CDC PUBLIC HEALTH GRAND ROUNDS

Preventing A Million Heart Attacks and Strokes: A Turning Point for Impact



September 16, 2014

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

Million Hearts®: Where We Are and Where We Need to Go

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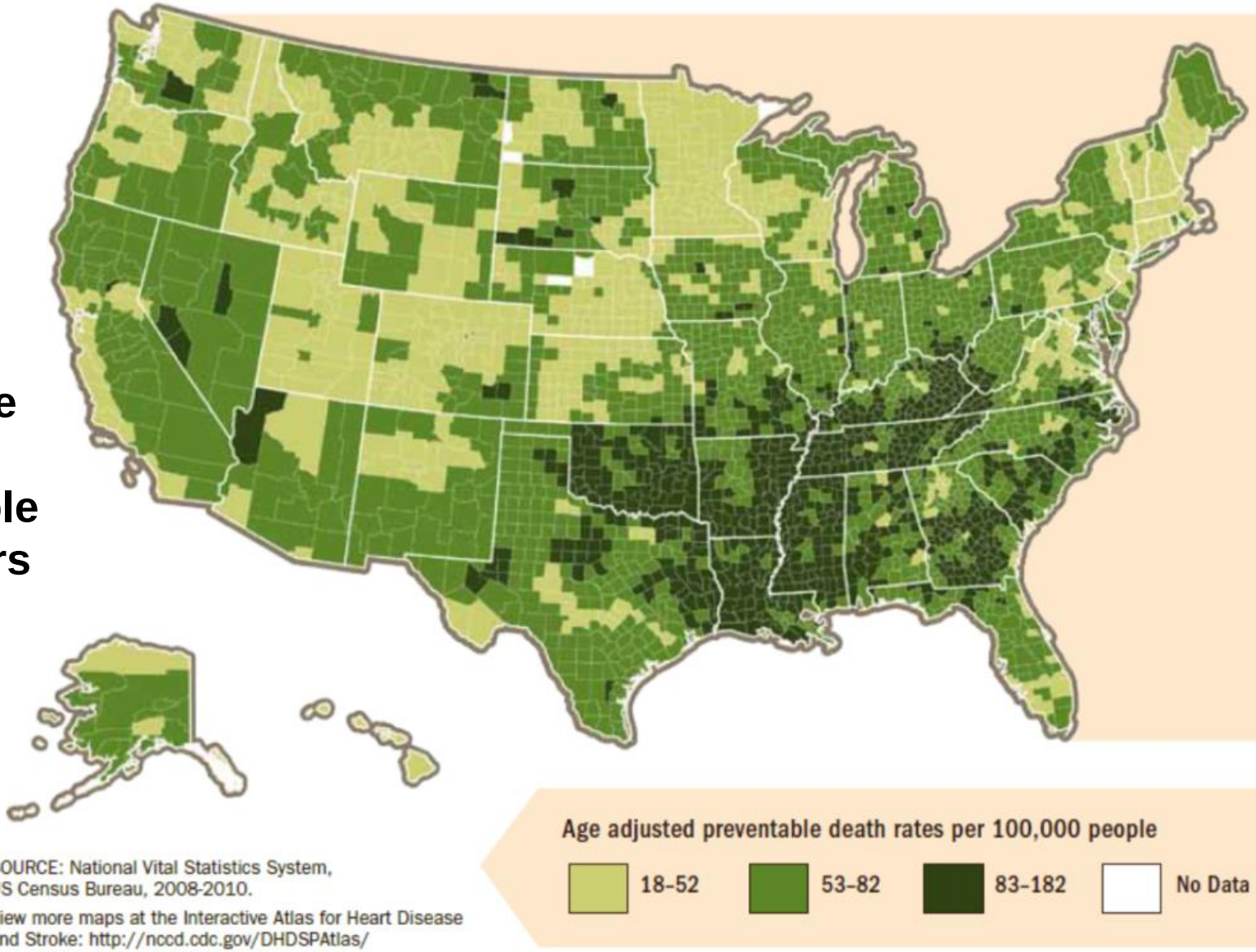
U.S. Department of Health and Human Services
Centers for Disease Control and Prevention

Heart Disease and Stroke: Deadly, Costly, Unequal

- **More than 1.5 million heart attacks and strokes each year**
- **Cause of 1 of every 3 deaths**
  - 800,000 cardiovascular disease deaths
  - $315.4 billion in healthcare costs and lost productivity
- **Leading contributor to racial disparities in life expectancy**

…and Preventable

Each year, 200,000 preventable deaths from heart disease and stroke occur in people under 75 years old



Million Hearts®

Goal: Prevent 1 million heart attacks and strokes by 2017

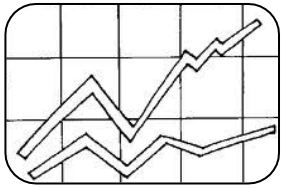
- **US Department of Health and Human Services initiative, co-led by**
  - Centers for Disease Control and Prevention (CDC)
  - Centers for Medicare & Medicaid Services (CMS)
- **Partners across federal and state agencies and private organizations**

Key Components of Million Hearts®

Keeping Us Healthy
Changing the environment

Health Disparities

Excelling in the ABCS
Optimizing care



Focus on the ABCS

Health information technology

Innovations in care delivery

ABCS: Aspirin when appropriate , Blood pressure control, Cholesterol management, Smoking cessation

Preventing a Million: Targets for Our Environment

Intervention	2009 - 2010 Pre-Initiative Estimate	2017 Target
Smoking prevalence	26%	10% reduction (~24%)
Sodium reduction	3580 mg/day	20% reduction (~2900 mg/day)
Trans fat reduction	0.6% of calories	100% reduction (0% of calories)

National Survey on Drug Use and Health 2009-2010
National Health and Nutrition Examination Survey 2009-2010

Preventing a Million: Targets for Optimizing Care

Intervention	2009 - 2010 Pre-Initiative Estimate	2017 Population-wide Target	2017 Clinical Target
Aspirin when appropriate	54%	65%	70%
Blood pressure control	53%	65%	70%
Cholesterol management	33%	65%	70%
Smoking cessation	22%	65%	70%

National Ambulatory Medical Care Survey, National Health and Nutrition Examination Survey

Million Hearts® Lessons Learned: Getting to Goal

Challenges

- Perception that heart attack and stroke are inevitable
- Competing priorities
- Incomplete adoption of evidence-based approaches
- Isolated efforts

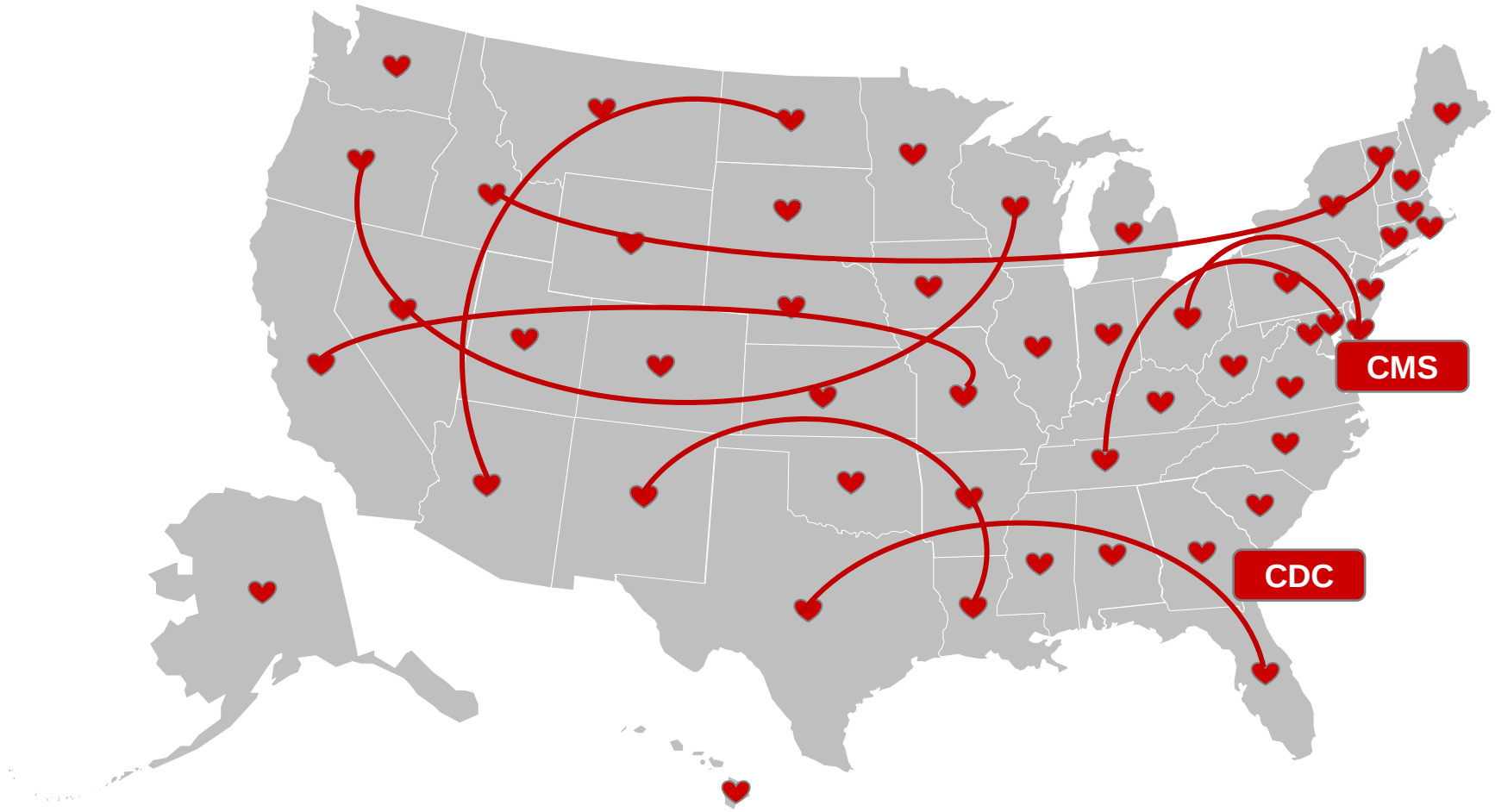
Solutions

- Clear, consistent, compelling action steps; real-life high-performers
- Making cardiovascular health a national priority
- Practical, ready-to-use tools and resources; value-based models of care
- Collaboration is key

Million Hearts® Progress

- **Goal of Million Hearts® resonates**
  - 1.3 million hits to website, 48,000 e-newsletter subscribers
- **Strong teamwork across HHS and beyond**
  - Measure alignment (comparing apples to apples)
  - Data-sharing and analysis
  - Tool development and sharing
- **Successes in the field**
  - Champions are teaching what works
  - Programs are aligning for reach and impact

Million Hearts® Progress
Public Health-Healthcare Collaboration



Monitoring Progress
Short-term Outcomes

Performance Indicators	Data Source	2011	2012	2013
Outpatient EHR adoption	NAMCS EHR supplement	34%	40%	48%
Clinical Quality Measure Reporting	PQRS GPRO (ABCS)	n=46	n=58	n=147*
Sodium procurement policies	Chronic disease state policy tracking system	2	5	6
100% smoke-free coverage in US	Americans for non-smoker's rights; CDC	48.1%	48.9%	49.1%
E-update subscribers	Gov't subscription service	34,071	38,344	43,726

Results as of August 2014 except *PQRS GPRO 2013 data preliminary, 09/16/14
EHR: Electronic health record
NAMCS: National Ambulatory Medical Care Survey
PQRS GPRO: Physician Quality Reporting System Group Practice Reporting Option
ABCS: Aspirin when appropriate , Blood pressure control, Cholesterol management, Smoking cessation

