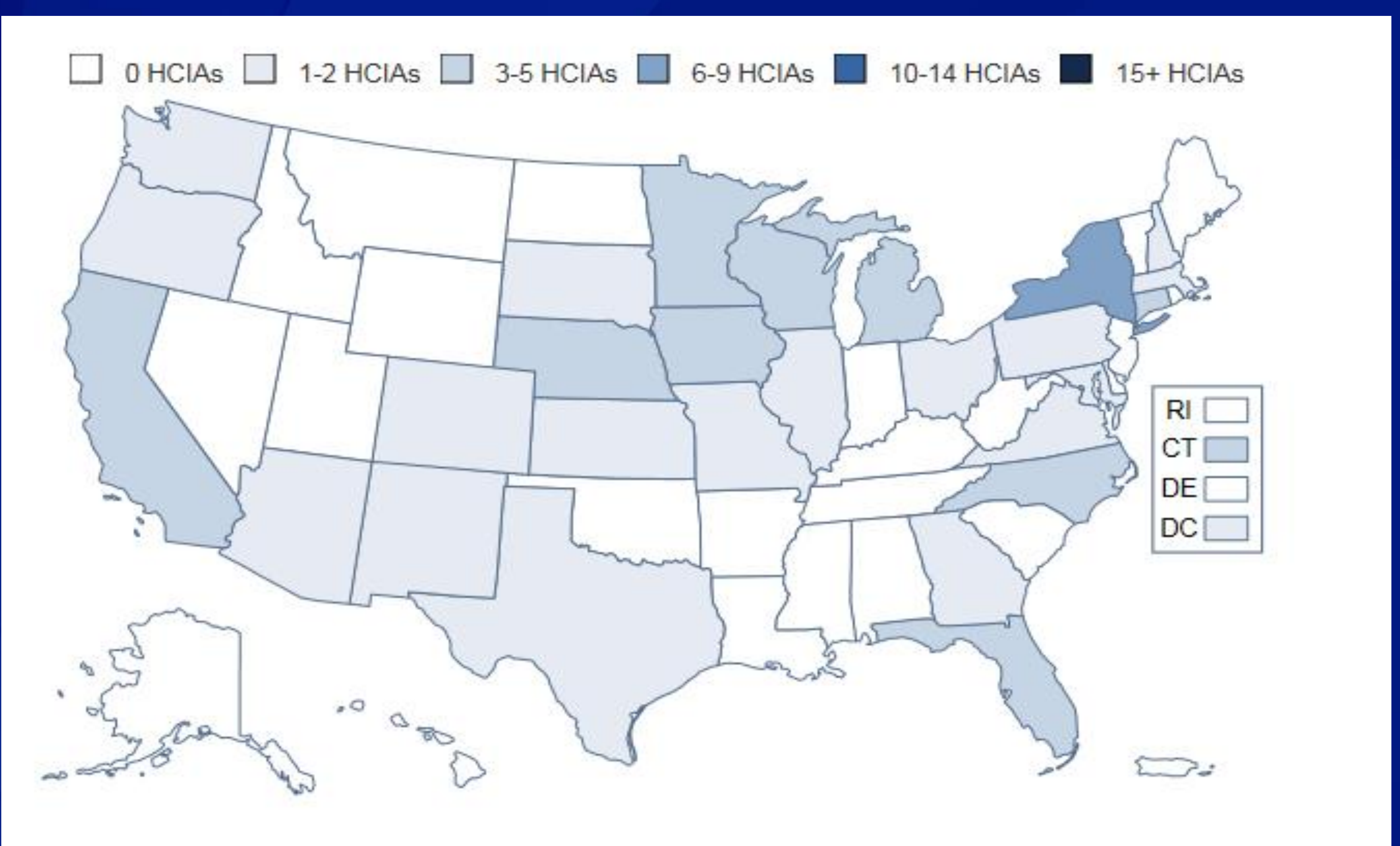
Note: The following R2 Model Design Awardees are NOT captured in this graphic: Puerto Rico, American Samoa, the Commonwealth of the Northern Mariana Islands and the District of Columbia

Health Care Innovation Award (HCIA)

Priority Areas: High Value Targets of Change

- Hypertension and Cardiovascular Disease, Diabetes, COPD, Asthma, HIV/AIDS
- Fall prevention in older adults
- Behaviors that reduce the risk for chronic disease
- Adherence and self management skills
- Broader models that link clinical care with community-based interventions

Health Care Innovation Award
HCIA



PA SIM Model Design: Population Health Priorities

- There are a number of programs in place focused on CMMI – identified priorities.

