Reducing Exposure: A Healthy People 2020 Progress Review of Environmental Health and Tobacco Use

December 5, 2014

Healthy People 2020

Office of Disease Prevention and Health Promotion

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U.S. Department of Health and Human Services

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Overview and Presenters

Chair

- Karen DeSalvo, MD, MPH, MSc, Acting Assistant Secretary for Health, U.S. Department of Health and Human Services

Presentations

- Irma Arispe, PhD, Associate Director, National Center for Health Statistics
- Linda Birnbaum, PhD, Director, National Institute of Environmental Health Sciences, NIH
- Tim McAfee, MD, MPH, Director, Office on Smoking and Health, CDC

Community Highlight

- Kara Skahen, MSW, MPP, Program Director, Live Smoke Free, St. Paul, Minnesota

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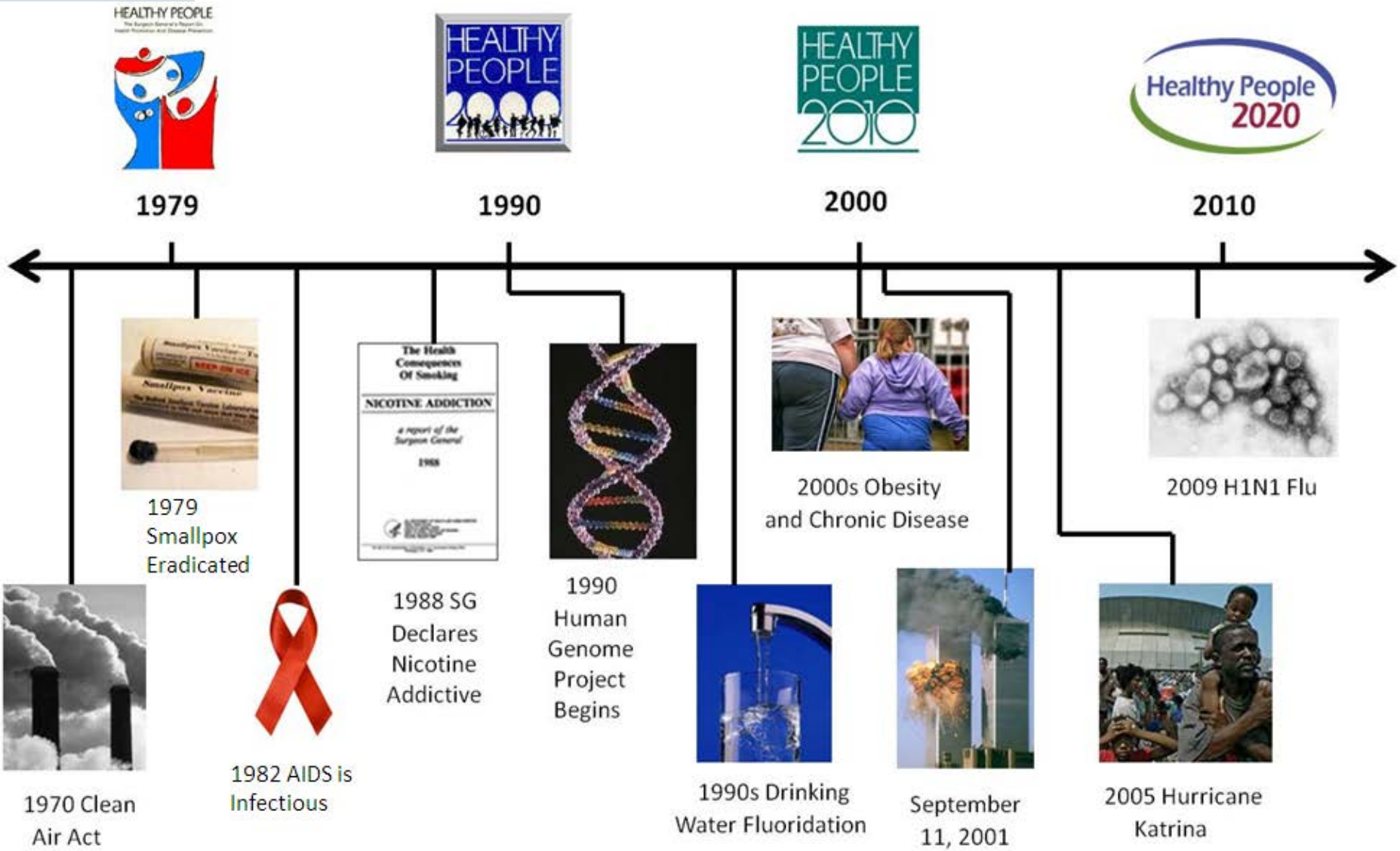
Healthy People 2020 Evolves



Our Environment, Our Health

- Limiting exposure to hazardous substances in air, water, soil, food improves quality of life
  - Natural environment (e.g., ambient air, beaches and drinking water, and soil)
  - Built environment (e.g., radon, lead paint, and other indoor allergens)

- Poor environmental quality has its greatest impact on people whose health status is already at risk

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Impact and Burden of Environmental Factors

- Globally, 13 million deaths annually are attributable to preventable environmental causes
- Environmental factors contribute over 80% of the diseases regularly reported by the World Health Organization
- Clean Air Act, in 2010 helped prevent:
  - 160,000 premature deaths
  - 130,000 heart attacks
  - 86,000 hospital admissions

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Burden of Tobacco Use

- Patterns of tobacco use are changing:
  - cigarette use is declining
  - use of other tobacco products is increasing
- According to the 2014 Surgeon General Report*:
  - Cigarettes are leading cause of preventable death
  - 480,000 smoking-attributable deaths each year (2005-2009, annual average)
  - 16 million persons have smoking-attributable conditions

Note: *Data are for cigarette use.
Source: U.S. Department of Health and Human Services. **The Health Consequences of Smoking—50 Years of Progress: A Report of the Surgeon General**. Atlanta: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health, 2014

Cigarette Use — Economic Costs

- The estimated economic costs attributable to cigarette **smoking** (2009 – 2012) now approach $300 billion annually including:
  - At least $130 billion in direct medical care costs
  - More than $150 billion for lost productivity

Source: U.S. Department of Health and Human Services. **The Health Consequences of Smoking—50 Years of Progress: A Report of the Surgeon General.** Atlanta: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health, 2014

Irma Arispe, PhD

Associate Director, National Center for Health Statistics
Centers for Disease Control and Prevention

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Presentation Overview

- Tracking the Nation's Progress
- Environmental Health
  - Background of Environmental Health Exposures
  - Burden of Toxic Air Pollution
  - Exposure to Hazardous Substances
  - Summary of Environmental Health Findings
- Tobacco Use
  - Burden
  - Prevalence of Cigarette Use
  - Initiation of Cigarette Use
  - Exposure to Tobacco Marketing
  - Smoke-free Indoor Air Laws
  - Secondhand Smoke Exposure

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Tracking the Nation's Progress

- 64 HP2020 Measurable Environmental Health Objectives
  - 7 Targets met
  - 11 Improving
  - 7 Little or no detectable change
  - 7 Getting worse
  - 32 Baseline data only
- 66 HP2020 Measurable Tobacco Use Objectives:
  - 6 Targets met
  - 22 Improving
  - 27 Little or no detectable change
  - 4 Getting worse
  - 7 Baseline data only

NOTES: The Tobacco Use topic area also has 10 developmental objectives. Measurable objectives are defined as having at least one data point currently available, and anticipate additional data points throughout the decade to track progress. Developmental objectives lack baseline data and targets.

Our Environment, Our Health

- Environmental health consists of preventing or controlling disease, injury, and disability related to the interactions between people and their environment.

- The Healthy People 2020 Environmental Health objectives focus on 6 themes, each of which highlights an element of environmental health:
  - Outdoor air quality
  - Surface and ground water quality
  - Toxic substances and hazardous wastes
  - Homes and communities
  - Infrastructure and surveillance
  - Global environmental health