Monitoring Progress
Intermediate Outcomes

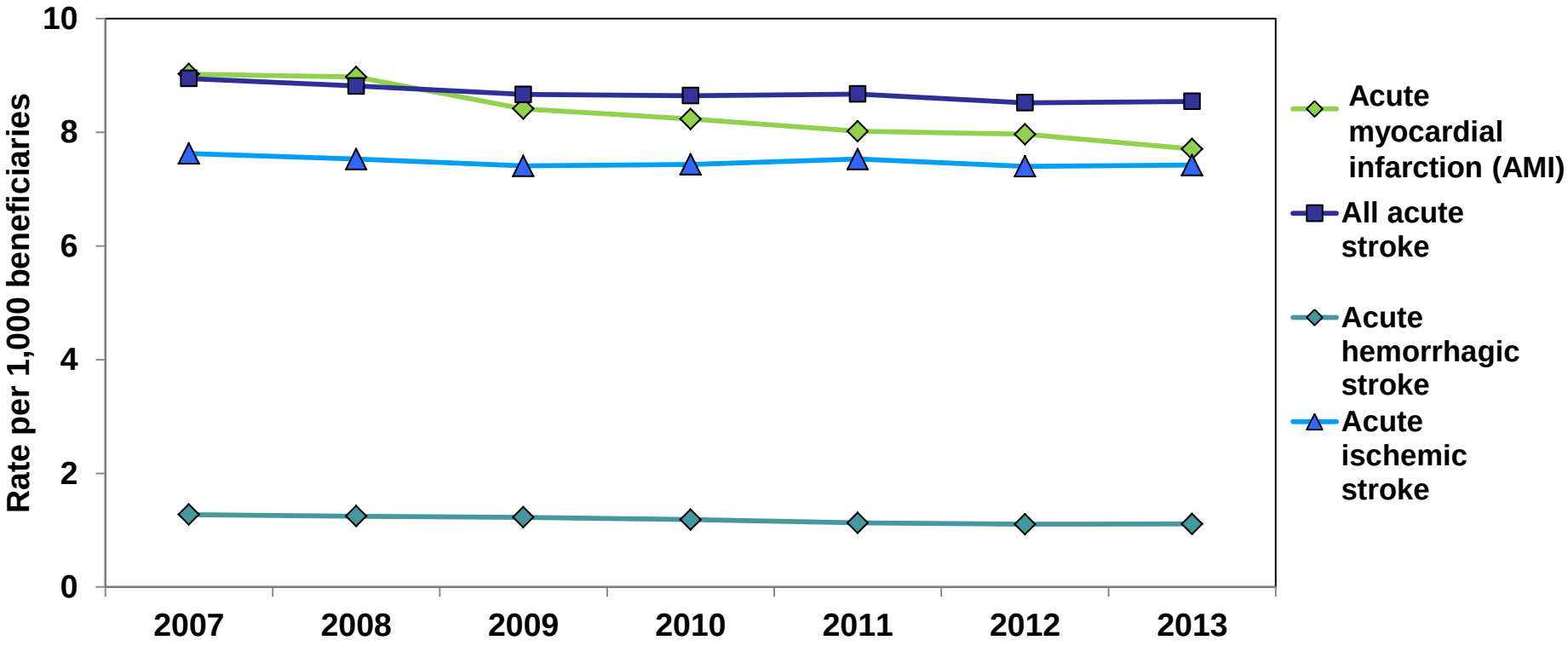
Performance Indicators	Data Source	2011	2012	2013
Aspirin use	NAMCS	54%	Summer 2014	UNK
	PQRS GPRO	N/A	83%	78%*
Blood pressure control	NHANES	53%	52%	2015
	PQRS GPRO	68%	69%	62%*
Cholesterol management	NHANES	33%	43%	2015
	PQRS GPRO	53%	56%	54%*
Smoking assessment and treatment	NAMCS	22%	Summer 2014	UNK
	PQRS GPRO	N/A	87%	83%*
Current smoking prevalence	NSDUH (combustible tobacco)	26%	25%	Winter 2014
	NHIS (cigarettes)	19%	18%	17.5%
Sodium intake (mg/day)	NHANES	3594	Fall 2014	2016

Results as of August 2014 except *PQRS GPRO 2013 data preliminary, 09/16/14.
PQRS GPRO: Physician Quality Reporting System, Group Practice Reporting Option.
NHANES: National Health and Nutrition Examination Survey.
NHIS: National Health Interview Survey.

NAMCS: National Ambulatory Medical Care Survey.
UNK: Unknown.
N/A: Not available.
NSDUH: National Survey on Drug Use and Health.

Monitoring Progress
Long-term Outcomes

Performance Indicators	Data Source
Medicare Fee for Service - AMI and stroke hospitalization rates	CMS Dashboard (per 1,000 beneficiaries)



Results as of August 2014. CMS: Centers for Medicare & Medicaid Services.
Rates are among those beneficiaries aged ≥65 years with Medicare Part A and B coverage and were adjusted to appropriately represent the number of full-time equivalent beneficiaries enrolled during the period and the 2010 Medicare population age distribution.

Million Hearts® Progress
Changing the Environment

- **More smoke-free space means fewer heart attacks**
  - More than 125 communities have chosen to go smoke free
- **"Tips from Former Smokers"**
  - Boosts quit attempts
- **CVS Health® stops selling tobacco products**
- **FDA's artificial trans fat determination is pending**
- **Power of procurement to increase availability of foods lower in sodium**

50 Years of Progress: A Report of the Surgeon General, 2014
MMWR 2012; **61:** 667–70.

www.no-smoke.org/pdf/current_smokefree_ordinances_by_year.pdf

Million Hearts® Progress
Optimizing Care – Performance on ABCS

"Dashboard" approach shows status of progress in ABCS by geographic area

Million Hearts® Clinical Quality Measures for Selected State, Corresponding HHS Region, and National Values, as Reported by HRSA Health Care Sites

ABCS Million Hearts® Clinical Quality Measures	Delaware		HHS Region 3 - Philadelphia		National	
	%	target	%	target	%	target
A. Aspirin Use	78%	●	76%	●	75%	●
B. Blood Pressure Control	61%	●	63%	●	63%	●
Blood Pressure Screening	n/a	●	n/a	●	n/a	●
C. Cholesterol Management - Population	n/a	●	n/a	●	n/a	●
Cholesterol Management - Diabetes	n/a	●	n/a	●	n/a	●
Cholesterol Management - IVD	n/a	●	n/a	●	n/a	●
S. Smoking Assessment and Treatment	49%	●	63%	●	63%	●

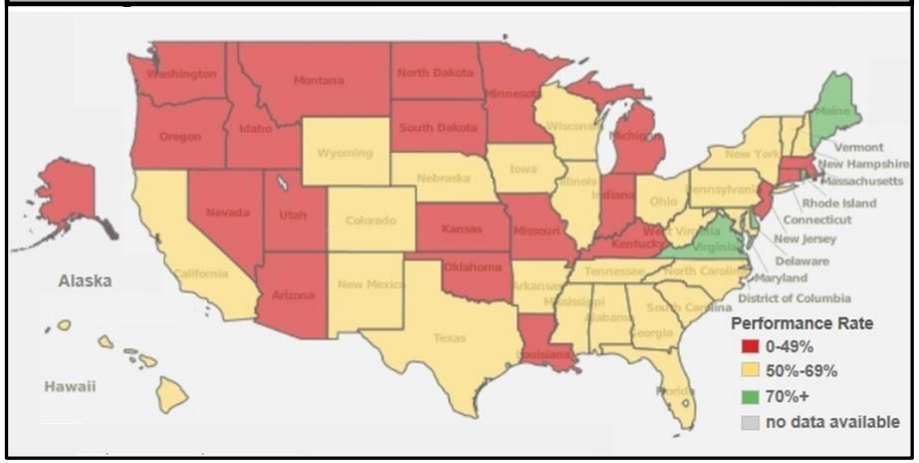
Red = 0% - 49%; **Yellow** = 50% - 69%; **Green** = 70%+; **Grey** = no data available

State-level data available from Healthcare Effectiveness Data and Information Set, Uniform Data System, and Physician Quality Reporting System Clinical Quality Measures Dashboard : millionhearts.hhs.gov/aboutmh/achieving-goals.html
HHS: Department of Health and Human Services
HRSA: Health Resources and Services Administration

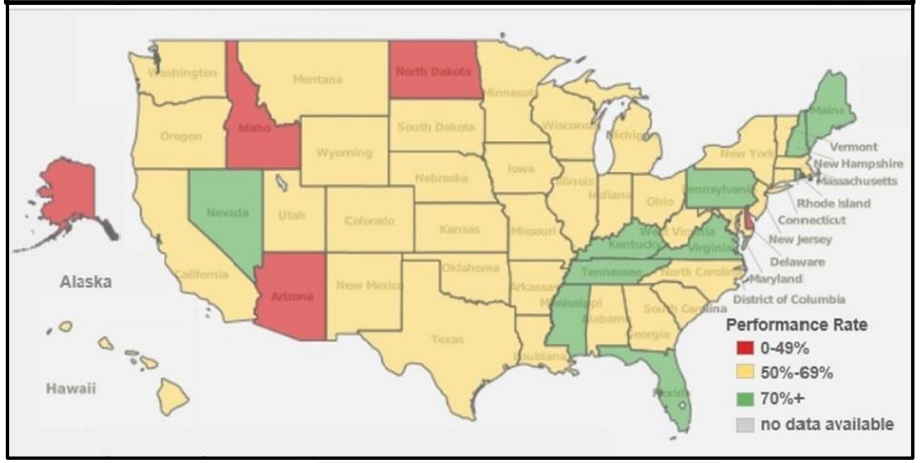
Million Hearts® Progress
Optimizing Care – Performance on ABCS

Smoking Assessment and Treatment Performance Rates Reported by HRSA Healthcare Sites

Smoking Assessment and Treatment 2011



Smoking Assessment and Treatment 2013



Performance Rate
- 0-49%
- 50%-69%
- 70%+
- No data available

State-level data available from Healthcare Effectiveness Data and Information Set, Uniform Data System, and Physician Quality Reporting System

Million Hearts® Progress
Addressing Health Disparities

- **CDC-Association of State and Territorial Health Officials (ASTHO) Million Hearts® Hypertension Control Project**
  - Ohio improved hypertension control among African American males
    - From 70% to 73% in 6 months in 11 healthcare sites
- **CMS' Quality Improvement Organizations (QIO)**
  - Special projects in 3 states
    - Reaching over 1.9 million patients
    - Through 400+ practices and partners
- **Community and faith-based organizations**
  - NAACP
  - "100 Congregations" for Million Hearts®

What Must Happen to Prevent a Million Heart Attacks and Strokes by 2017?

- **6.3 million smokers must quit**
- **10 million people must control their hypertension**
- **There must be a 20% reduction in sodium intake**

Focus on populations
with the greatest burden
and at greatest risk

Success in Blood Pressure Control: 2013 Hypertension Champions

Andrew Tremblay, MD
Chair, Department of Primary Care
Cheshire Medical Center/Dartmouth-Hitchcock Keene

Cheshire Medical Center
Dartmouth-Hitchcock Keene

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

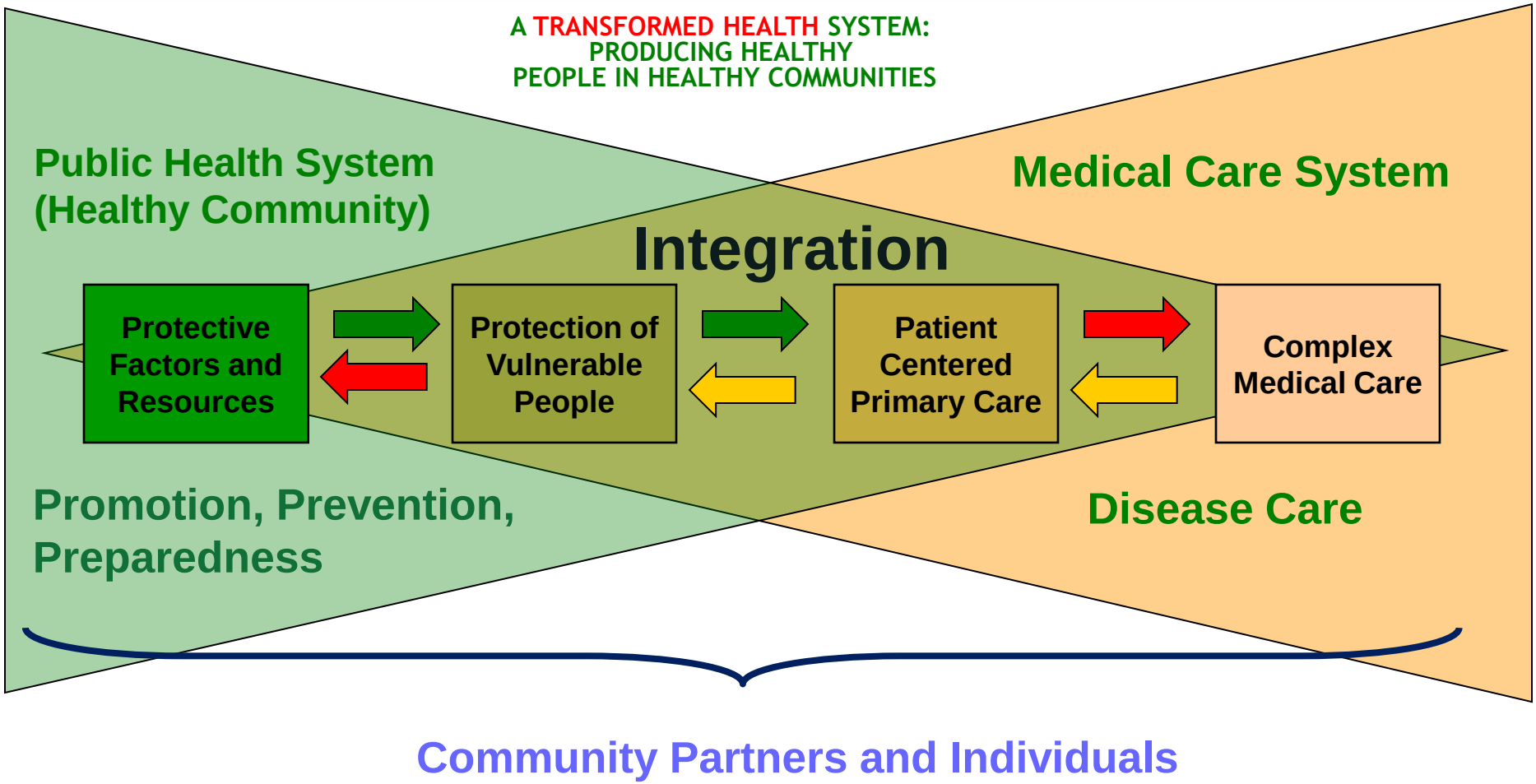
Our Three-part Aim

Improve Health of All Residents

Create a Culture of Health

Decrease Medical Costs
Allow Investment in Prevention

Integration of Public Health System and Medical Care System as a Strategic Concept