- Examples include focusing on improving population health and outcomes with regard to childhood obesity, tobacco use, diabetes, behavioral health, oral health, and drug use.

Chronic Disease Self-Management Program

- *Low-cost, community-based class for people with chronic diseases developed at Stanford University*
- *A CDC meta-analysis of CDSMP showed improvements in fatigue, depression, health distress, etc.*
- *CDC's Arthritis Program funds 12 state arthritis programs that can offer CDSMP as a proven intervention*

Health Resources and Services Administration

Community Health Workers Evidence-based Model Toolbox

COMMUNITY HEALTH WORKERS EVIDENCE-BASED MODELS TOOLBOX

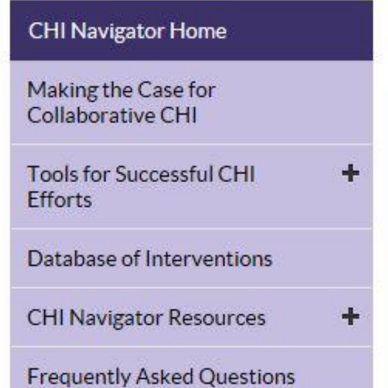
HRSA OFFICE OF RURAL HEALTH POLICY

U.S. Department of Health and Human Services
Health Resources and Services Administration

August 2011

CDC Tools and Resources

CDC Community Health Improvement Navigator



Our health and well-being are products of not only the health care we receive and the choices we make, but also the places where we live, learn, work, and play. **Community health improvement (CHI) is a process to identify and address the health needs of communities**. Because working together has a greater impact on health and economic vitality than working alone, CHI brings together health care, public health, and other stakeholders to consider high-priority actions to improve community health.

The CDC Community Health Improvement Navigator (CHI Navigator) is a website for people who lead or participate in CHI work within hospitals and health systems, public health agencies, and other community organizations. It is a one-stop-shop that offers community stakeholders expert-vetted tools and resources for:

- Depicting visually the who, what, where, and how of improving community health
- Making the case for collaborative approaches to community health improvement

Sortable Risk Factors and Health Indicators

Add Sortable Stats to Your Website
Download Sortable Stats Fact Sheets

(•) States ( ) Federal Regions ( ) Territories

The thirty three indicators are categorized in four groups.
Click a column header to sort on that value.

Current Group Death Rates (8) Health Burden (11) Risk Factors (11) Preventive Services (3)

Region/State	Infant Mortality Rate (2011)	Heart Disease Death Rate (2011)	Stroke Death Rate (2011)	Suicide Death Rate (2011)	Homicide Death Rate (2011)	Drug Poisoning Death Rate (2011)	Motor Vehicle Death Rate (2012)	Cancer Death Rate (2011)
National Value								
National	6.1	173.7	37.9	12.5	5.3	13.2	10.7	169.0
State Values								
Alabama	8.2	228.7	49.4	13.3	8.3	11.8	17.9	187.8
Alaska	3.8	149.6	39.4	20.0	4.8	14.2	8.1	175.5
Arizona	5.9	150.3	30.6	17.9	6.4	16.9	12.6	148.5
Arkansas	7.4	213.8	50.6	16.1	7.4	12.6	18.7	191.1
California	4.8	159.0	36.4	10.5	5.0	10.7	7.5	152.0
Colorado	5.6	129.8	34.6	17.6	3.7	16.1	9.1	143.9
Connecticut	5.1	155.1	28.3	9.8	4.1	11.2	6.6	158.4
Delaware	8.7	175.2	40.5	11.0	5.4	17.6	12.4	179.8
District of Columbia	7.5	194.4	34.2	5.9	15.5	13.5	2.4	180.7
Florida	6.4	153.1	31.5	14.1	6.3	15.4	12.6	161.2
Georgia	6.8	182.5	42.6	11.8	6.3	10.7	12.0	170.3
Hawaii	5.3	132.9	35.6	12.9	N/A	12.4	9.1	138.1