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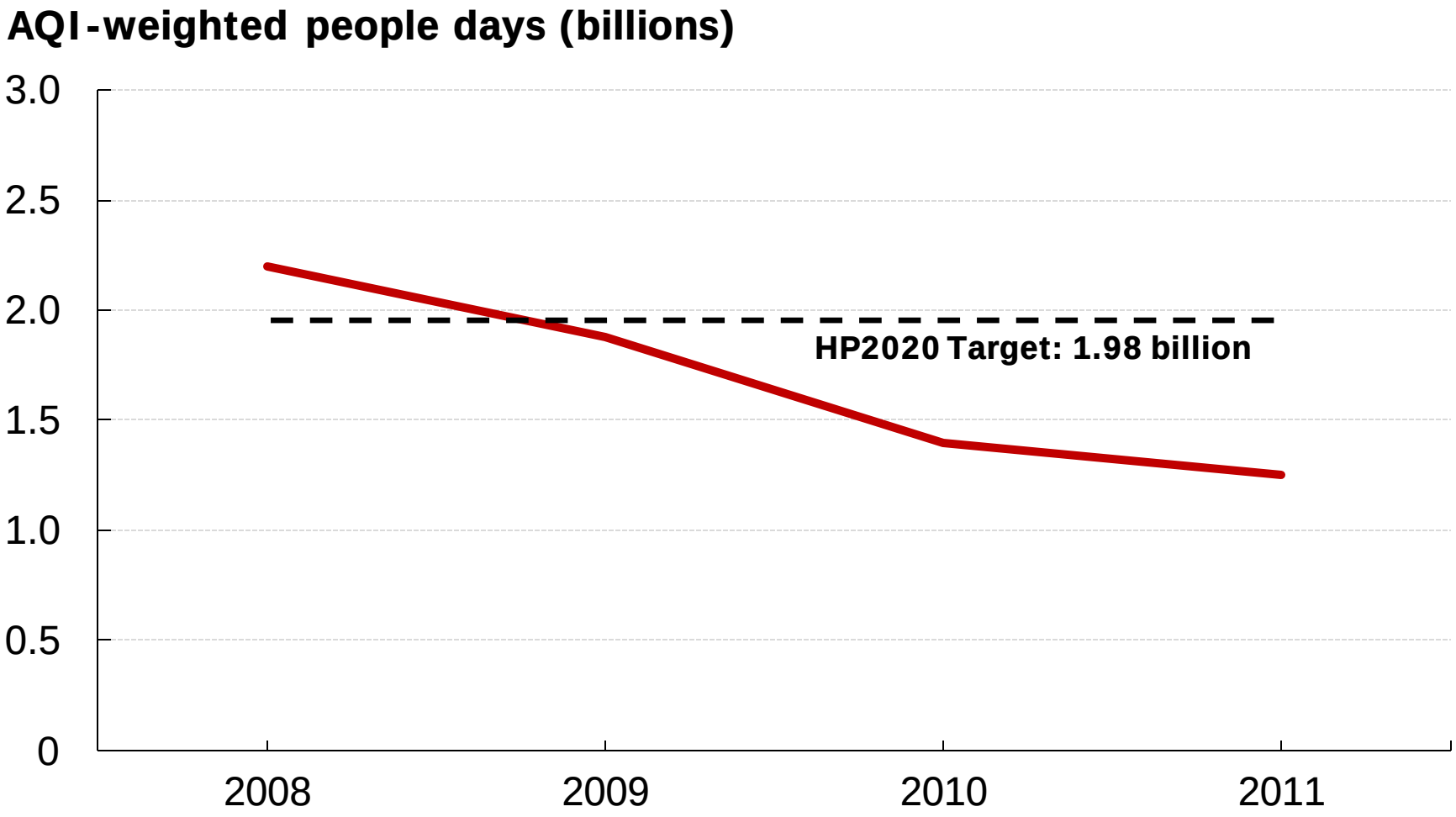
Outdoor Air Quality

- **Globally:**
  - Poor environmental quality accounts for one in eight deaths[1]
  - $3.5 trillion cost in premature mortality and health care in 34 OECD countries including the US, plus China and India (2010)[2]
- **In the United States:**
  - 200,000 premature deaths (2013)[3]
  - 130,000 particulate matter-related deaths and 4,700 ozone-related deaths (2012)[4]
  - $76.6 billion spent on diseases of environmental origin in children (2008)[5]

NOTE: Particulate matter is fine particulate matter ($\leq$ 2.5 micrometers per cubic meter of air).
SOURCES: [1] Quantifying environmental health impacts. [online]. 2012. Available from: http://www.who.int/quantifying_ehimpacts/global/en/; [2] Regional, rural and urban development: The cost of air pollution: Health impacts of road transport. [online]. 2010. Available from: http://www.oecd.org/regional/cost-of-air-pollution.htm; [3] Caiazzo F, Ashok A, Waitz IA, Yim SHL, Barrett SRH. Air pollution and early deaths in the United States. Part I: Quantifying the impact of major sectors in 2005. Atmos Environ 2013;79:198-208.; [4] Fann N, Lamson AD, Anenberg SC, Wesson K, Risley D, Hubbell BJ. Estimating the nationnal public health burden associated with exposure to ambient $PM_{2.5}$ and ozone. Risk Analysis 2012; 32(1):81-95.; [5] Trasande L, The economic costs of environmental health impacts [online]. 2014. Available from : http://www.niehs.nih.gov/news/newsletter/2014/7/science-economic/

Number of Days the Air Quality Index (AQI) Exceeds 100, Weighted by Population and AQI

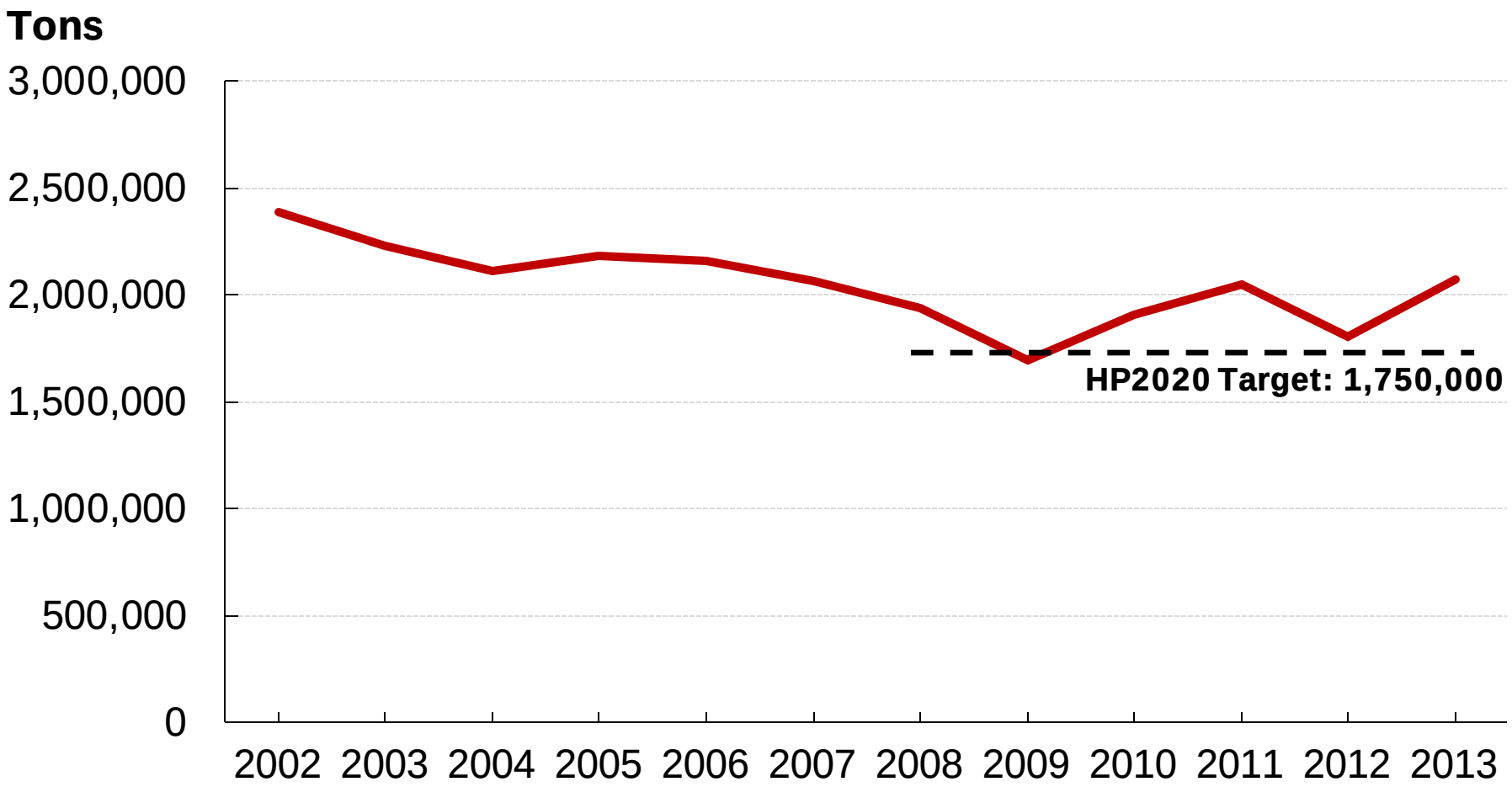


NOTES: AQI days are weighted by severity of air quality (e.g. an AQI of 130 counts as 1.3 days, an AQI of 250 counts as 2.5 days, etc.). The objective tracks concentrations of ozone and particulate matter, which account for over 95% of AQI action days. Tests of significance are not available.

SOURCE: Air Quality System (AQS), EPA.