Cheshire Medical Center/Dartmouth-Hitchcock Keene (CMC/DHK)

- **38,000 active adult patients**
- **Over 125 providers**
  - Several multi-specialty groups
- **32% with hypertension**
  - Over 12,000 individuals
- **8.5% Medicaid-eligible**
- **3.7% racial or ethnic minority**

Barriers to Optimal BP Control Observed at CMC/DHK

- **Inconsistencies included**
  - Work flow between primary care teams (medical homes) and providers
  - Engagement of specialty care departments
  - Documentation, especially of second BP readings (dictation and vital flow sheet) by providers into EMR
  - Inconsistent BP technique and multiple brands of equipment
  - Lack of timely maintenance and calibration of equipment

EMR: Electronic Medical Record

Additional Barriers Observed at CMC/DHK

- Cost barrier of blood pressure rechecks and lack of consistent, centralized process
- Lack of resources to effectively manage registries
- No agreement on universal triage and treatment algorithms
- Varied process for flow staff to notify provider of elevated blood pressure
- Lack of engagement and alignment of patients and the community

Setting An Above Average Goal: 81% of Patients with HTN Control

- **Strategies deployed to improve HTN control**
  - Multidisciplinary Quality Improvement Team
    - Hypertension Champions
  - Free nurse clinics
    - Eliminated cost barriers
    - Implemented protocol based modifications
  - Electronic Health Record Use
    - Provider-specific registry coordination
  - Behavioral health strategies used to engage patients in convenient locations (e.g., YMCA, work, home)

HTN: Hypertension

10 Strategies for Success

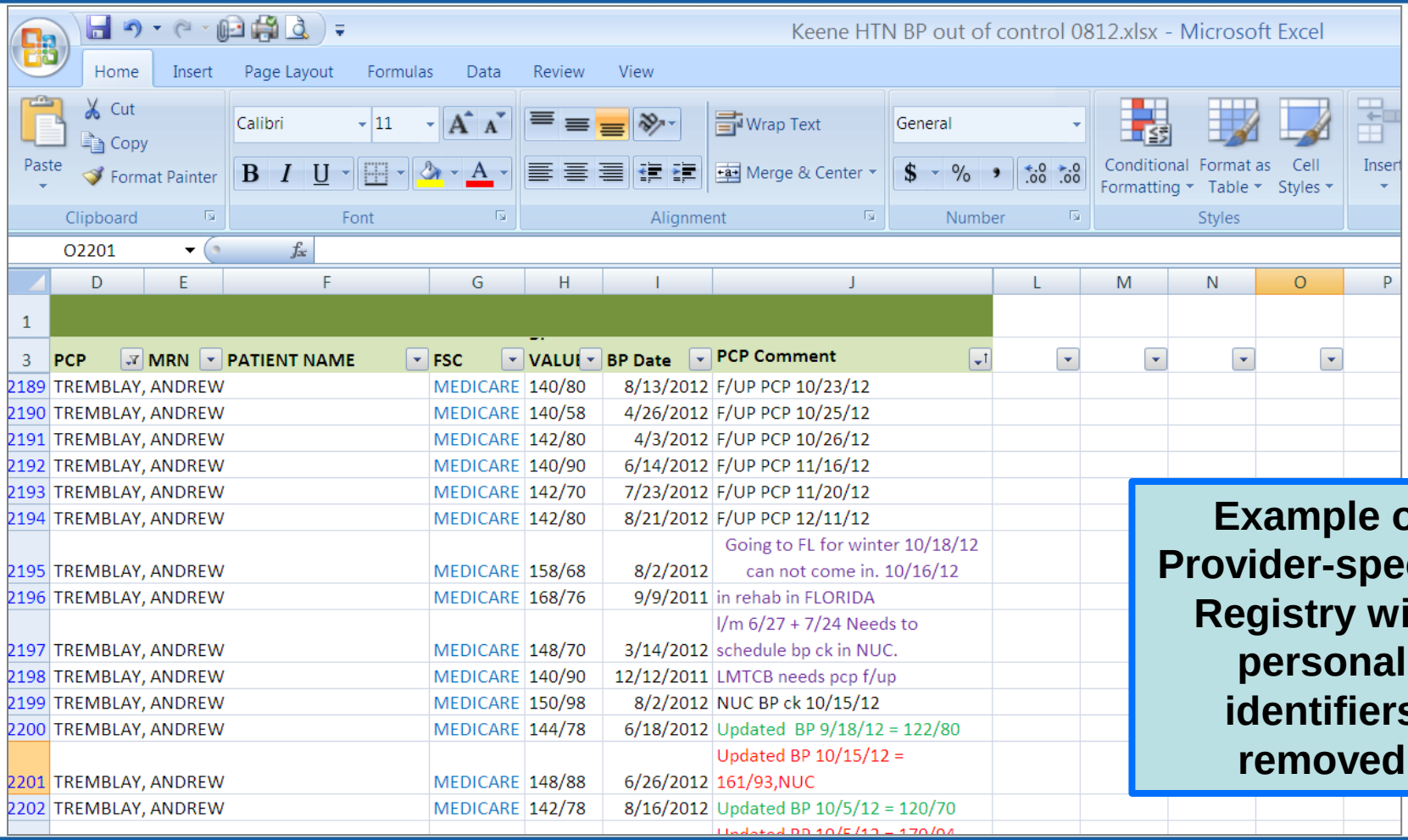
1. **Convened a multi-disciplinary team**
   - Grounded in our quality improvement framework and Clinical-Community Integration Model
   - Won the 2014 CMC/DHK Chairman's Award
2. **Surveyed primary care providers and nursing staff about their barriers to adequate blood pressure control**
3. **Calibrated all cuffs and standardized future purchasing**
4. **Created a core competency for nursing staff in all departments and community partners**
   - YMCA, nursing homes and visiting registered nurses
5. **Distributed a single blood pressure brochure throughout the community**
   - Consistent message and care plan prompt

QI: Quality improvement
CMC/DHK: Cheshire Medical Center/Dartmouth-Hitchcock Keene

10 Strategies for Success, continued

6. **Created a nurse clinic**
   - No-cost blood pressure rechecks and triaging
7. **Created single evidence-supported triage and treatment algorithms**
   - For primary care, specialty care, and community
8. **Provided individual provider registries**
   - Monthly data feedback
   - Increased the number of registry managers
9. **Incentivized providers for meeting blood pressure control targets**
10. **Widely distributed "Know Your Numbers" wallet cards**
    - More than 12,000 issued

Provider-specific Registry Management



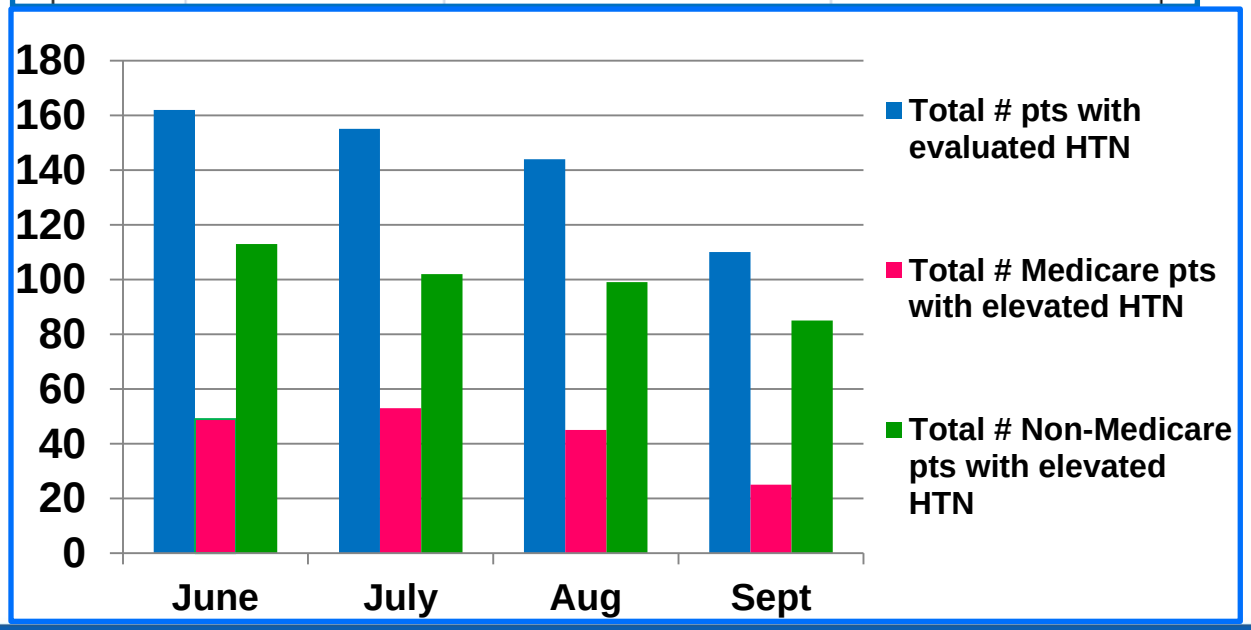
	PCP	MRN	PATIENT NAME	FSC	VALUE	BP Date	PCP Comment
2189	TREMBLAY,	ANDREW		MEDICARE	140/80	8/13/2012	F/UP PCP 10/23/12
2190	TREMBLAY,	ANDREW		MEDICARE	140/58	4/26/2012	F/UP PCP 10/25/12
2191	TREMBLAY,	ANDREW		MEDICARE	142/80	4/3/2012	F/UP PCP 10/26/12
2192	TREMBLAY,	ANDREW		MEDICARE	140/90	6/14/2012	F/UP PCP 11/16/12
2193	TREMBLAY,	ANDREW		MEDICARE	142/70	7/23/2012	F/UP PCP 11/20/12
2194	TREMBLAY,	ANDREW		MEDICARE	142/80	8/21/2012	F/UP PCP 12/11/12
2195	TREMBLAY,	ANDREW		MEDICARE	158/68	8/2/2012	Going to FL for winter 10/18/12 can not come in. 10/16/12
2196	TREMBLAY,	ANDREW		MEDICARE	168/76	9/9/2011	in rehab in FLORIDA
2197	TREMBLAY,	ANDREW		MEDICARE	148/70	3/14/2012	l/m 6/27 + 7/24 Needs to schedule bp ck in NUC.
2198	TREMBLAY,	ANDREW		MEDICARE	140/90	12/12/2011	LMTCB needs pcp f/up
2199	TREMBLAY,	ANDREW		MEDICARE	150/98	8/2/2012	NUC BP ck 10/15/12
2200	TREMBLAY,	ANDREW		MEDICARE	144/78	6/18/2012	Updated BP 9/18/12 = 122/80
2201	TREMBLAY,	ANDREW		MEDICARE	148/88	6/26/2012	Updated BP 10/15/12 = 161/93,NUC
2202	TREMBLAY,	ANDREW		MEDICARE	142/78	8/16/2012	Updated BP 10/5/12 = 120/70