About the Data / About the Site / Related Links

Export Information to CSV File

Centers for Disease Control and Prevention, 1600 Clifton Rd, Atlanta, GA 30333, U.S.A
800-CDC-INFO (232-4636); 1-888-232-6348 (TTY), 24 Hours/Every Day - cdcinfo@cdc.gov

Prevention Status Reports (PSRs)

Prevention Status Reports
- About the PSRs
- View PSRs by State
- View PSRs by Topic +
- FAQs
- Quick Start Guide
- Errata
- Web Buttons

CDC > STLT Gateway Home > Prevention Status Reports

About the Prevention Status Reports

PSR | 2013 The Prevention Status Reports (PSRs) highlight—for all 50 states and the District of Columbia—the status of public health policies and practices designed to address the following important public health problems and concerns:

- Excessive Alcohol Use
- Food Safety
- Healthcare-Associated Infections
- Heart Disease and Stroke
- HIV
- Motor Vehicle Injuries
- Nutrition, Physical Activity, and Obesity
- Prescription Drug Overdose
- Teen Pregnancy
- Tobacco Use

See Also

- PSR Quick Start Guide
- PSR Fact Sheet [PDF 341K]

Need Assistance?

Pharmacist collaborative drug therapy management policy	Green
HIV	
State Medicaid reimbursement for routine HIV screening	Green
State HIV testing laws	Green
Reporting of CD4 and viral load data to state HIV surveillance program	Yellow
Motor Vehicle Injuries	
Seat belt law	Red
Child passenger restraint law	Yellow
Graduated driver licensing system	Red
Ignition interlock law	Yellow
Nutrition, Physical Activity, and Obesity	
Secondary schools not selling less nutritious foods and beverages	Yellow
State nutrition standards policy for foods and beverages sold or provided by state government agencies	Red
Inclusion of nutrition and physical activity standards in state regulations of licensed childcare facilities	Red
State physical education time requirement for high school students	Red
Average birth facility score for breastfeeding support	Red
Prescription Drug Overdose	
State pain clinic law	Red
Prescription drug monitoring programs following selected best practices	Red
Teen Pregnancy	
Expansion of state Medicaid family planning eligibility	Yellow
Tobacco Use	
State cigarette excise tax	Yellow
Comprehensive state smoke-free policy	Red

New Publication: High School Completion Programs Improve Health

Programs improve long-term health for minority and low-income groups. Peer-reviewed journal publication now available online.

1 2 3 4

Task Force

2015 Meetings
June 17–18
October 28–29

2016 Meetings

Annual Reports to Congress

Get Email Updates

Submit your email address to get updates on The Community Guide topics of interest.

Your email address Submit

What's this?

Topics

Adolescent Health	Diabetes	Motor Vehicle Injury	Social Environment
Alcohol - Excessive Consumption	Emergency Preparedness	Nutrition	Tobacco
Asthma	Health Communication	Obesity	Vaccination
Birth Defects	Health Equity	Oral Health	Violence
Cancer	HIV/AIDS, STIs, Pregnancy	Physical Activity	Worksite
Cardiovascular Disease	Mental Health		

What is The Community Guide?

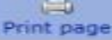
The Guide to Community Preventive Services is a free resource to help you choose programs and policies to improve health and prevent disease in your community. Systematic reviews are used to answer these questions:

- Which program and policy interventions have been proven effective?
- Are there effective interventions that are right for my community?
- What might effective interventions cost; what is the likely return on investment?

Learn more about *The Community Guide*, collaborators involved in its development and dissemination, and methods used to conduct the systematic reviews.