Obj. EH-1
Decrease desired

Toxic Pollutants Released into the Environment

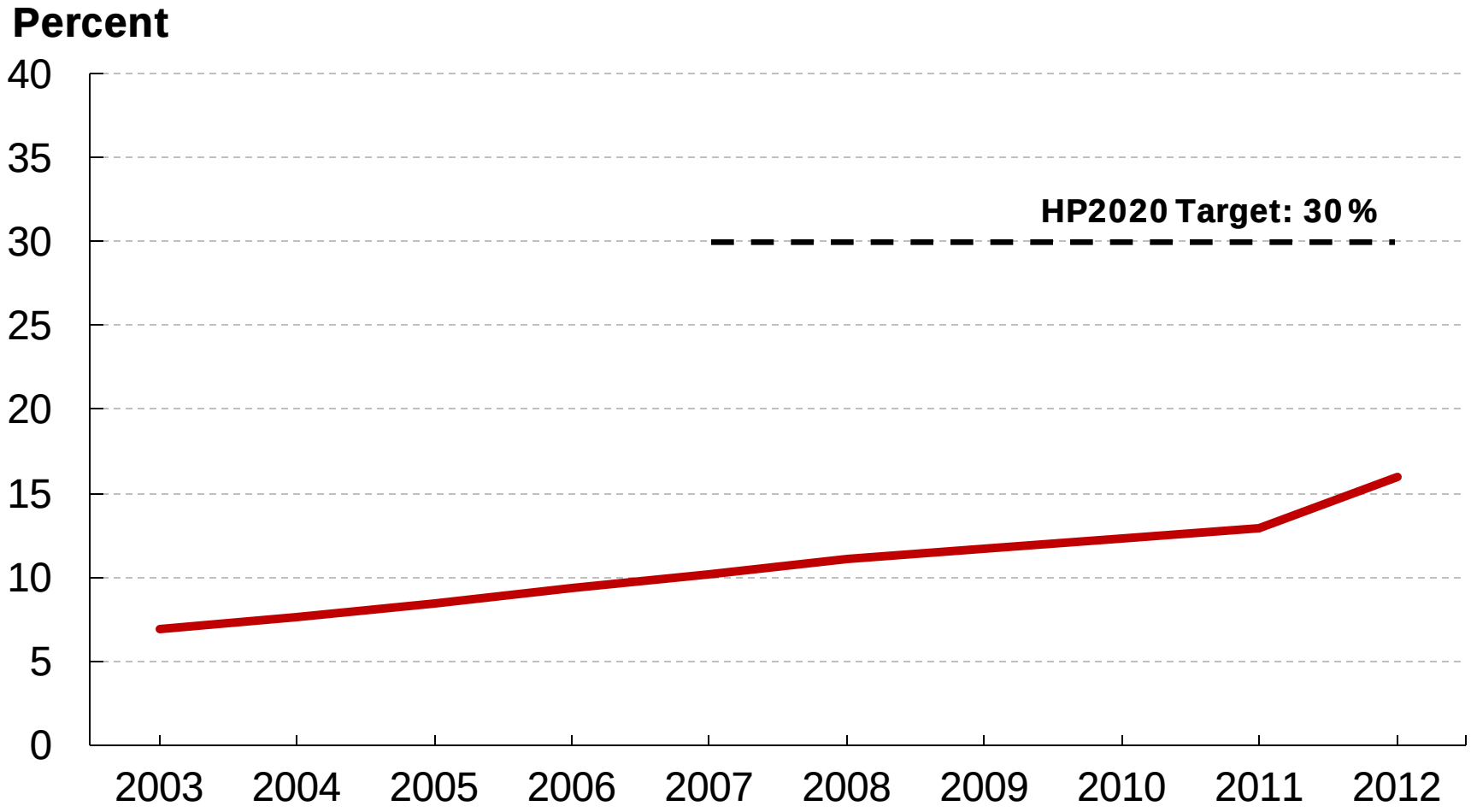


NOTES: Mobile sources emissions, which account for approximately 50% of all air toxics, as well as smaller sources such as gas stations and dry cleaners are not included in TRI.

SOURCE: Toxics Release Inventory (TRI), EPA.

Obj. EH-11
Decrease desired

Homes with an Operating Radon Mitigation System

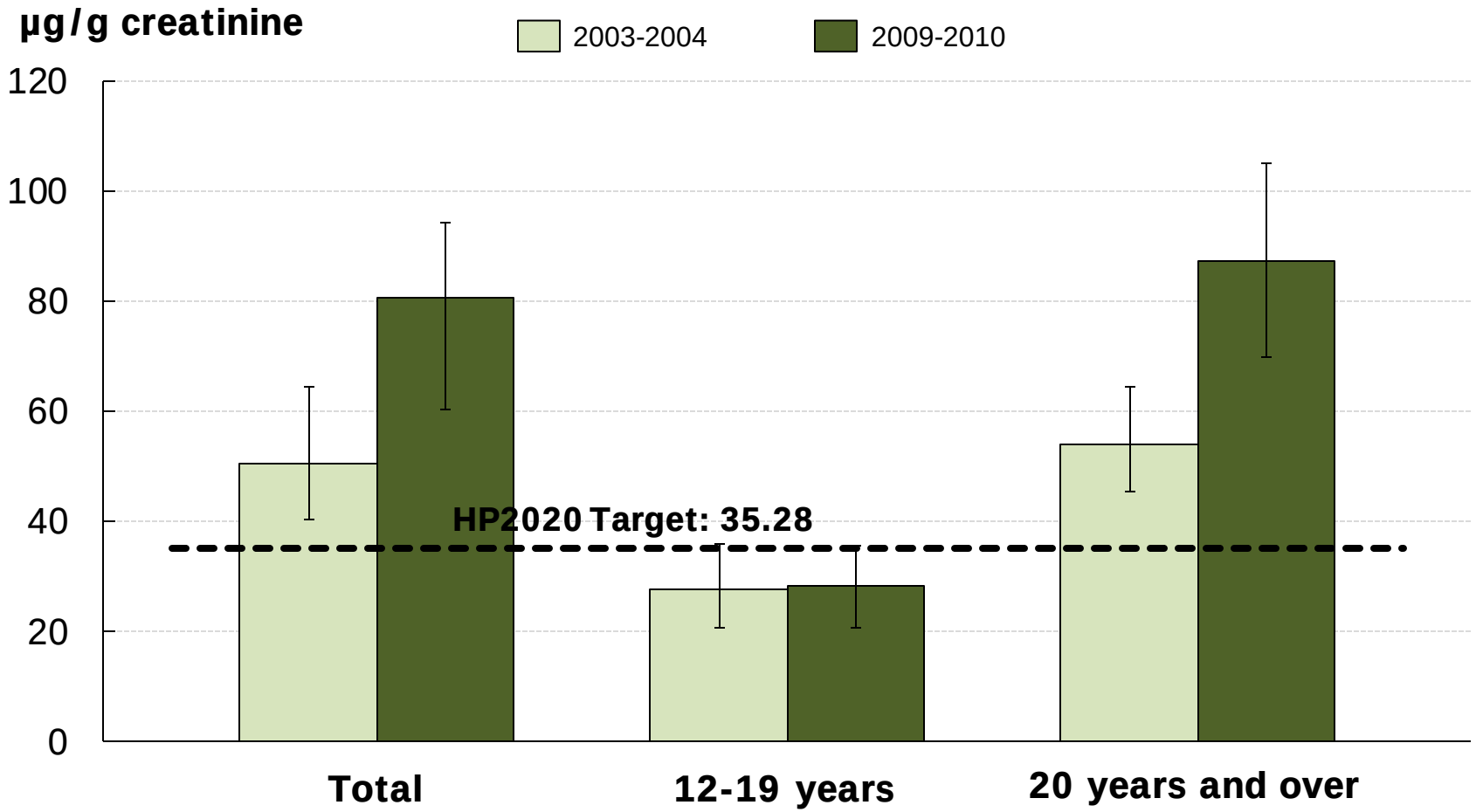


NOTE: Proportion of homes with an operating radon mitigation system for persons living in homes at risk for radon exposure.

SOURCE: Homes with Radon Mitigation Systems, Radon Vent Fan Manufacturers.