Example of Provider-specific Registry with personal identifiers removed

Tracking Progress Through Provider-specific Registry Management

Dr Tremblays HTN Registry #'s 2012

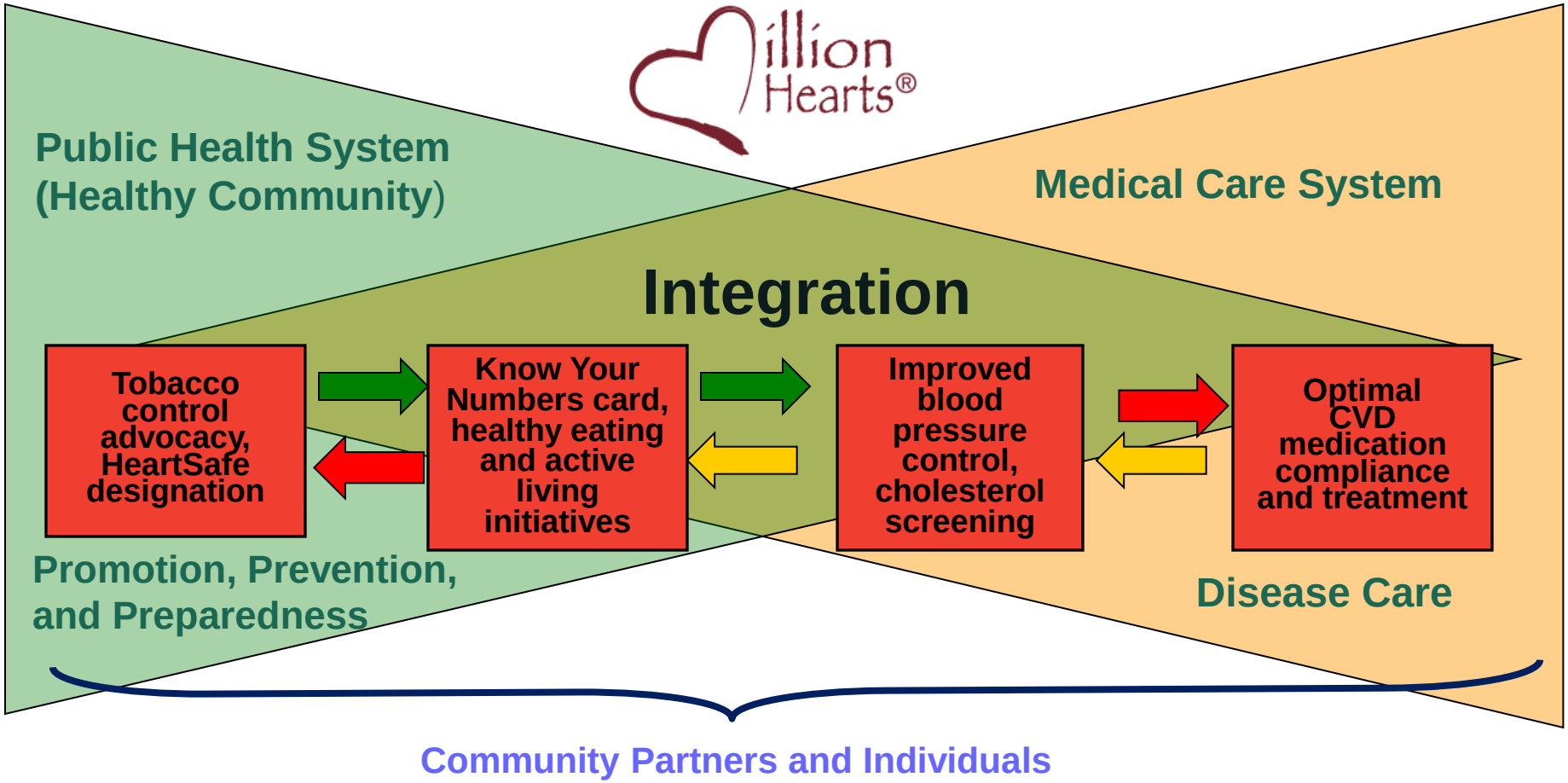
Month	Total # pt's with elevated HTN	Total # Medicare pt's with elevated HTN	Total # Non- Medicare pt's with elevated HTN
June	162	49	113
July	155	53	102
Aug	144	45	99
Sept	110	25	85



Provider specific feedback provided both as charts and graphs

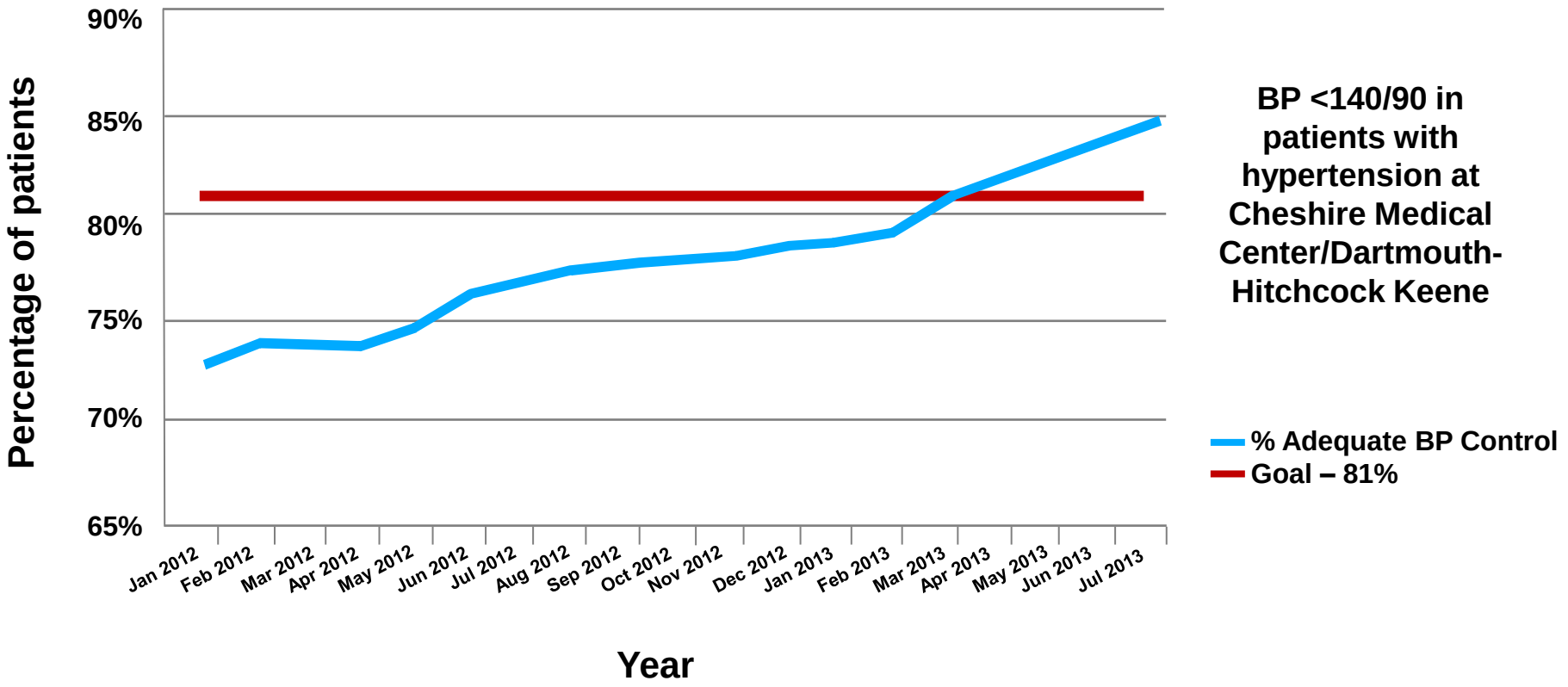
HTN: hypertension

Integration Applied to Million Hearts® Initiative



CVD: Cardiovascular disease

CMC/DHK Results: Control of Hypertension



The Reward for a Job Well Done Is the Ability to Do More

- **New Hampshire awarded an ASTHO/Million Hearts® Grant**
- **CMC/DHK funded to:**
  - Provide technical assistance to Federally-qualified Health Centers in 2 counties
  - Replicate strategies and success in more diverse, urban settings

CDC

illion Hearts®

astho™ ASSOCIATION OF STATE AND TERRITORIAL HEALTH OFFICIALS

Examples of New Community Partnerships

Strengthened relationship and collaboration with the Manchester Health Department

YMCA will now offer reduced and no cost memberships to patients at Manchester Community Health Center

The Organization for Refugee and Immigrant Success will provide a summer farm stand in the parking lot of Manchester Community Health Center to increase access to fresh fruits and vegetables

More to Do…..

- Expanding registry coordination to provide comprehensive chronic disease management
- Explore the use of blood pressure kiosks
- “Activity is Good Medicine”
- Integrate nutrition counseling and therapy
- Pharmacist integration
- Spreading improvement
- A plan for maintaining gains

Tobacco Use Prevention in Massachusetts

Patricia P. Henley, M.Ed.

Director, Office of Community Health and Tobacco Use Prevention

Massachusetts Tobacco Cessation and Prevention Program

Massachusetts Department of Public Health

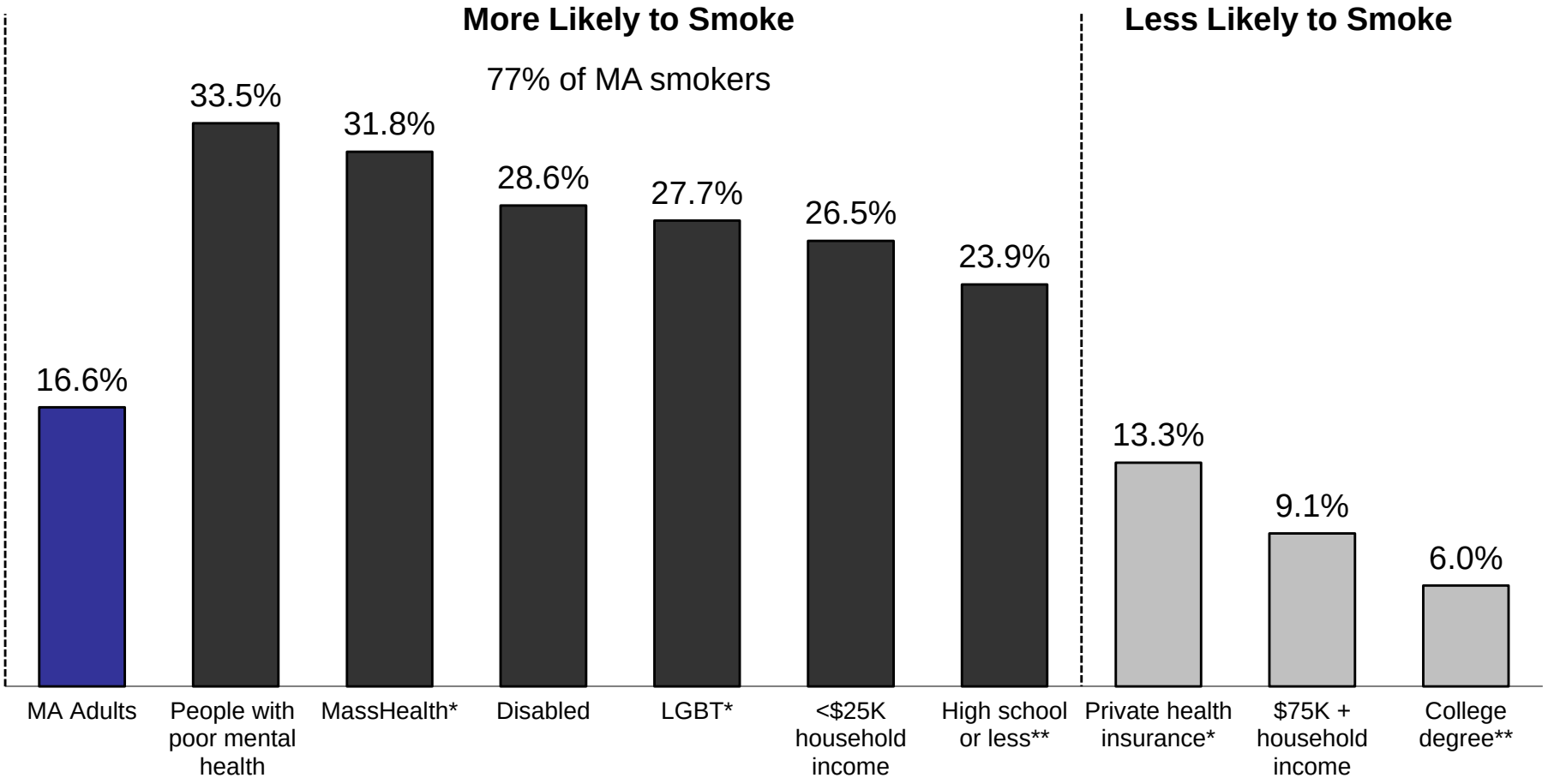
U.S. Department of Health and Human Services
Centers for Disease Control and Prevention

The State of Massachusetts

- **Massachusetts is**
  - 44th in the nation for land area
  - 13th in the nation for population
  - 1st in the nation for the number of local public health departments