Contact Us

- Email
- Address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CDC Fellowship Opportunities

Office of Public Health Scientific Services
Center for Surveillance, Epidemiology and Laboratory Services
Division of Scientific Education and Professional Development

Fellowships, Internships, and Student Programs

U.S. Department of Health and Human Services
Centers for Disease Control and Prevention

Focus	Program	Education Eligibility Criteria	Other Eligibility Criteria	Citizenship	When to Apply	Duration	Program Start	Program Email and Web Address
Informatics in public health practice Assignment at state or local health department	**Applied Public Health Informatics Fellowship (APHIF)**	Master's degree or PhD in informatics or epidemiology, statistics, computer science, information science, information systems, public health, medicine, nursing, health care, health policy, health services research	Certificate or coursework in public health informatics and experience in public health informatics	U.S. citizen or permanent resident	November to February	1 year	June	Email: aphif@cste.org Web: http://www.aphif.org
Applied epidemiology	***The CDC Experience* Applied Epidemiology Fellowship**	Completed second or third year at an LCME or AOA-accredited school of medicine	N/A	U.S. citizen or permanent resident	September to December	10 to 12 months	August	Email: CDCExperience@cdcfoundation.org Web: www.cdc.gov/CDCExperienceFellowship
Applied epidemiology	**Epidemic Intelligence Service (EIS)**	Physicians, veterinarians, doctoral-level scientists, other health professionals—may require an MPH or equivalent	U.S. citizens or permanent residents with a clinical degree must have full unrestricted U.S. license	U.S. citizen, permanent resident, or foreign national	May 1 to September 1	2 years	July	Email: EIS@cdc.gov Web: www.cdc.gov/EIS
Introduction to applied epidemiology, public health, and preventive medicine	**Epidemiology Elective Program for Senior Medical and Veterinary Students**	Fourth-year medical or veterinary student enrolled in an LCME, AOA, or AVMA-accredited school	Available a minimum of 6 weeks during the fall or spring semester	U.S. citizen or permanent resident	*Fall semester:* January to March *Spring semester:* January to May	at least 6 weeks	*Fall semester:* June *Spring semester:* January	Email: EpiElective@cdc.gov Web: www.cdc.gov/EpiElective
Population health in an international setting	**CDC-Hubert Global Health Fellowship**	Third- or fourth-year medical or veterinary students enrolled in an LCME, AOA, or AVMA-accredited school	Varies, based on assignment	U.S. citizen or permanent resident	January to February	6 to 12 weeks	Program starts July 1. Assignment start dates vary.	Email: HubertFellowship@cdcfoundation.org Web: www.cdc.gov/HubertFellowship
Leadership and management of public policy and programs	**Presidential Management Fellows (PMF) Program**	Master's, law, or doctoral degree	N/A	U.S. citizen or permanent resident	November to December	2 years	Start dates vary	Email: PMF@cdc.gov Web: www.cdc.gov/PMF
Prevention effectiveness: health economics, decision analysis, and quantitative policy analysis	**CDC Steven M. Teutsch Prevention Effectiveness Fellowship (PEF)**	PhD-level degree in economics, public policy, health services research, operations research, industrial engineering, or other quantitative field. MD with appropriate experience	N/A	U.S. citizen, permanent resident, or foreign national	September to January	2 years	August	Email: PEF@cdc.gov Web: www.cdc.gov/PEF
Public health, general preventive medicine, leadership	**Preventive Medicine Residency & Fellowship (PMR/F)**	Physicians, veterinarians, dentists, nurses, or physician assistants with an MPH or comparable degree	Must have experience comparable to CDC's Epidemic Intelligence Service	U.S. citizen or permanent resident	July	1 to 2 years	mid-June	Email: PrevMed@cdc.gov Web: www.cdc.gov/PrevMed
Informatics in public health practice Assignment at CDC headquarters	**Public Health Informatics Fellowship Program (PHIFP)**	Master's degree or above in information or computer science, public health, or health-related discipline	1 to 3 years experience in information or computer science and also in public health or related health-care profession (depending on degree)	U.S. citizen, permanent resident, or foreign national	July to November	2 years	June	Email: PHIFP@cdc.gov Web: www.cdc.gov/PHIFP

For more fellowship opportunities at CDC go to www.cdc.gov/Fellowships.

Revised: August 2013

Things CAN Be Different!

This facility is smoke free.
No Smoking

Saving Lives. Protecting People.

Contact Information:

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hgiles@cdc.gov

Office of the Director
Division of Population Health