Obj. EH-14
Increase desired

High-End* Arsenic Exposure by Age

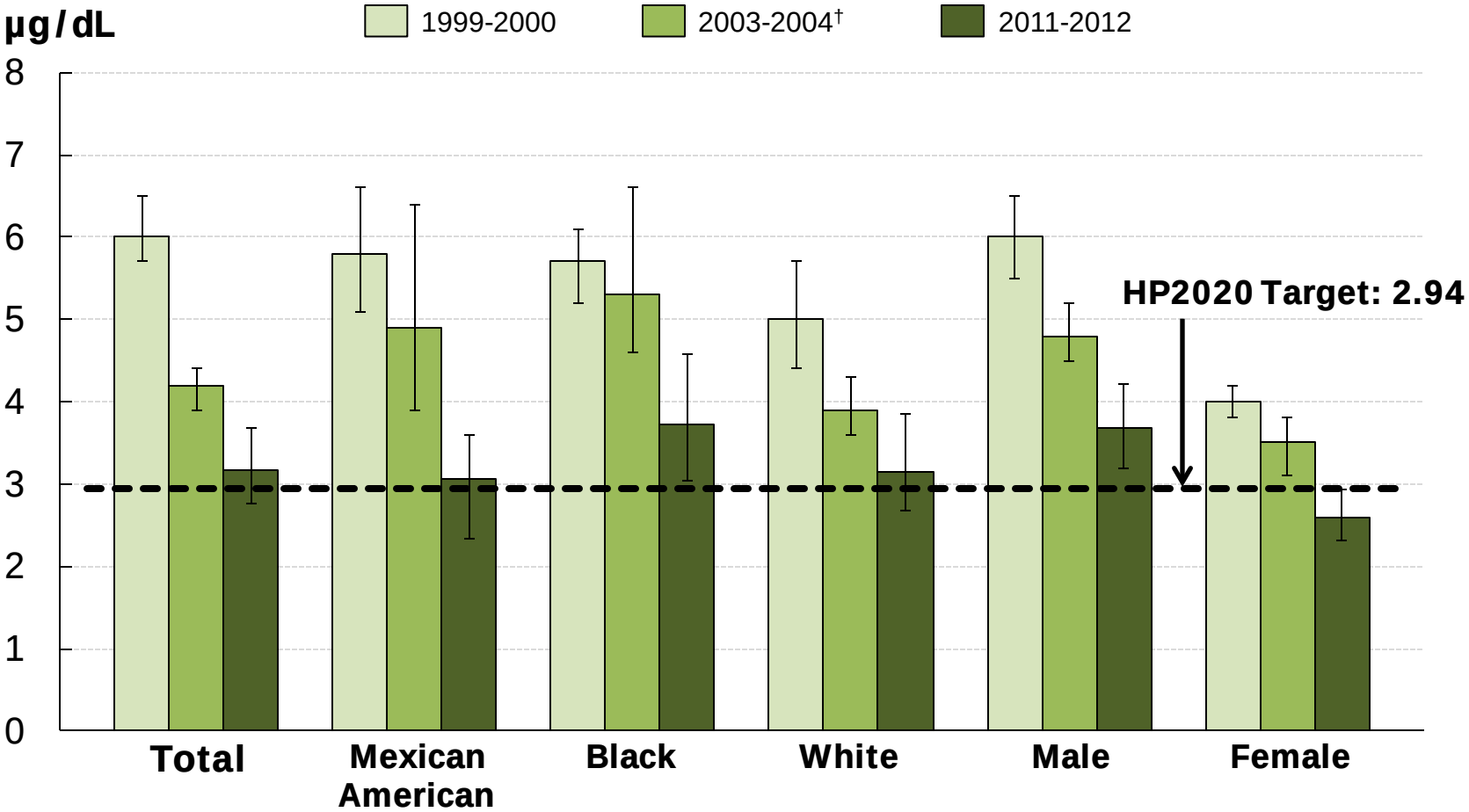


NOTES: I = 95% confidence interval. The measure tracks the top 5% (highest concentration) of arsenic in the population. * In the literature this is referred to as the 95th percentile. The measure is micrograms per gram in urine, and is creatinine-adjusted to account for in person-to-person and time of day differences in urine dilution.

SOURCE: Fourth National Report on Human Exposure to Environmental Chemicals, Updated Tables, August, 2014; National Health and Nutrition Examination Survey (NHANES), CDC/NCHS.

Obj. EH-20.1
Decrease desired

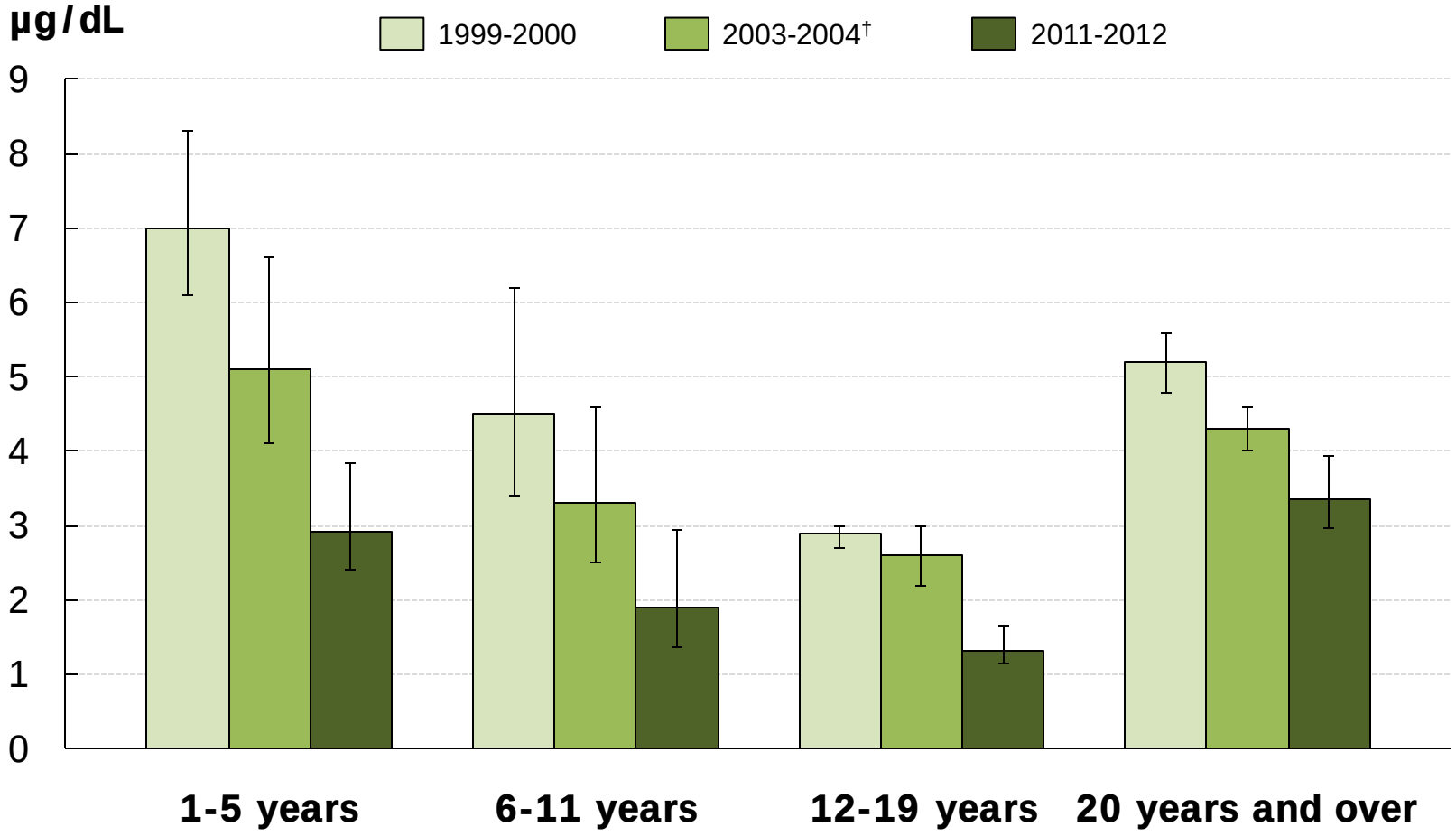
High-End* Lead Exposure by Race/Ethnicity and Sex



NOTES: I = 95% confidence interval. † Indicates Healthy People 2020 baseline year for this measure. Respondents were asked to select one or more races. The categories black and white include persons who reported only one racial group and exclude persons of Hispanic origin. Persons of Hispanic origin may be of any race. The measure tracks the top 5% (highest concentration) of lead in the population. * In the literature this is referred to as the 95th percentile. The measure is micrograms per deciliter of blood.
SOURCE: Fourth National Report on Human Exposure to Environmental Chemicals, Updated Tables, August, 2014; National Health and Nutrition Examination Survey (NHANES), CDC/NCHS.

Obj. EH-20.3
Decrease desired

High-End* Lead Exposure by Age

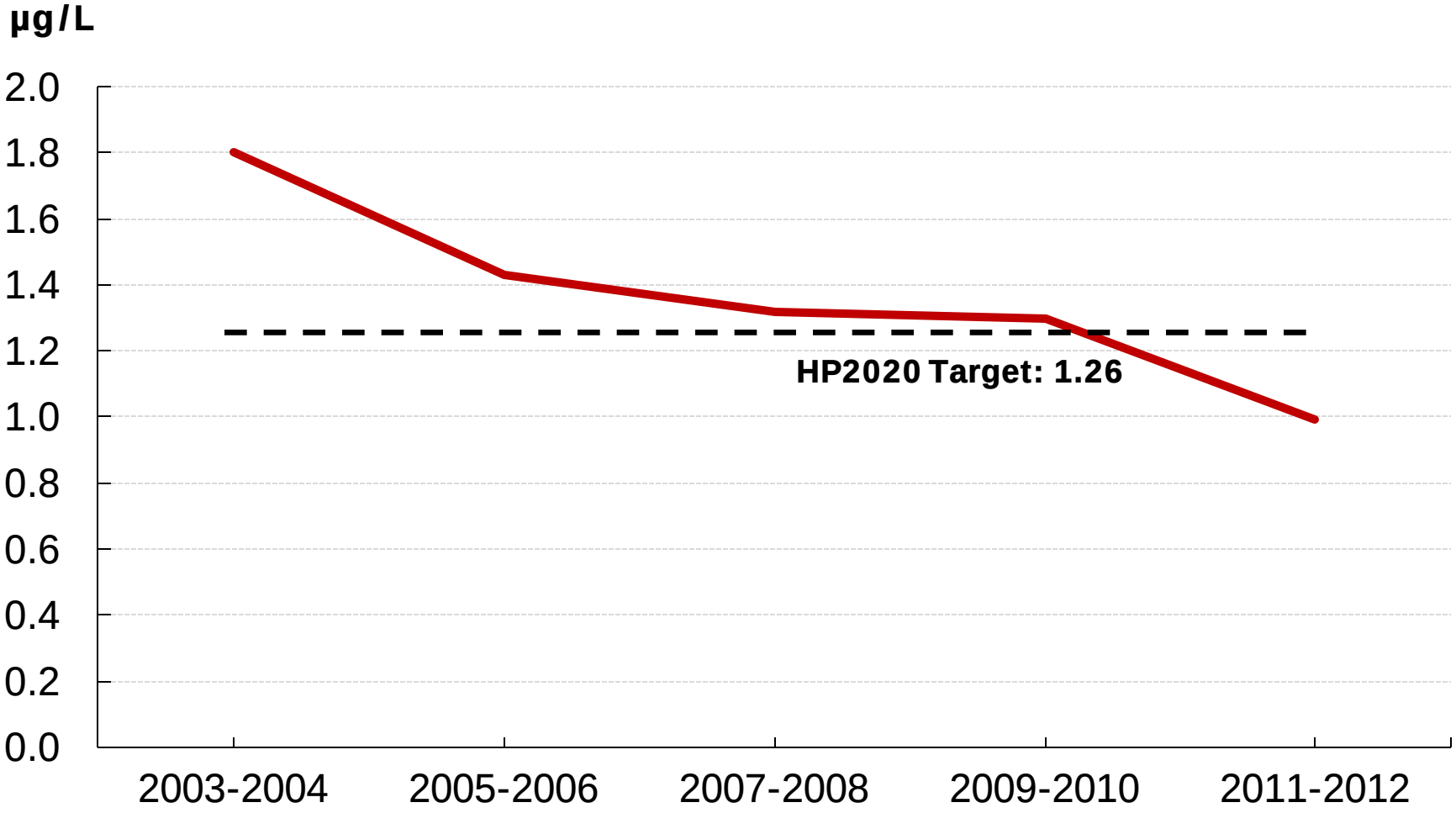


NOTES: I = 95% confidence interval. † Indicates Healthy People 2020 baseline year for this measure. The measure tracks the top 5% (highest concentration) of lead in the population. In the literature this is referred to as the 95th percentile*. The measure is micrograms per deciliter of blood.