- **351 municipalities with limited county government**

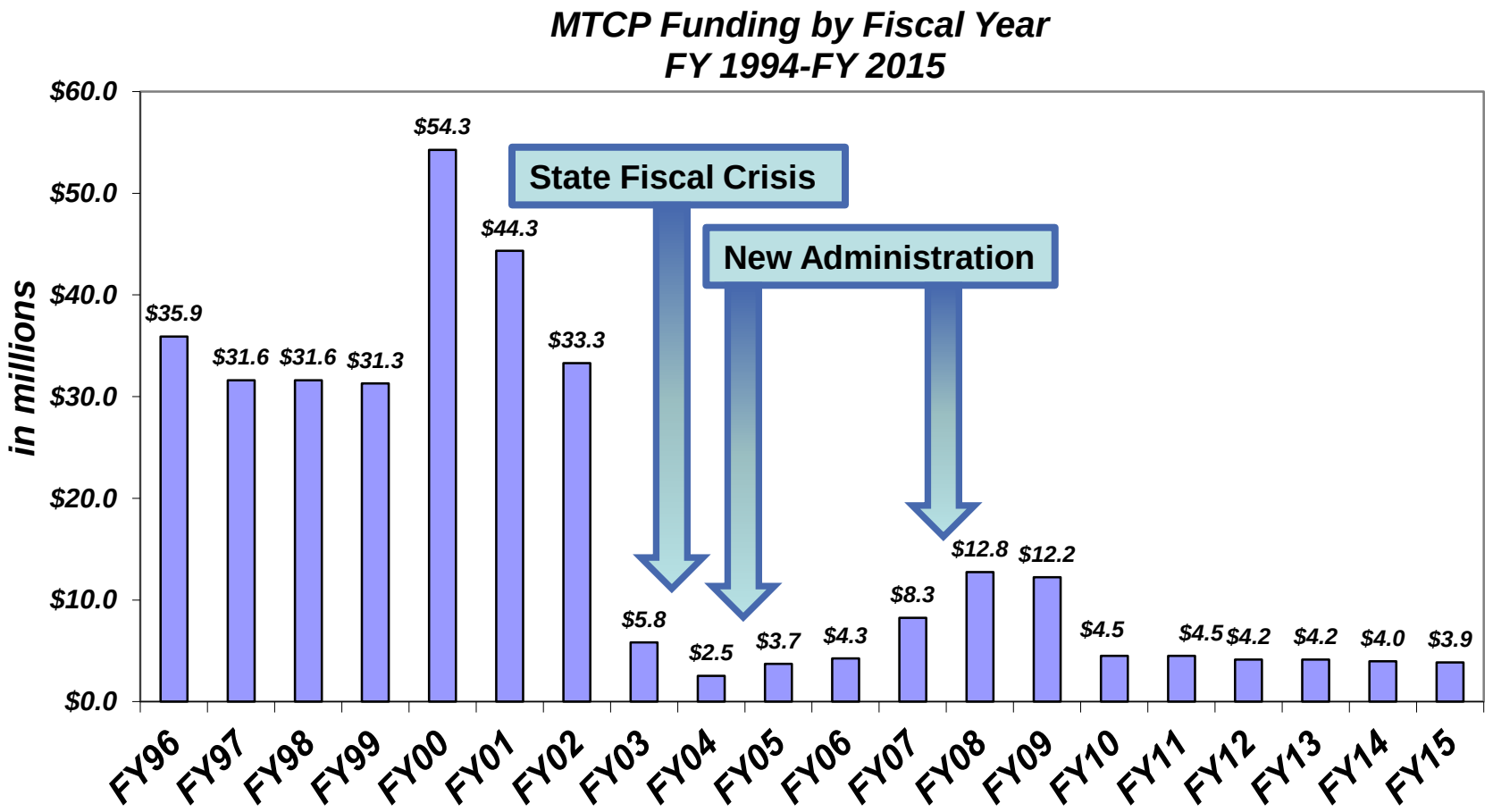
Adult Smoking Prevalence Among Subgroups in Massachusetts, 2013



LGBT: Lesbian, Gay, Bisexual and Transgender
Massachusetts Behavioral Risk Factor Surveillance System

*Adults, age 18 - 64
** Adults, age 25+

Massachusetts Tobacco Control Program (MTCP) Budget



Massachusetts Tobacco Prevention Infrastructure at State and Local Levels

- **Despite budget cuts, maintained core infrastructure**
  - Local programs
  - Cessation services
  - Surveillance and evaluation
  - Legal and policy experts
  - Communications
    - Earned media, publicity gained through editorial influence*
    - Paid media
  - Youth engagement
  - Quitline and QuitWorks
- **All of the above contribute to promoting sustainable policy change**

**Earned media may include newspaper, television, radio, and the Internet, and may include formats such as news articles or shows, letters to the editor, editorials, and polls*

Local Boards of Health Programs

- **14 Board of Health tobacco control programs**
  - Cover 184 municipalities and 65% of MA population
  - Provide local enforcement of tobacco regulations
  - Retail store monitoring, inspections and compliance checks
  - Local policy education and promotion

Community Partnership Programs

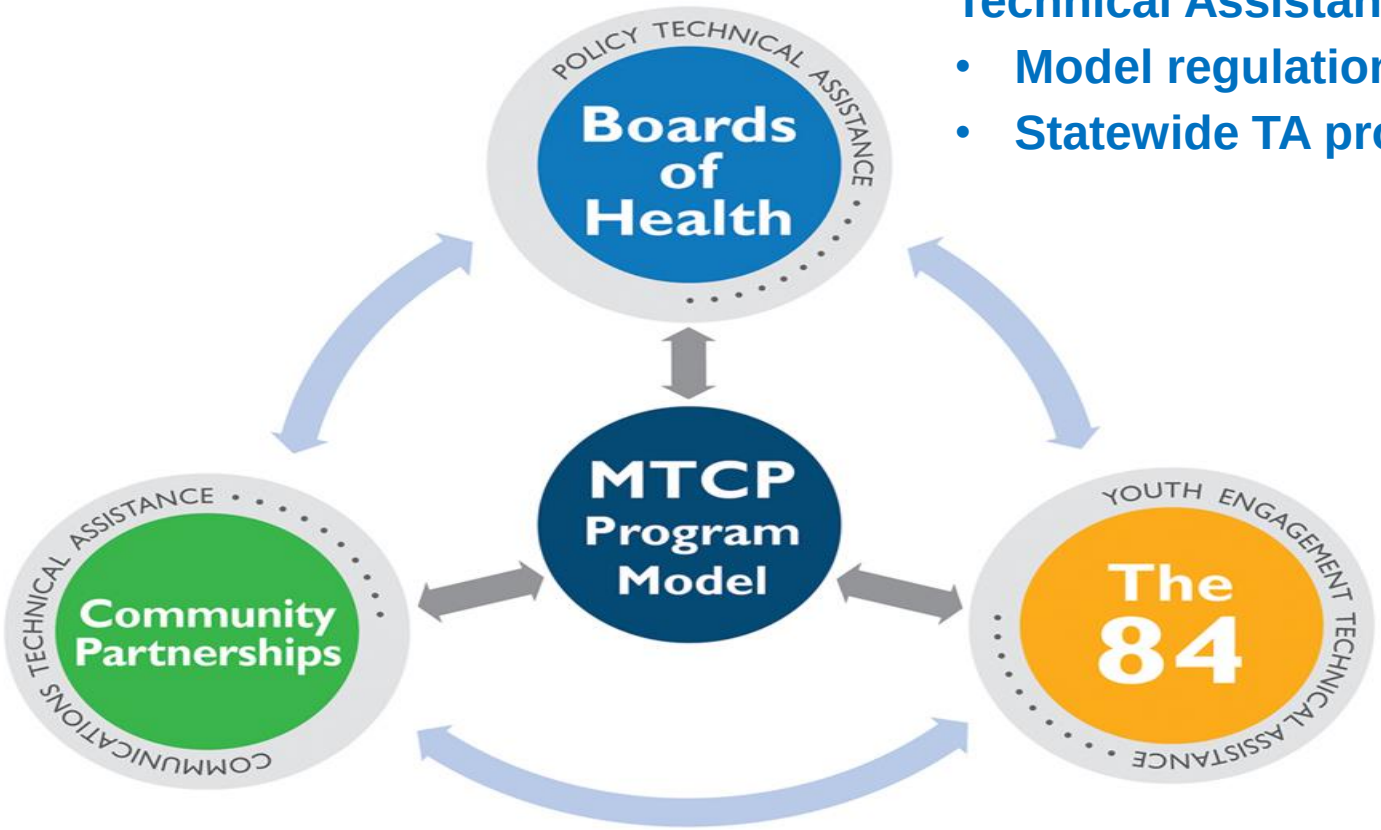
- **8 Community Partnership programs**
  - Cover entire state in 8 regions
  - Coordinate communications
    - Earned media
    - Local media outreach
  - Build local partnerships
  - Promote policy, systems and environmental strategies

The 84 Youth Prevention Program

The 84 chapters

- Named after the 84% of youth who choose not to smoke
- 75+ chapters statewide
- Policy-focused youth groups
- Provide youth perspective to tobacco industry influence in their communities
- School-based chapters promote social norms and local policy

MTCP Prevention Model



Technical Assistance includes

- **Model regulation language**
- **Statewide TA providers**

MTCP: Massachusetts Tobacco Control Program
TA: Technical assistance

Five Priorities for Tobacco Control in Massachusetts

1. **Access to comprehensive cessation benefits for all state residents**

   Goal: Increase smokers making quit attempts

2. **Protect youth from tobacco industry tactics**

   Goal: Reduce number of youth who begin using tobacco

3. **Increase the price of tobacco**

   Goal: Reduce all tobacco use

4. **Ensure all smokers receive intervention by healthcare providers**

   Goal: Provide smokers with motivation to quit

5. **Protect everyone from secondhand smoke**

   Goal: Protect the health of nonsmokers and smokers

Priority One: Access to Cessation Benefits through Quitline Programs

- **Quitline or The Massachusetts Smokers' Helpline**
  - Discusses MA state health benefits for tobacco cessation with callers
- **QuitWorks**
  - Educates healthcare providers about benefits available to patients who want or need to quit
- **Community programs promote cessation-related benefits and resources, including the Quitline**
- **Key characteristic of callers to the Quitline**
  - 44% have Medicaid

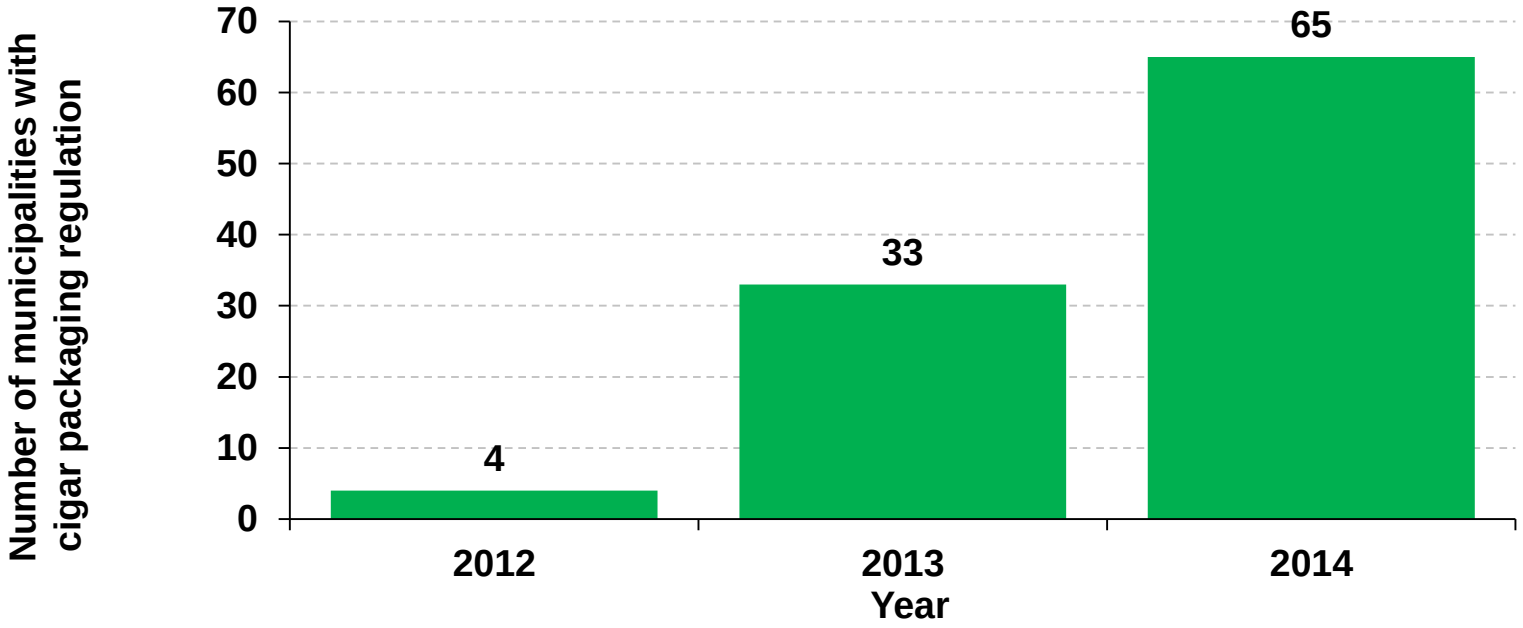
quitworks.makesmokinghistory.org
makesmokinghistory.org/1-800-quitnow.html