SOURCE: Fourth National Report on Human Exposure to Environmental Chemicals, Updated Tables, August, 2014; National Health and Nutrition Examination Survey (NHANES), CDC/NCHS.

Obj. EH-20.3
Decrease desired

High-End* Mercury Exposure in Children, Ages 1 to 5 Years

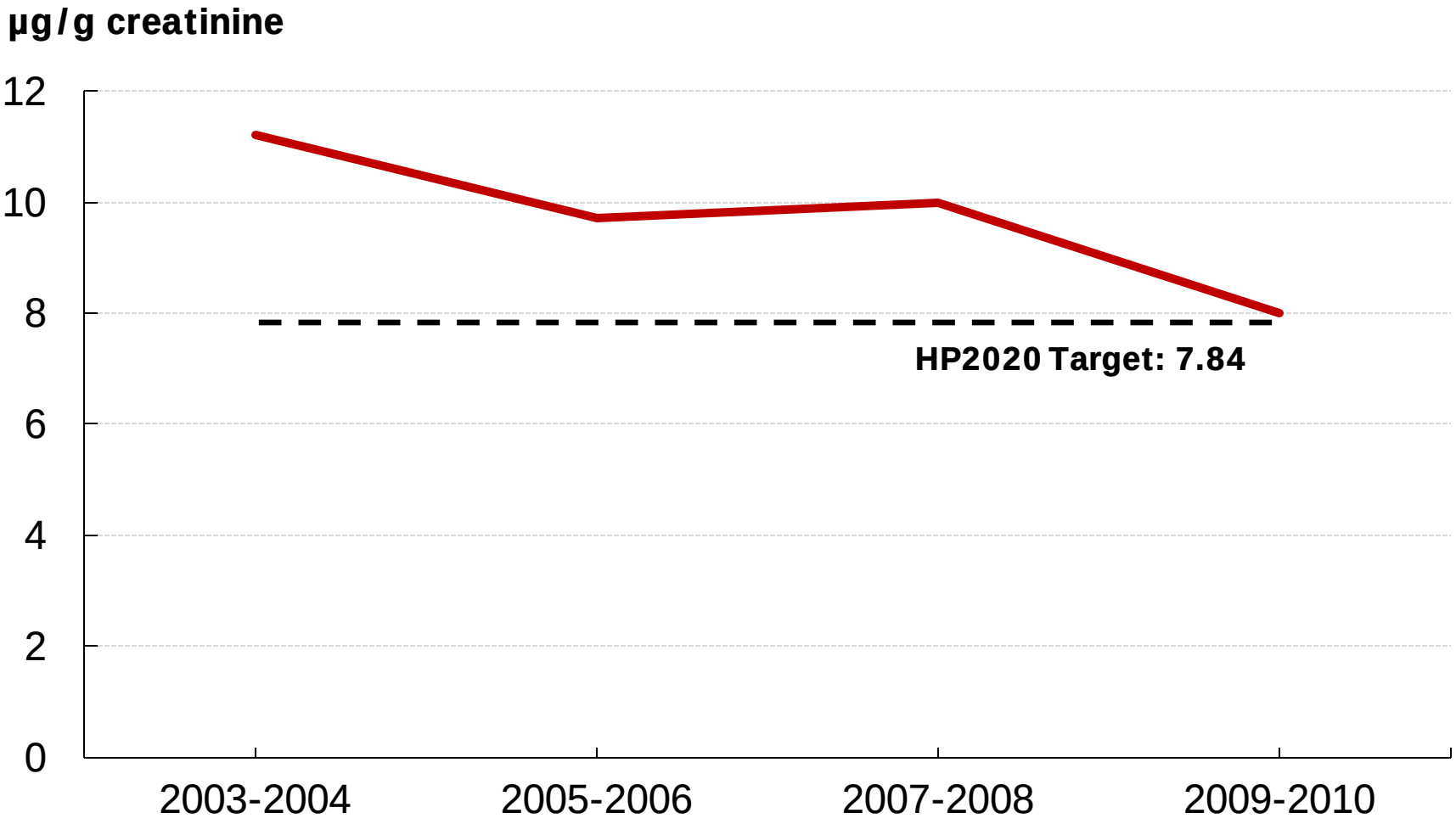


NOTES: The measure tracks the top 5% (highest concentration) of mercury in the population. In the literature this is referred to as the 95th percentile*. The measure is micrograms per liter of blood. The most unhealthy form is methyl mercury.

SOURCE: Fourth National Report on Human Exposure to Environmental Chemicals, Updated Tables, August, 2014; National Health and Nutrition Examination Survey (NHANES), CDC/NCHS.

Obj. EH-20.4
Decrease desired

High-End* Bisphenol A Exposure in Persons Ages 6 Years and Over

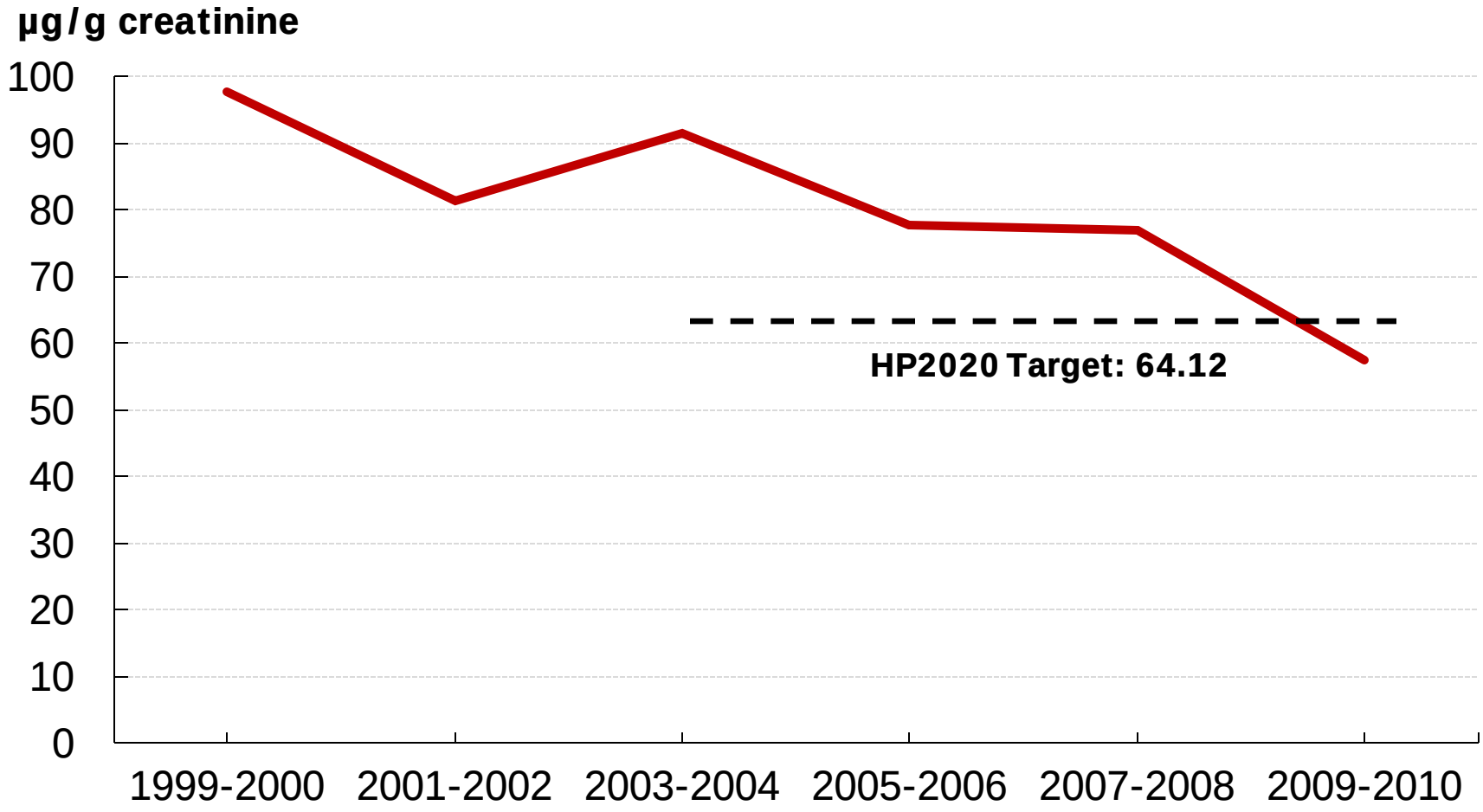


NOTES: The measure tracks the top 5% (highest concentration) of bisphenol A in the population. In the literature this is referred to as the 95th percentile*. The measure is micrograms per gram of urine, and is creatinine-adjusted to account for in person-to-person and time of day differences in urine dilution.

SOURCE: Fourth National Report on Human Exposure to Environmental Chemicals, Updated Tables, August, 2014; National Health and Nutrition Examination Survey (NHANES), CDC/NCHS.

Obj. EH-20.15
Decrease desired

High-End* Phthalate Exposure in Persons Ages 6 Years and Over



NOTES: Mono-*n*-butyl phthalate is tracked in Healthy People and is representative of the phthalate class of chemicals. The measure tracks the top 5% (highest concentration) of phthalate in the population. In the literature this is referred to as the 95th percentile*. The measure is micrograms per gram of urine, and is creatinine-adjusted to account for in person-to-person and time of day differences in urine dilution.

SOURCE: Fourth National Report on Human Exposure to Environmental Chemicals, Updated Tables, August, 2014; National Health and Nutrition Examination Survey (NHANES), CDC/NCHS.

Obj. EH-20.17
Decrease desired

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  - Burden of Pesticide Use
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  - Initiation of Cigarette Use
  - Exposure to Tobacco Marketing
  - Smoke-free Indoor Air Laws
  - Secondhand Smoke Exposure

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Burden of Cigarette Use

- According to the 2014 Surgeon General's Report:
  - Leading cause of preventable death
  - 480,000 smoking-attributable deaths each year (2005 – 2009, annual average)
  - 16 million persons have smoking-attributable conditions

SOURCE: U.S. Department of Health and Human Services. The Health Consequences of Smoking—50 Years of Progress: A Report of the Surgeon General. Atlanta, GA: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health, 2014.

Secondhand Smoke

- Contains over 70 known carcinogens
- At least 40,000 deaths attributed to secondhand smoke each year
- A known cause of:
  - Infants: Low birth weight and Sudden Infant Death Syndrome (SIDS)
  - Children: Lung problems, asthma, and ear infections
  - Adults: Heart disease, stroke, and lung cancer

NOTE: Data are for non-smokers.
SOURCE: U.S. Department of Health and Human Services. The Health Consequences of Smoking—50 Years of Progress: A Report of the Surgeon General. Atlanta, GA: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health, 2014.

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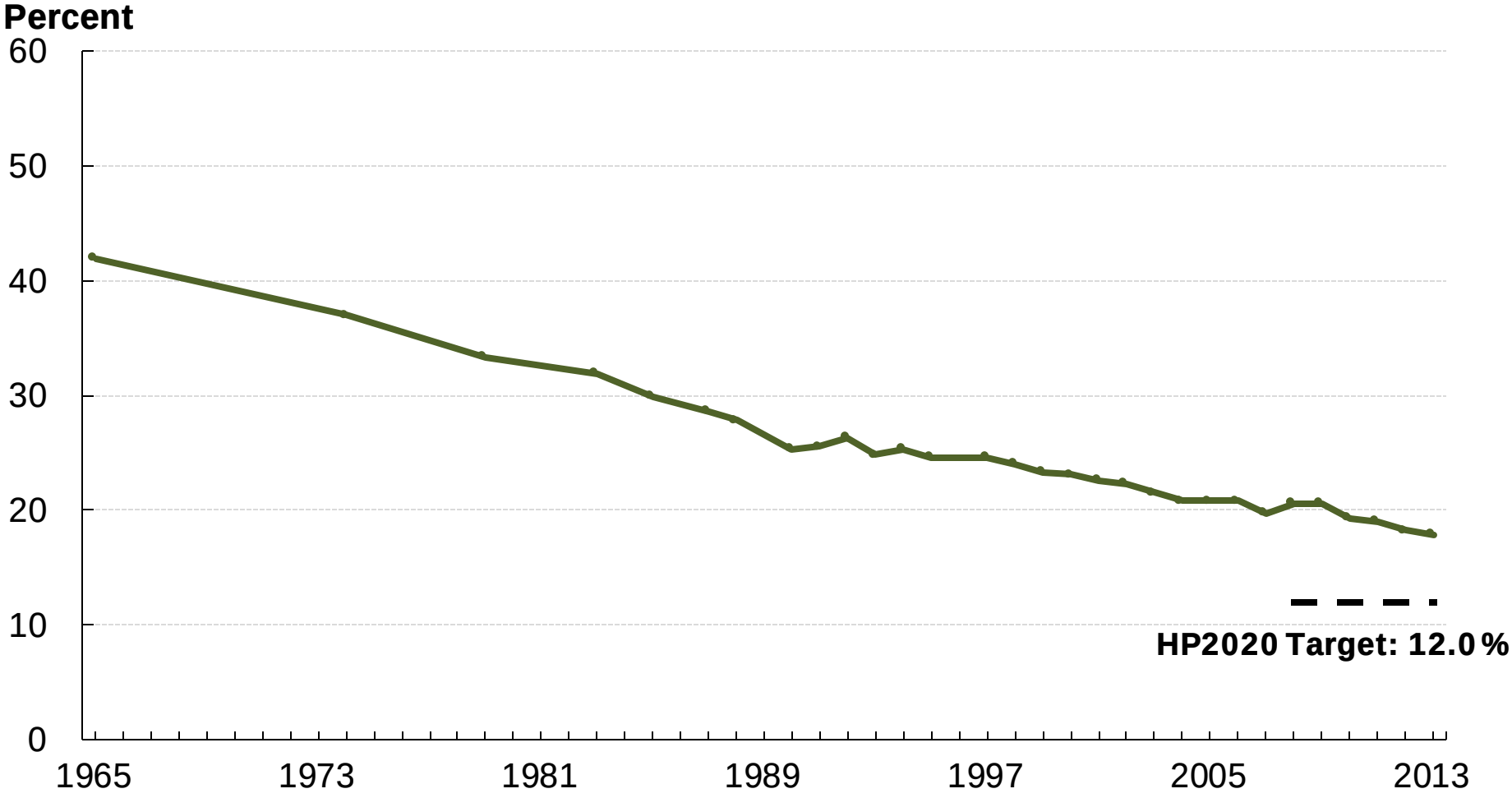
Current Cigarette Smoking, Adults Ages 18 Years and Over

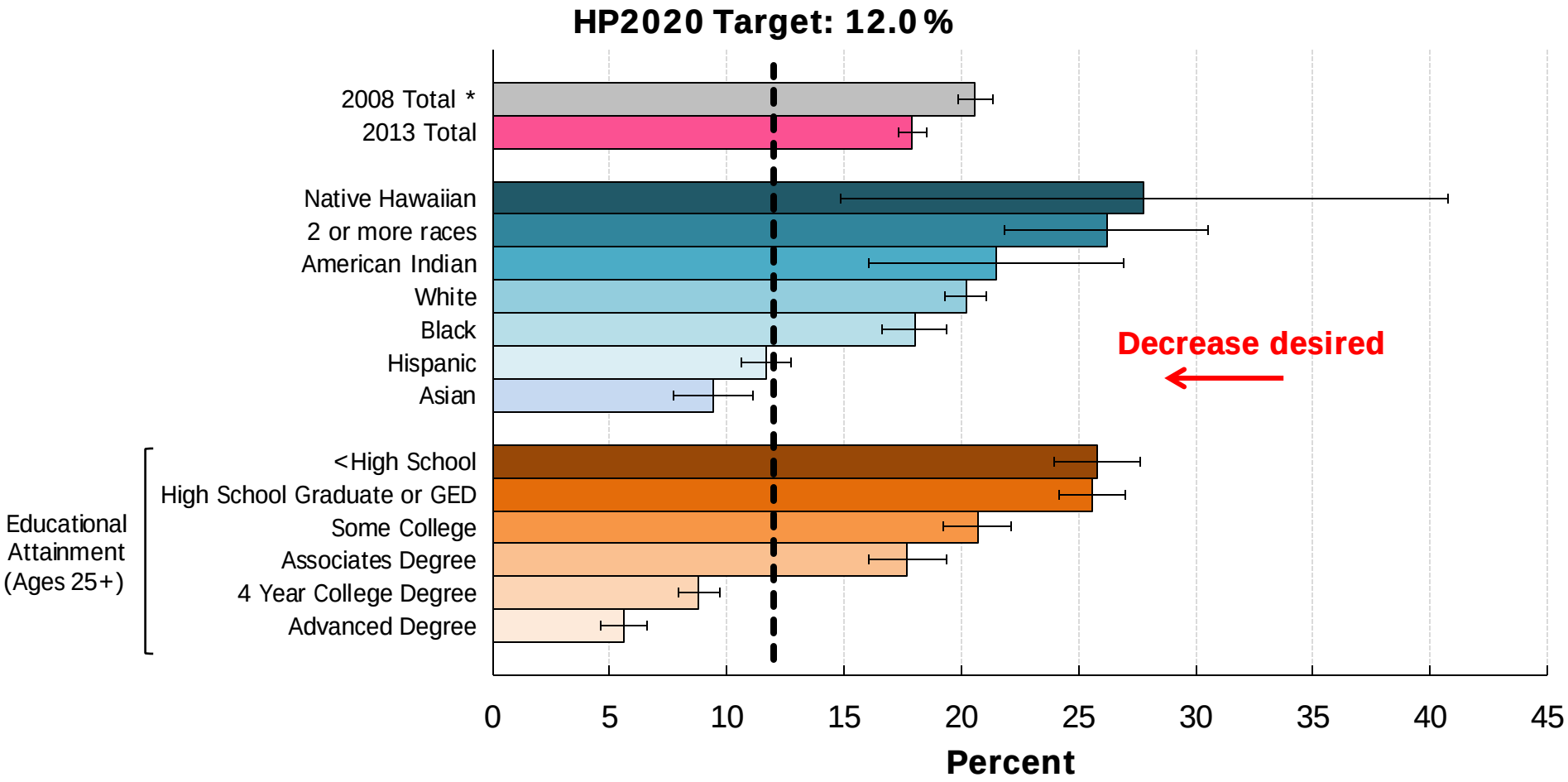


NOTES: Data are for adults 18+ who have smoked at least 100 cigarettes in their lifetime and currently report smoking every day or some days. Data are age adjusted to the 2000 standard population. Data prior to 1997 are not strictly comparable with data for later years due to the 1997 questionnaire redesign.