Priority Two: Protect Youth from Industry Tactics by Focusing on Local Policy Initiatives

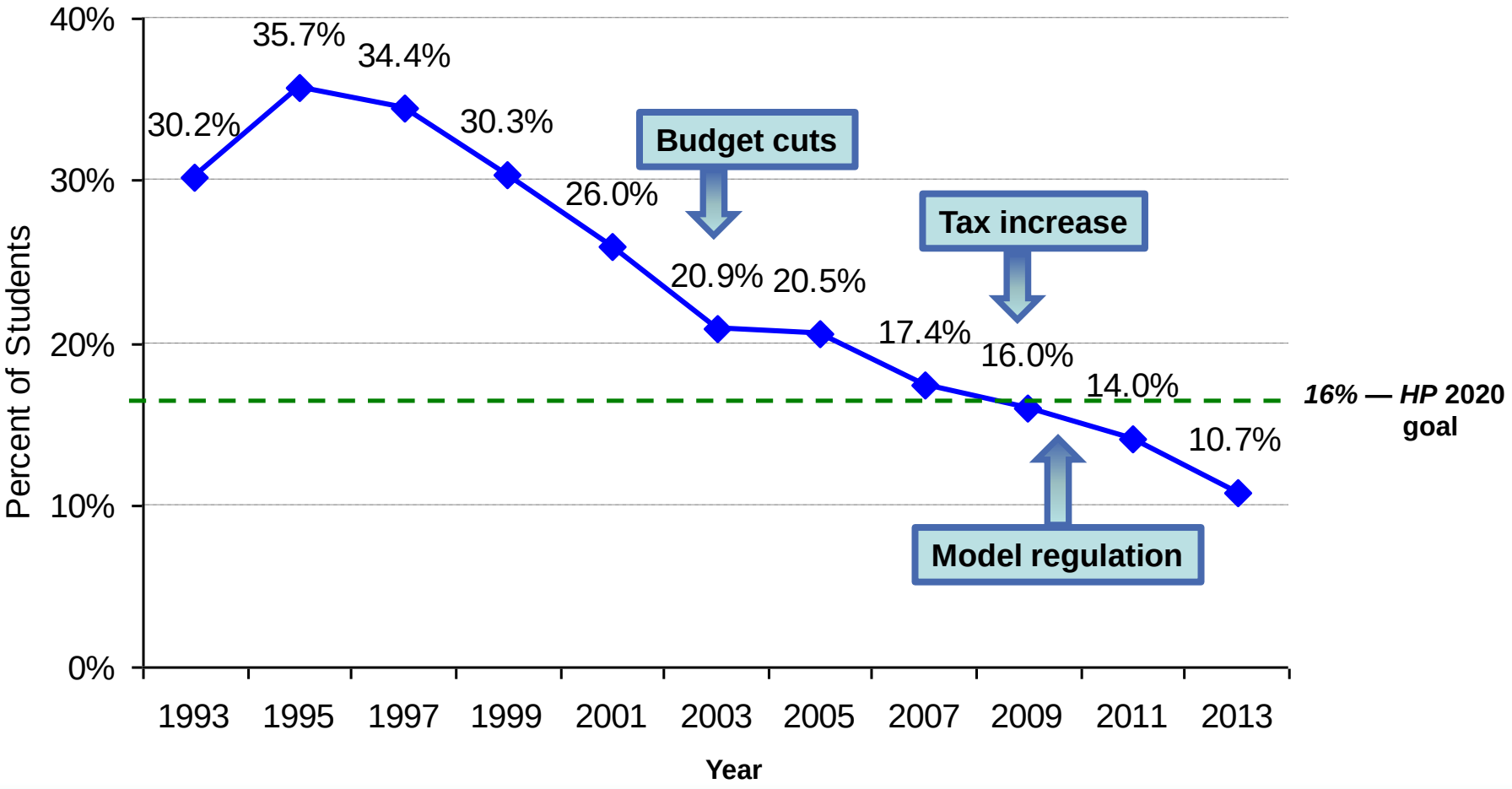
- **Reducing tobacco retailer density**
  - Prohibiting the sale of tobacco in healthcare institutions
  - Limiting number of local tobacco retail permits
- **Pricing**
  - No single cigar packaging
- **Flavoring**
  - Restricting flavored tobacco products
- **Age restriction, including e-cigarettes**

Protect Youth from Industry Tactics: Cigar Packaging Regulation

- Regulation prohibits sale of cheap single cigars
- Single cigars cannot be sold for under $2.50
- By 2014, 31.8% of the population covered by regulation



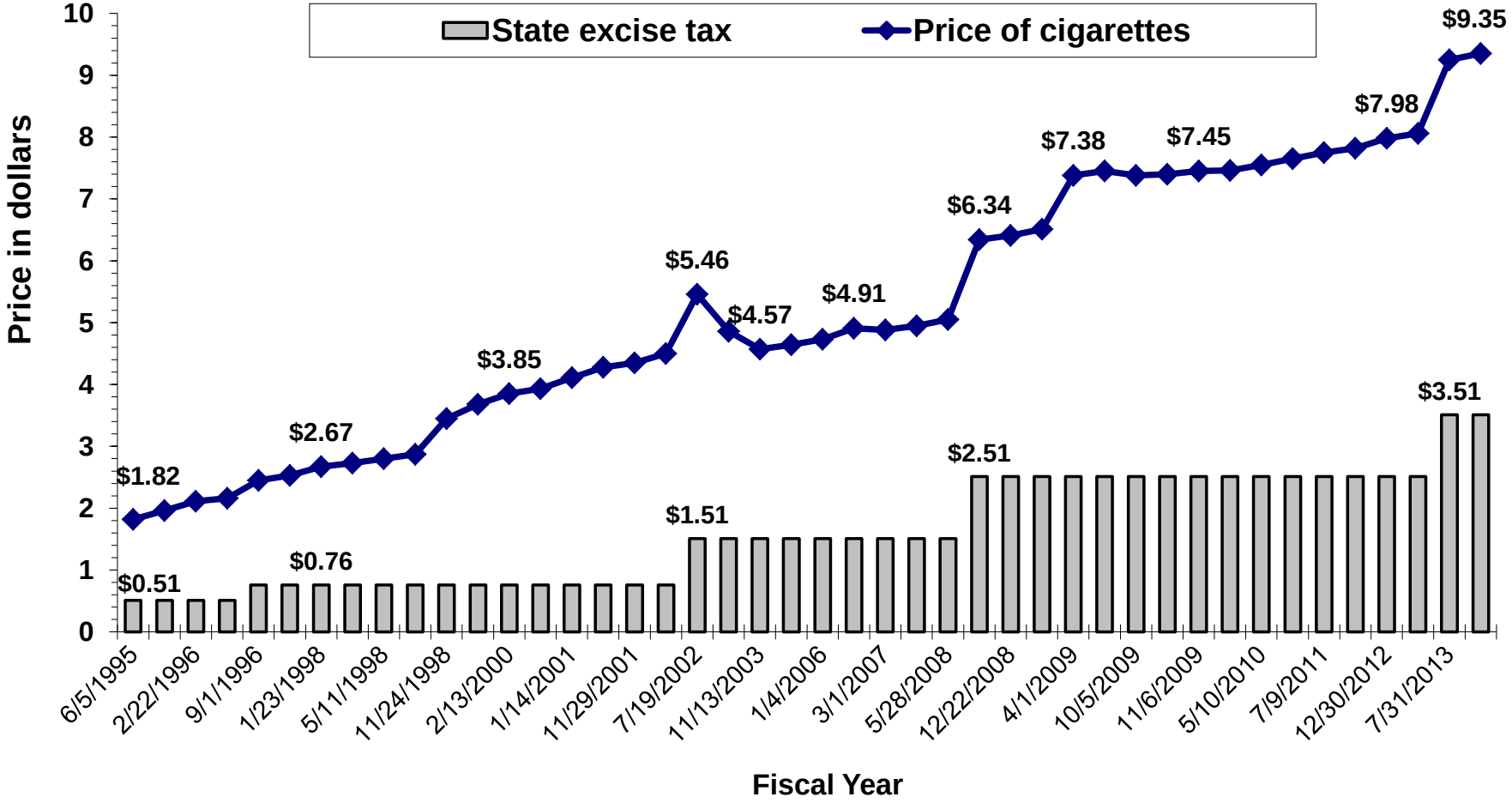
Current Cigarette Use Among Massachusetts High School Students, 1993-2013



Current cigarette use: Smoked cigarettes one or more days during the past 30 days.

www.doe.mass.edu/cnp/hprograms/yrbs/

Priority Three: Increase the Price of a Pack of Cigarettes



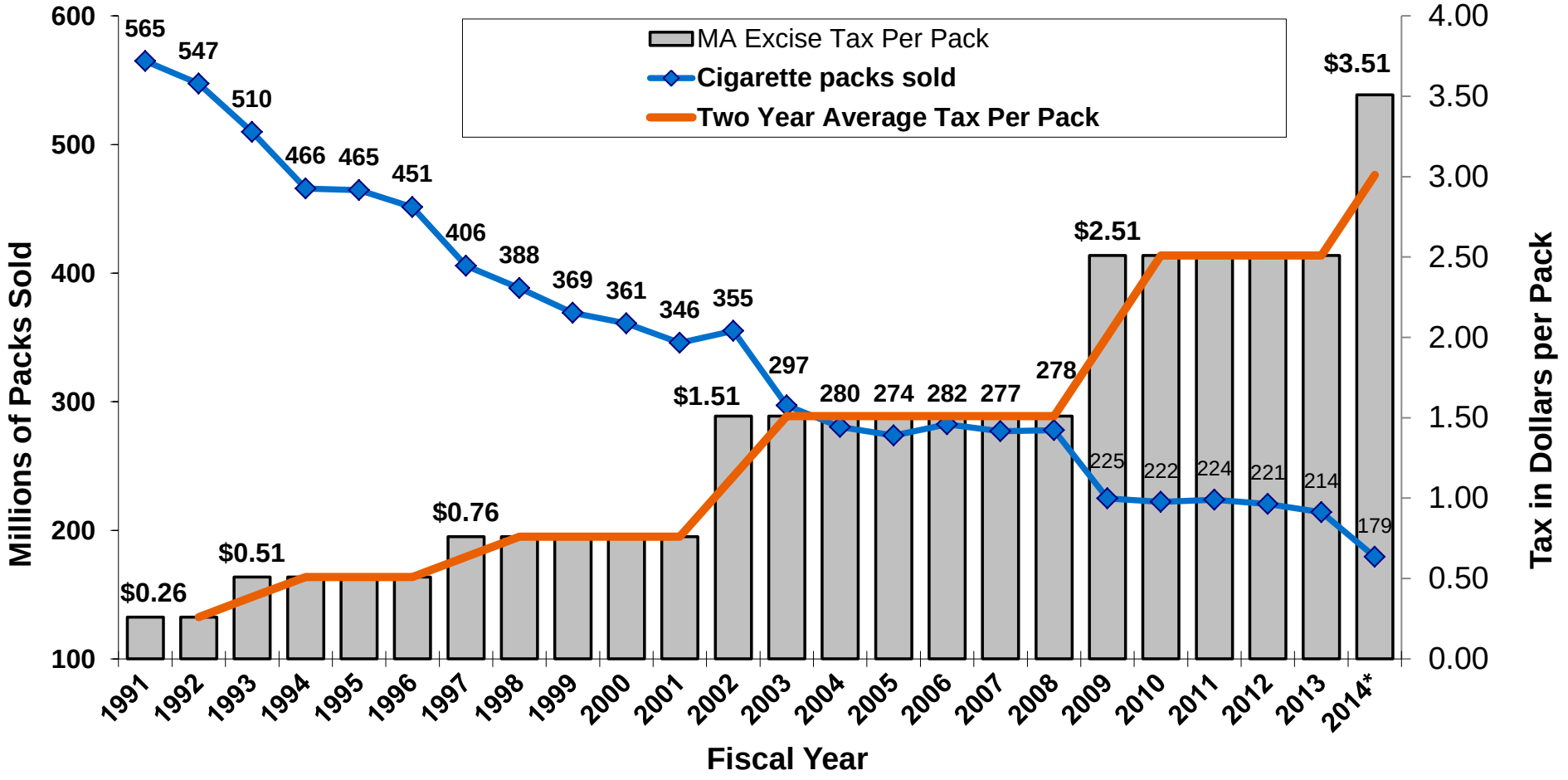
www.mass.gov/dor/

Projection for FY 2014 based on 10 months of data

Minimum Price Law

- Regulations were issued in 1989 to enforce a 1945 law prohibiting retailers from selling cigarettes below cost
- Regulation provides a formula to calculate the minimum price
- The minimum price for Marlboro cigarettes in Massachusetts is $9.54 per pack
- Not a public health law, but has public health benefits