SOURCE: National Health Interview Survey (NHIS), CDC/NCHS.

Obj. TU-1.1
Decrease desired

Current Cigarette Smoking, Adults Ages 18 Years and Over, 2013

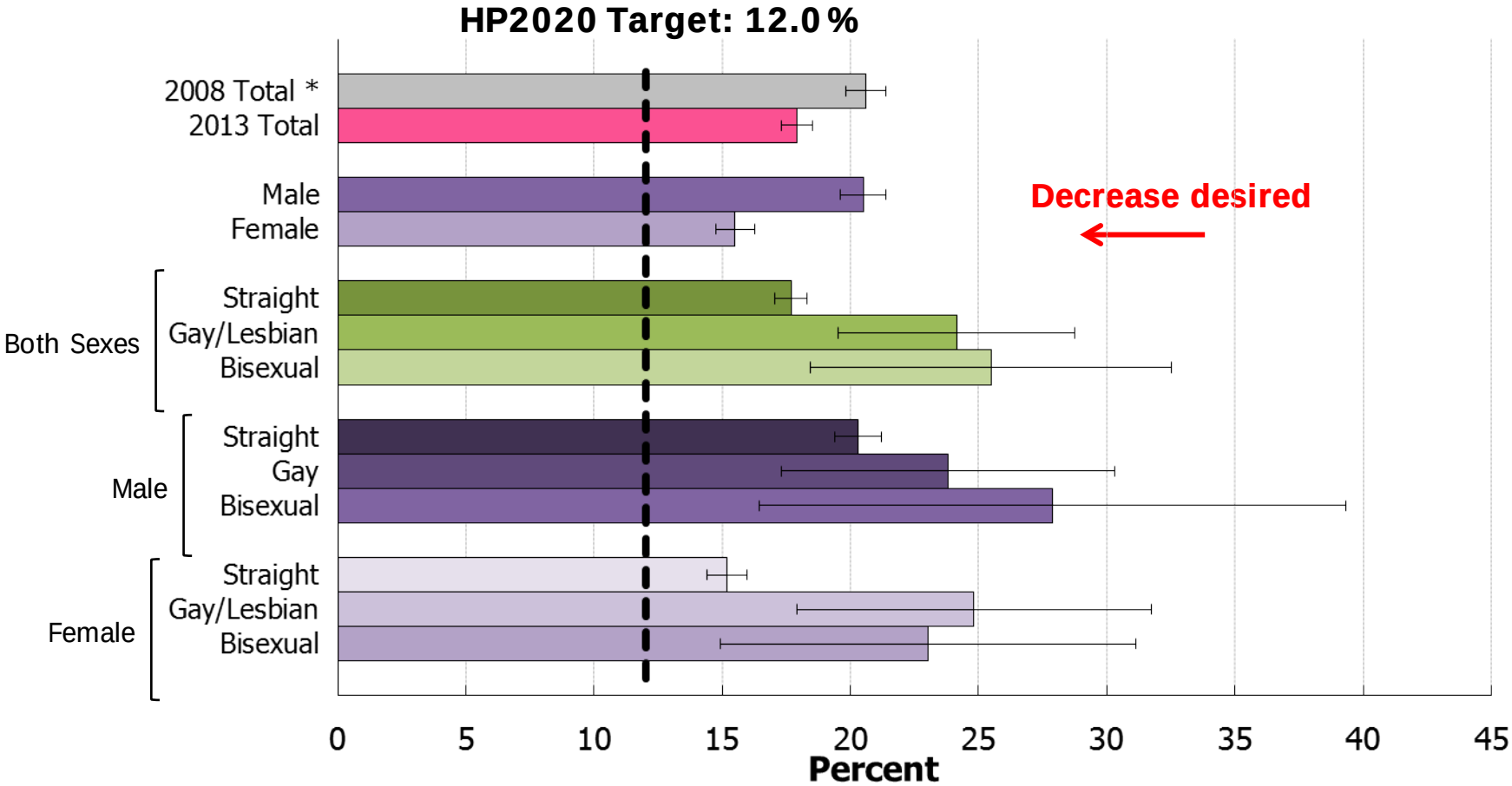


NOTES: — = 95% confidence interval. *2008 data – HP2020 baseline. Data are for persons who have smoked at least 100 cigarettes in lifetime and currently report smoking every day or some days. Black and White exclude persons of Hispanic origin. Persons of Hispanic origin may be any race. American Indian includes Alaska Native. Native Hawaiian includes other Pacific Islander. Respondents were asked to select one or more races. Data for the single race categories shown are for persons who reported only one racial group. Data are age adjusted to the 2000 standard population.

SOURCE: National Health Interview Survey (NHIS), CDC/NCHS.

Obj. TU-1.1

Current Cigarette Smoking, Adults Ages 18 Years and Over, 2013

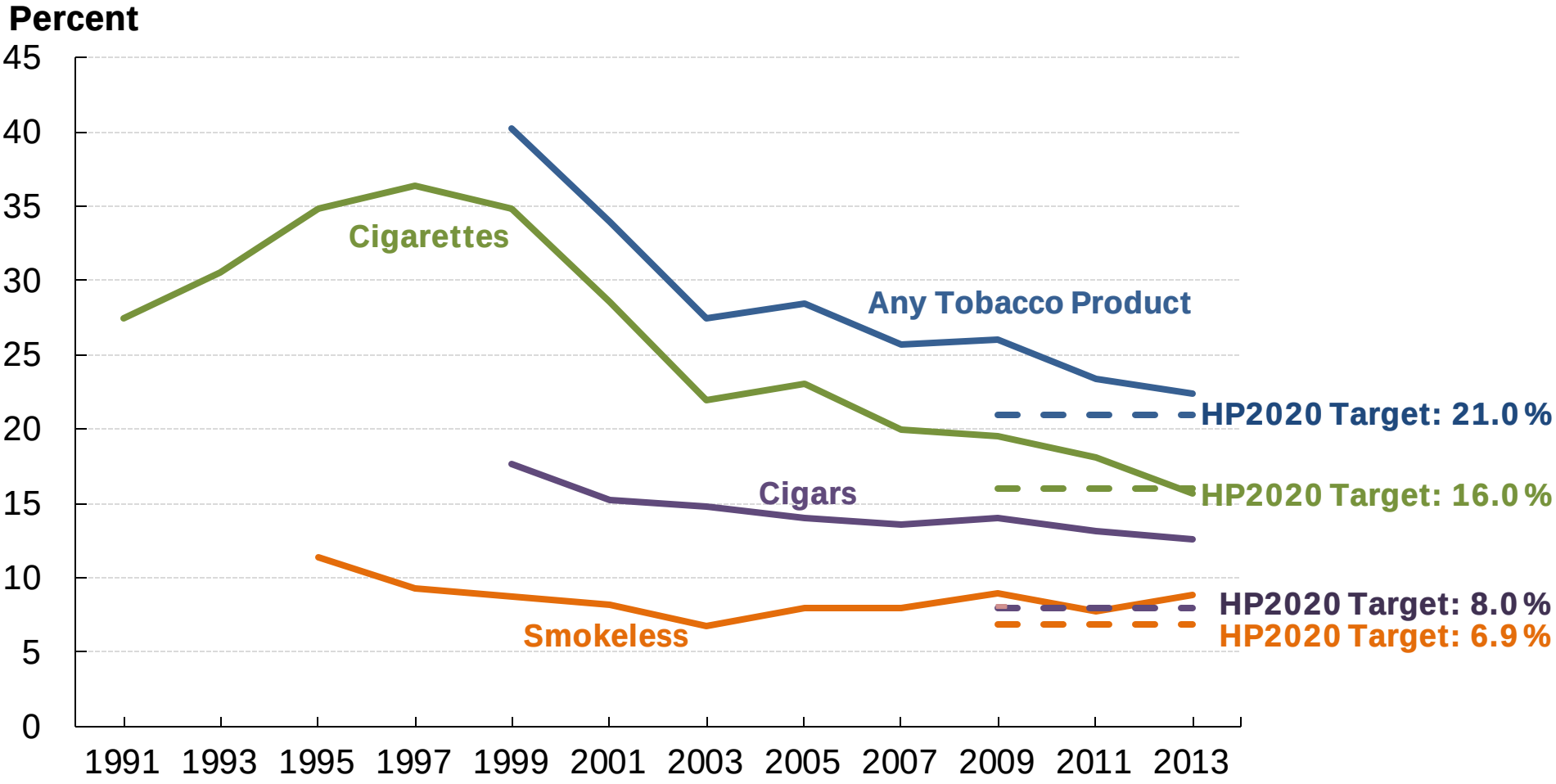


NOTES: — = 95% confidence interval. *2008 data – HP2020 baseline. Data are for persons who have smoked at least 100 cigarettes in lifetime and currently report smoking every day or some days. Data are age adjusted to the 2000 standard population. For data on sexual orientation, men were asked, "Which of the following best represents how you think of yourself? : Gay; Straight, that is, not gay; Bisexual; Something else; I don't know the answer." Women were asked, "Which of the following best represents how you think of yourself?: Lesbian or gay; Straight, that is, not lesbian or gay; Bisexual; Something else; I don't know the answer."