Number of Cigarette Packs Sold Massachusetts, FY 1991 to FY 2014

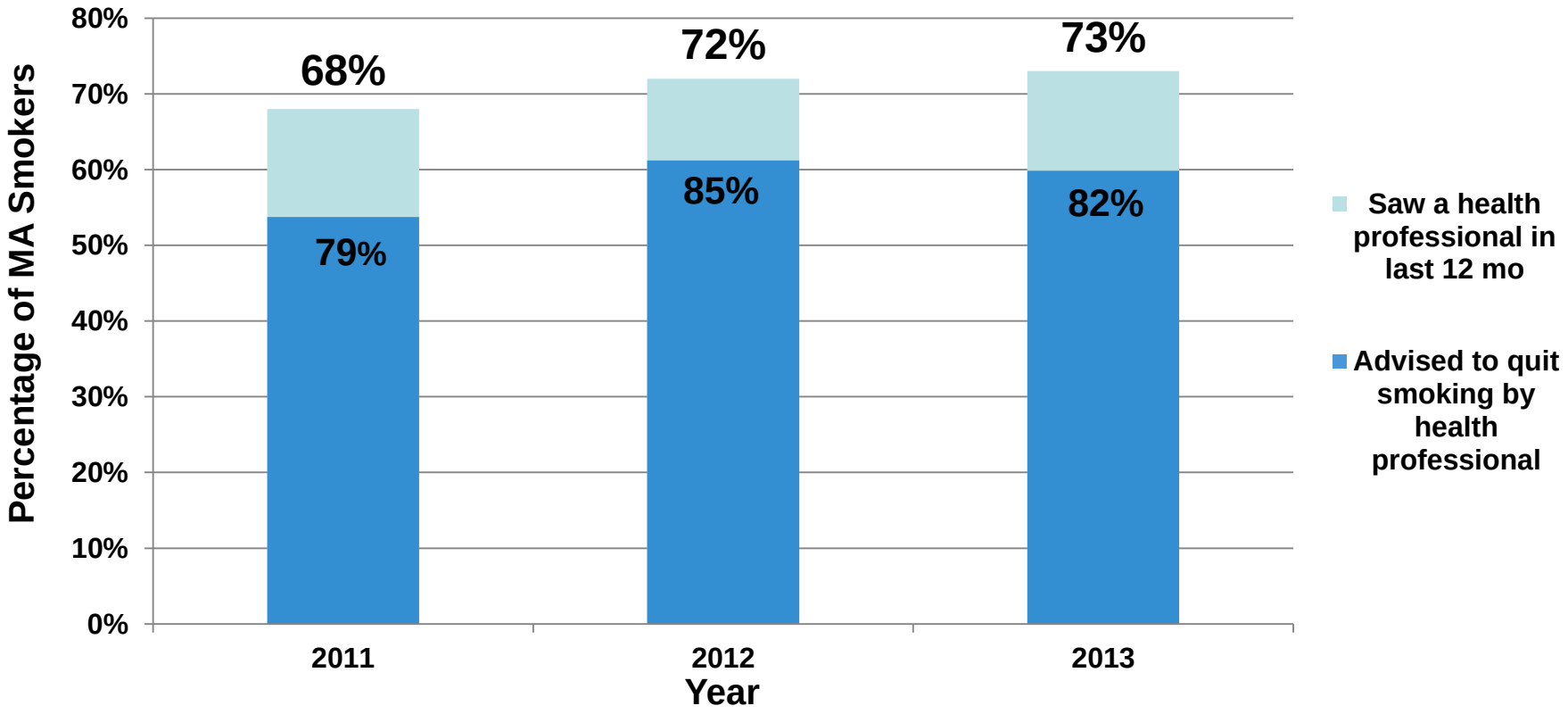


www.mass.gov/dor/

* Projected for FY 2014 based on 10 months of data

Priority Four: Ensure All Smokers Receive Intervention by their Healthcare Provider

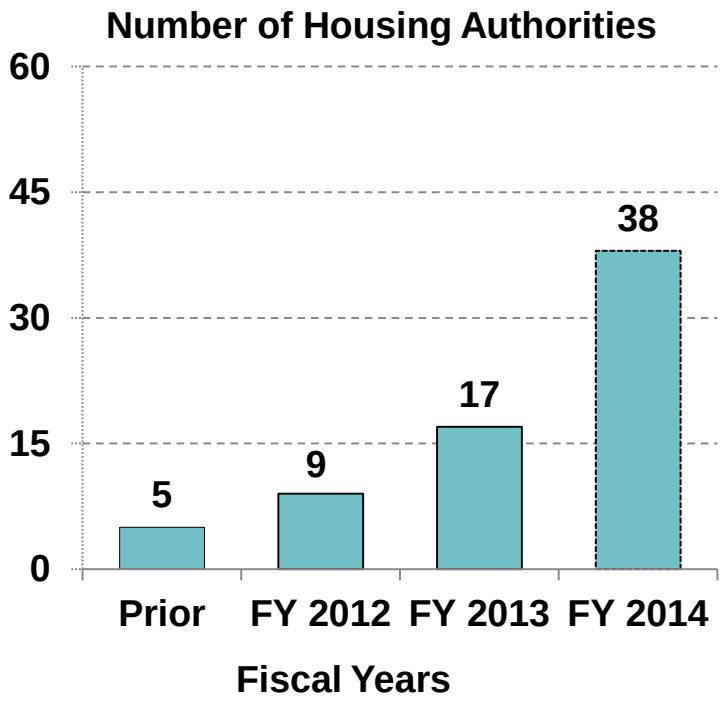
Provider Interventions Among Massachusetts Smokers

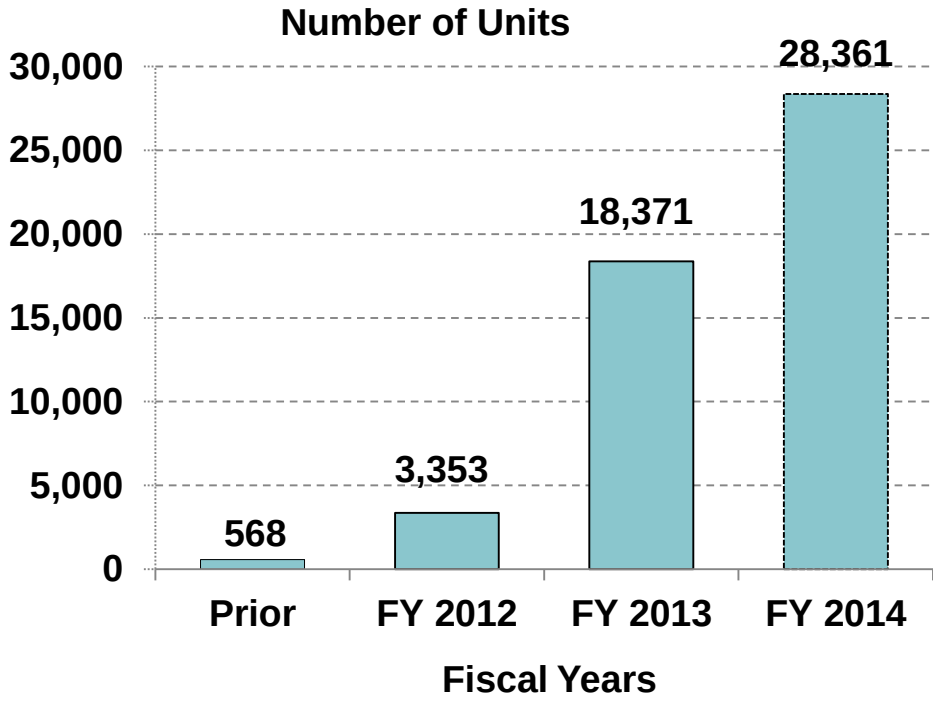


Massachusetts Behavioral Risk Factor Surveillance System (BRFSS), 2013

Priority Five: Protect All Massachusetts Residents from Secondhand Smoke

As of June 2014, 38 public housing authorities with 28,361 units are smoke-free





Massachusetts Tobacco Control Program Smoke-free Public Housing Database

Make Smoking History: the Role of Strong Public Policy

- We focus on sustainable policies
- We focus on maintaining a core infrastructure to support strong policy strategies
- We base our strategies on both practice-based evidence and evidence-based practice
- We evaluate strategies and their impact

The work continues!

Partnerships to Improve Cardiovascular Health through Sodium Reduction in Los Angeles County

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Los Angeles County Department of Public Health

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

Improving Cardiovascular Health in Los Angeles County (LAC)

- **Million Hearts® efforts in LAC**
  - ABCS
  - Sodium reduction
  - Clinical preventive services
  - Clinical community linkages
- **Sodium reduction initiative**
  - Case study: 100% Healthy Vending Machine Policy
- **Lessons learned**
- **Next steps**

ABCS: Aspirin when appropriate, Blood pressure control, Cholesterol management, Smoking cessation

Cardiovascular Disease Risk Factors and Burden of Disease in Los Angeles County

24% of adults in Los Angeles County (LAC) have been diagnosed with hypertension

Heart attacks and stroke are leading causes of death in LAC

2011 Los Angeles County Health Survey data, Office of Health Assessment and Epidemiology, Los Angeles County Department of Public Health
CVD: Cardiovascular disease

Sodium: A Public Health Primer

- **Current levels of sodium ingestion are not safe**
  - Average sodium intake 3,400 - 3,500 mg/day in U.S.
    - Reduce to <2,300 mg/day for general population
    - Reduce to 1,500 mg/day for specific populations
      - Persons 51 years of age or older, African Americans, and persons with high blood pressure, diabetes, or chronic kidney disease
- **Difficult for consumers to reduce sodium intake**
  - 74% of adults are unaware of the recommended daily sodium intake limit
  - Most sodium added before food preparation or serving

Gunn JP, Kuklina EV, Keenan NL, Labarthe DR. *MMWR.* 2010;59(24);746-49
Carriquiry A, Moshfegh AJ, Steinfeldt LC, et al. *MMWR.* 2013,;62(50):1021-25
USDA and HHS. Dietary Guidelines for Americans, 2010. 7th edition. Washington, DC

Opinions on Sodium in Los Angeles County

81% (5.6 million) LAC adults (18+ years) agree there should be restrictions placed on how much sodium is added to packaged and restaurant foods

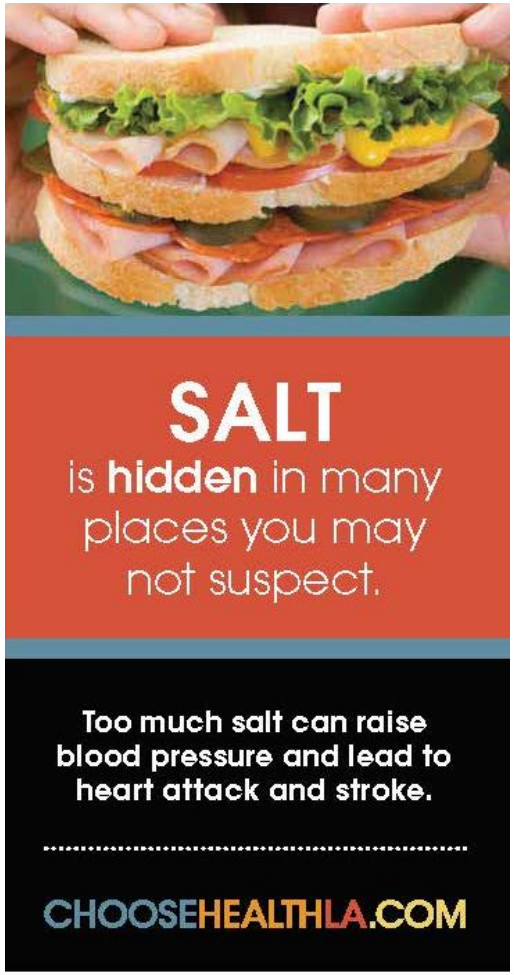
70% of LAC adults favor reduced access to unhealthy snacks and beverages in vending machines in public buildings and work sites

68% agree there should be policies or requirements to lower sodium content of foods in workplace cafeterias

LAC Voter Survey, Food Policy/Healthy Eating Poll. October 2013. Field Research Corp. for the Los Angeles County Department of Public Health

LAC Department of Public Health Internet Panel Survey, Portion Control Ad Test. April 19-May 10, 2013. Global Strategy Group.

Los Angeles County Sodium Reduction Initiative



- **Supported by CDC's Sodium Reduction in Communities Program (SRCP)**
  - 2010-2013 and 2013-2016: County of Los Angeles government, City of Los Angeles government, school districts, and hospitals
- **Goal** — to reduce population sodium intake in Los Angeles County
- **Implementing strategies to improve food service venues**
  - Lower-sodium products, reduced portion sizes, menu labeling, pricing, placement, and promotion/media
- **National partners**: Million Hearts® and NSRI

NSRI: National Salt Reduction Initiative

DPH Healthy Food Procurement (HFP) Initiative

- **Local, State, and Federal Partnerships**
- **2010:** HFP initiative launched by LA County DPH
- **2011*:** County of Los Angeles Board Motion requires DPH to make nutrition recommendations for all new or renewing food service contracts in the county
  - *Vending Machine Nutrition Policy* (adopted in 2006; revised in 2010)
- **2010 - present:** worked with 6 of 12 departments
  - e.g., Chief Executive Office, Beaches & Harbors, Health Services, Public Works, Parks and Recreation, Probations

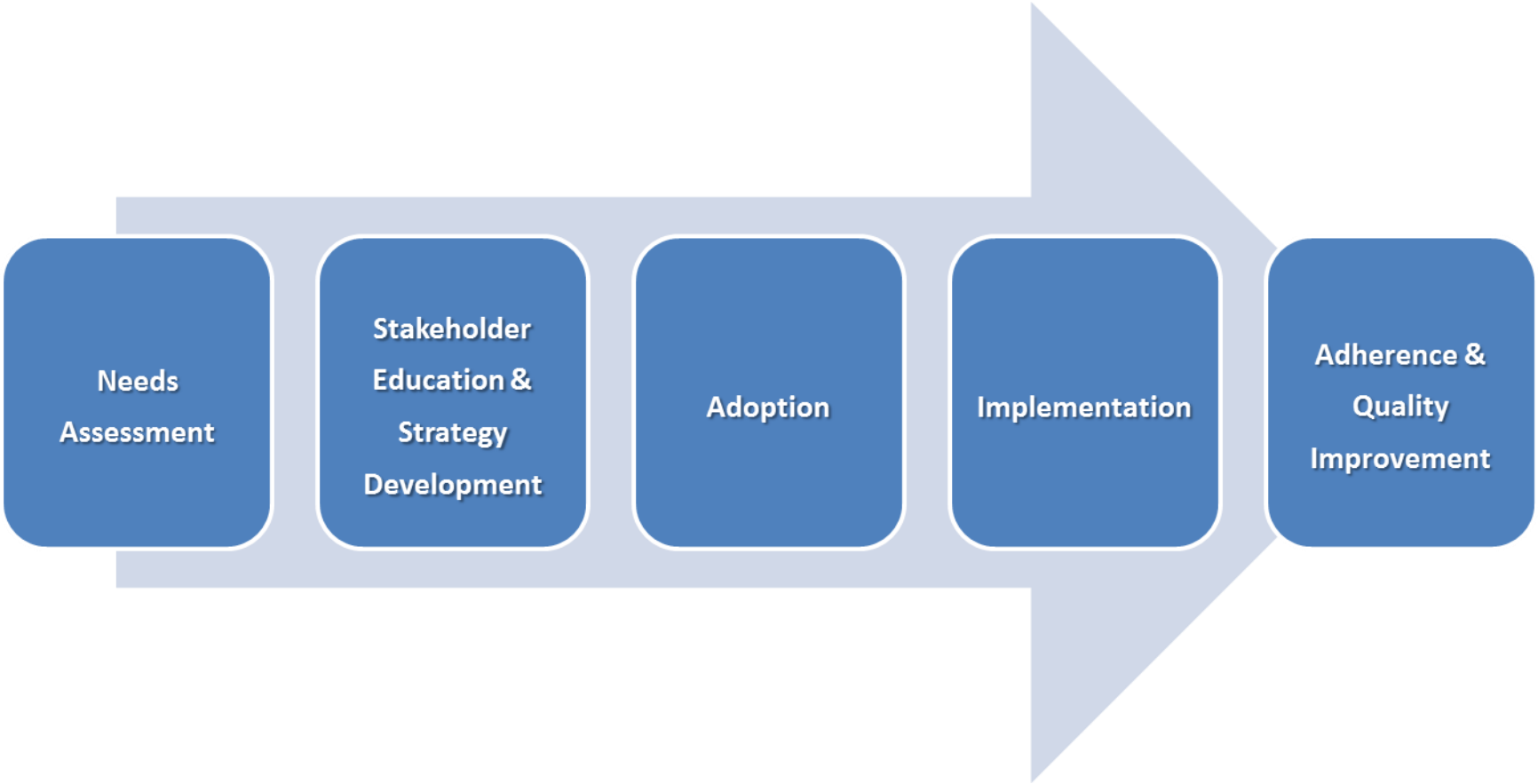
DPH: Department of Public Health
HFP initiative is supported by CDC's Communities Putting Prevention to Work, Sodium Reduction in Communities Program, and Community Transformation Grant.

*Contextual fact

Food Service Environments in Los Angeles County (LAC)

- **37 departments with 100,000+ staff**
  - 12 departments purchase, sell, and/or distribute food
- **2 main categories of food service in LAC**
  1. **Meals and snacks served to dependent community members**
     - Distributive meals (senior meals, after-school snacks), meals served to hospitals, institutionalized populations (probations)
  2. **Food sold on government property**
     - Concession operations (cafés, snack shops), food trucks, work-site cafeterias, vending machines
- **Estimated 37 million meals and snacks served each year**

Operationalizing Healthy Nutrition Standards DPH's 5-Phase Process Framework



Robles B, Wood M, Kimmons J, Kuo T. *Adv Nutr* 2013.

Food Service Contracting Process: What's Nutrition Got to Do With It?

- **Contracting process is similar to applying for a grant**
  - Letter of Intent and Proposal
- **DPH recommended standards and purchasing practices are incorporated into RFP and IFB**
- **Bidders conferences are a requirement for the contract solicitation process**
  - Allows prospective bidders to ask questions
  - DPH presents nutrition standards and answers questions
- **Once vendor is selected and contract is executed, DPH recommendations become <u>requirements</u>**

DPH: Department of Public Health
RFP: Request for proposal
IFB: Invitation for bid

Example of Recommendations for Placement and Promotion in Vending Machines

ADVERTISE A HEALTHY BEVERAGE CHOICE
such as water in promotional space

PLACE BOTTLED WATER AT EYE LEVEL
provide at least 2 or more slots for water

PLACE SIGNAGE
on vending machine to highlight healthy options

PLACE DIET SODA AND SWEETENED BEVERAGES
with a higher calorie count on the bottom shelf

Vending Machine Nutrition Policy

ALL SNACKS SOLD IN COUNTY-CONTRACTED VENDING MACHINES MUST ADHERE TO THE FOLLOWING NUTRITION GUIDELINES:

AN INDIVIDUALLY SOLD SNACK THAT HAS NO MORE THAN:

1. 35% of its calories from fat (excluding legumes, nuts, nut butters, seeds, eggs, non-fried vegetables and cheese packaged for individual sale).
2. 10% of its calories from saturated fat (excluding eggs and cheese packaged for individual sale).
3. 35% sugar by weight (excluding fruits and vegetables).
4. 250 calories per individual food item or package if a pre-packaged item.
5. 360 milligrams of sodium per individual food item or package if a pre-packaged item.

EXAMPLES OF SNACKS THAT COMPLY WITH THE NUTRITION POLICY

Baked chips

Unsalted nuts

Pretzels

Granola and Energy bars

Dried fruit (no sugar added)

Case-Study: Chief Executive Office Vending Contract

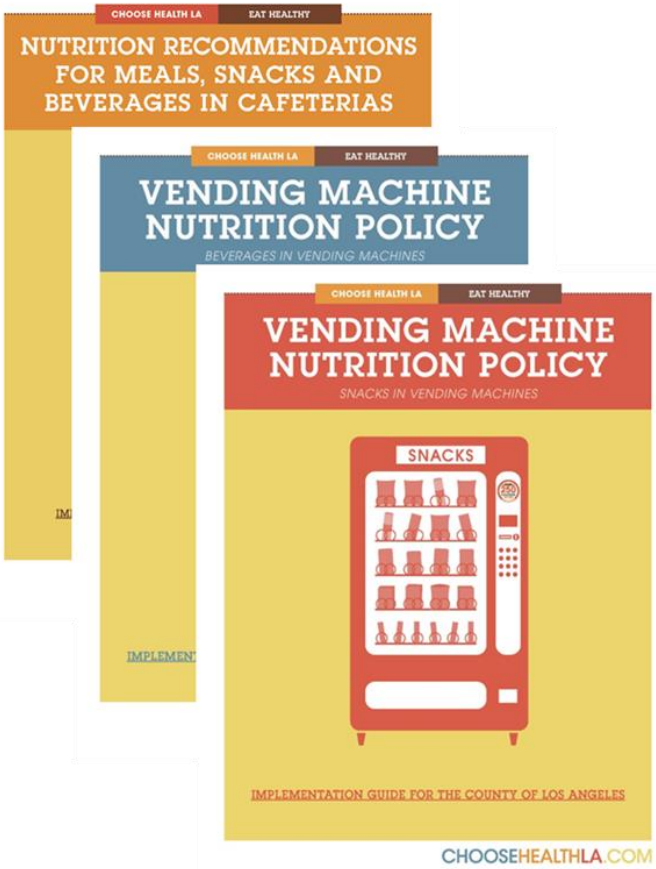
500+ machines across 200+ locations
46,471 employees; 15,840 visitors per day across all locations

	Adherence to Policy		Average Sodium per packaged product			
	Baseline (old vendor)	Follow-up (new vendor)	NEMS-V (old vendor)	Sales Records (transition period)	NEMS-V (new vendor)	Product List Data (new vendor)
Snacks	27% Healthy snacks	60% Healthy snacks	294 mg per package	203 mg per package	205 mg per package	126 mg per package
Beverages	57% Healthy beverages	74% Healthy beverages	N/A	53 mg per beverage	75 mg per beverage	N/A

Average 57% reduction of sodium in snacks

*Preliminary Data. Total weighted average for beverage and snack machines = 137.3 mg of sodium per package (weighted by sales)
Stratified weighted average by vending type: snacks = 118 mg of sodium per package; beverages = 18.9 mg of sodium per beverage
NEMS-V: Nutrition Environment Measures Vending Survey

Impact of Sodium Reduction in Los Angeles County (LAC)



- **Average sodium per packaged product adheres to County Vending Machine Policy nutrition standards**
- **FEM-LA population model for 2004 - 2050**
  - Preliminary estimate: **3,207 - 5,155 deaths averted** from reductions in incidence of heart disease and stroke due to a 400 mg sodium reduction in dietary intake in LAC
  - **Up to 2 lives saved every week**
  - Savings in total medical spending

    $2.2 - 3.6 billion in LAC from 2004 to 2050

Unpublished data. Estimates using the Future Elderly Model – Los Angeles County (FEM-LA). The FEM is an economic-demographic micro-simulation developed over the past decade by researchers with funding from the Centers for Medicare and Medicaid Services, the National Institute on Aging, the Department of Labor, and the MacArthur Foundation.

Bibbins-Domingo K, Chertow GM, Coxson PG et al. N Engl J Med. 2010 Feb 18;362(7):590-9.

Contributing to Million Hearts
One County and One Policy at a Time

- **For the 5-year period covered by Million Hearts ® 2012 - 2017**
  - Up to 560 lives saved
  - Up to $778 million in medical costs averted
- **Does not take other LA County Million Hearts ® Programs into account**

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Partnerships to Improve Cardiovascular Health in Los Angeles County

- **Limitations**
  - Vendor product list cannot be assumed to be what is in the machine
- **Lessons Learned**
  - Partnership with department and vendor is valuable for adherence
  - Evaluation is essential
- **Next Steps**
  - Continue to refine the sodium reduction framework
    - Update sodium limits for vending policy to 230 mg per package
  - Designate intervention data collection points to monitor sodium intake
  - Share evaluation results

Educational Materials from Los Angeles County

Food Procurement resources
http://publichealth.lacounty.gov/chronic

Public education resources
www.choosehealthla.com

Salt shocker videos
http://www.youtube.com/user/ChooseHealthLA

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Michelle Wood, Brenda Robles, Dr. Irene Vidyanti

Amelia Rose, Ranjana Wickramasekaran, Katrina Vo

Million Hearts®, 2015
Accelerating Progress, Achieving Results

- **Send a clear signal**
- **Measure and report progress in preventing heart attacks and strokes: every person counts**
  - **Millionhearts.gov**
  - **Mid-Course Review**: millionhearts.hhs.gov/Docs/MH_Mid-Course_Review.pdf
- **Detect. Connect. Control.**
- **Remember the ABCS**
  - **Aspirin when appropriate, blood pressure control, cholesterol management, and smoking cessation**