SOURCE: National Health Interview Survey (NHIS), CDC/NCHS.

Obj. TU-1.1

Tobacco Use in Past Month Among Students in Grades 9–12, 1991–2013

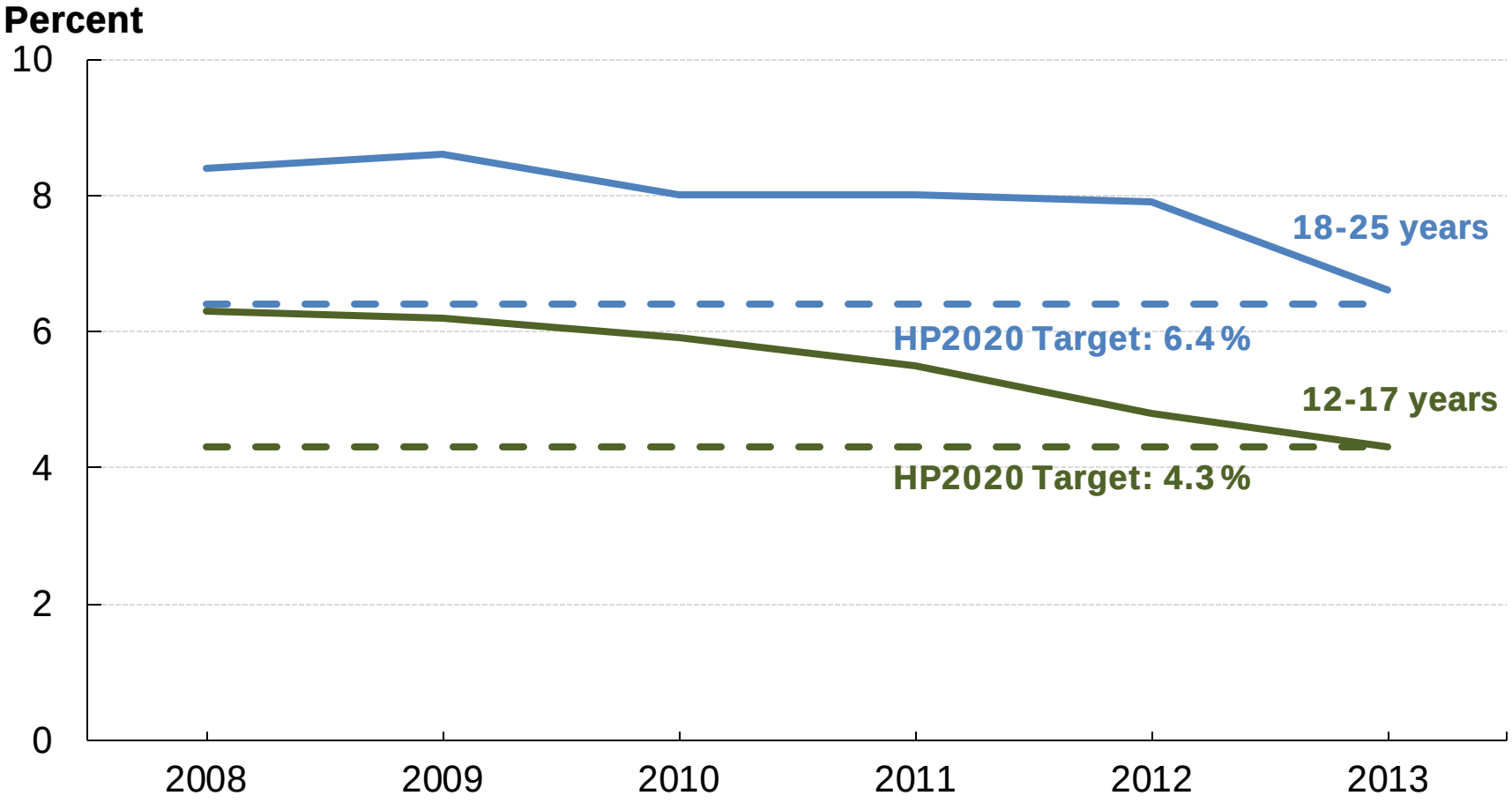


NOTES: Data are for the proportion of students in grades 9–12 who used any of the following tobacco products on 1 or more of the 30 days preceding the survey: cigarettes, cigars (including cigarillos or little cigars) and smokeless tobacco (i.e., chewing tobacco, snuff, or dip).

SOURCE: Youth Risk Behavior Surveillance System (YRBSS), CDC/NCCDPHP.

Objs. TU-2.1–2.4
Decrease desired

Cigarette Initiation, Adolescents and Young Adults

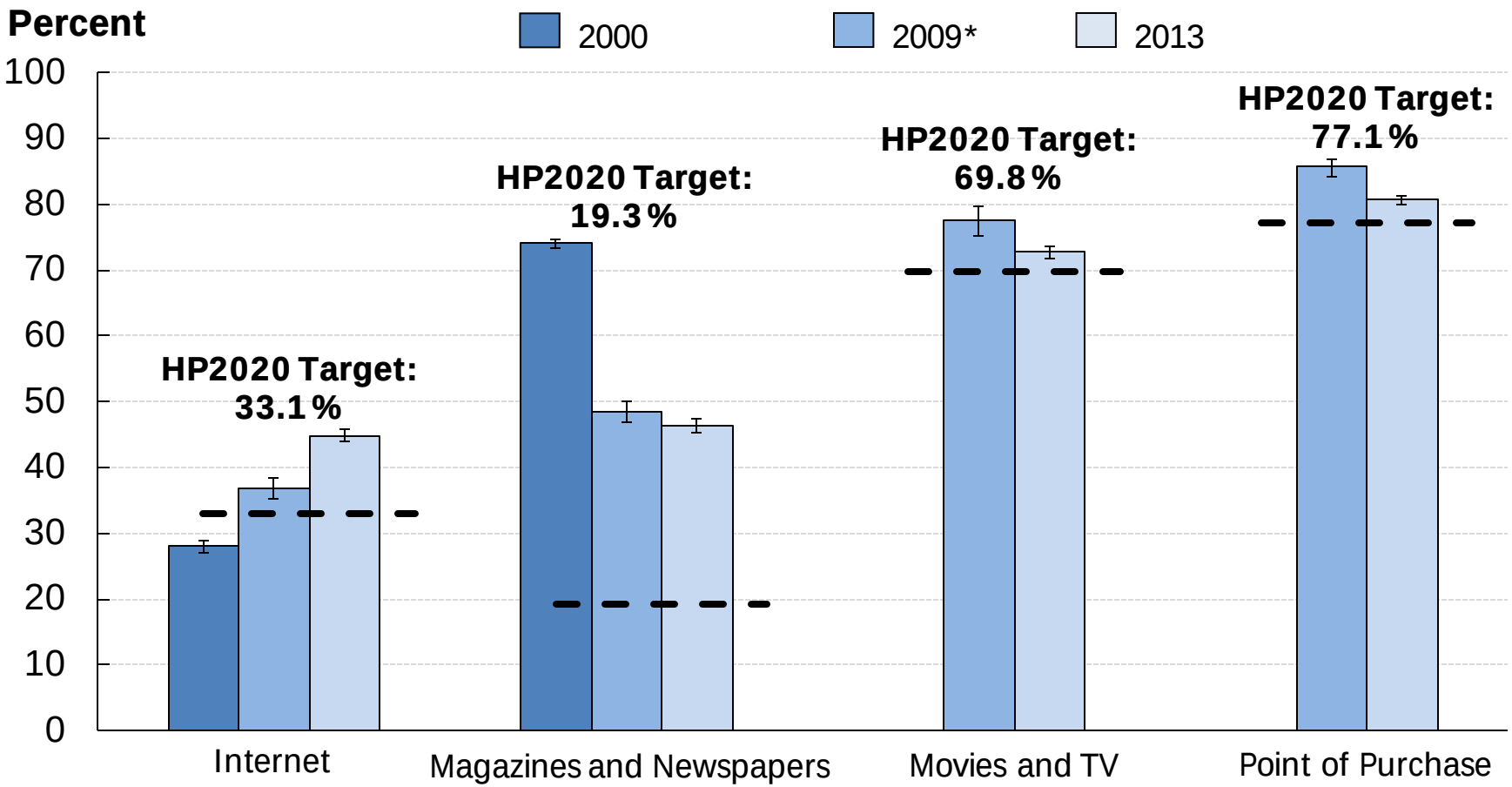


NOTE: Data are for the percent of never smoking adolescents (ages 12-17 years) or young adults (ages 18-25 years) who initiated cigarette use in the 12 months prior to the interview.

SOURCE: National Survey on Drug Use and Health (NSDUH), SAMHSA.

Objs. TU-3.2 and TU-3.6
Decrease desired

Exposure to Tobacco Marketing, Students in Grades 6–12

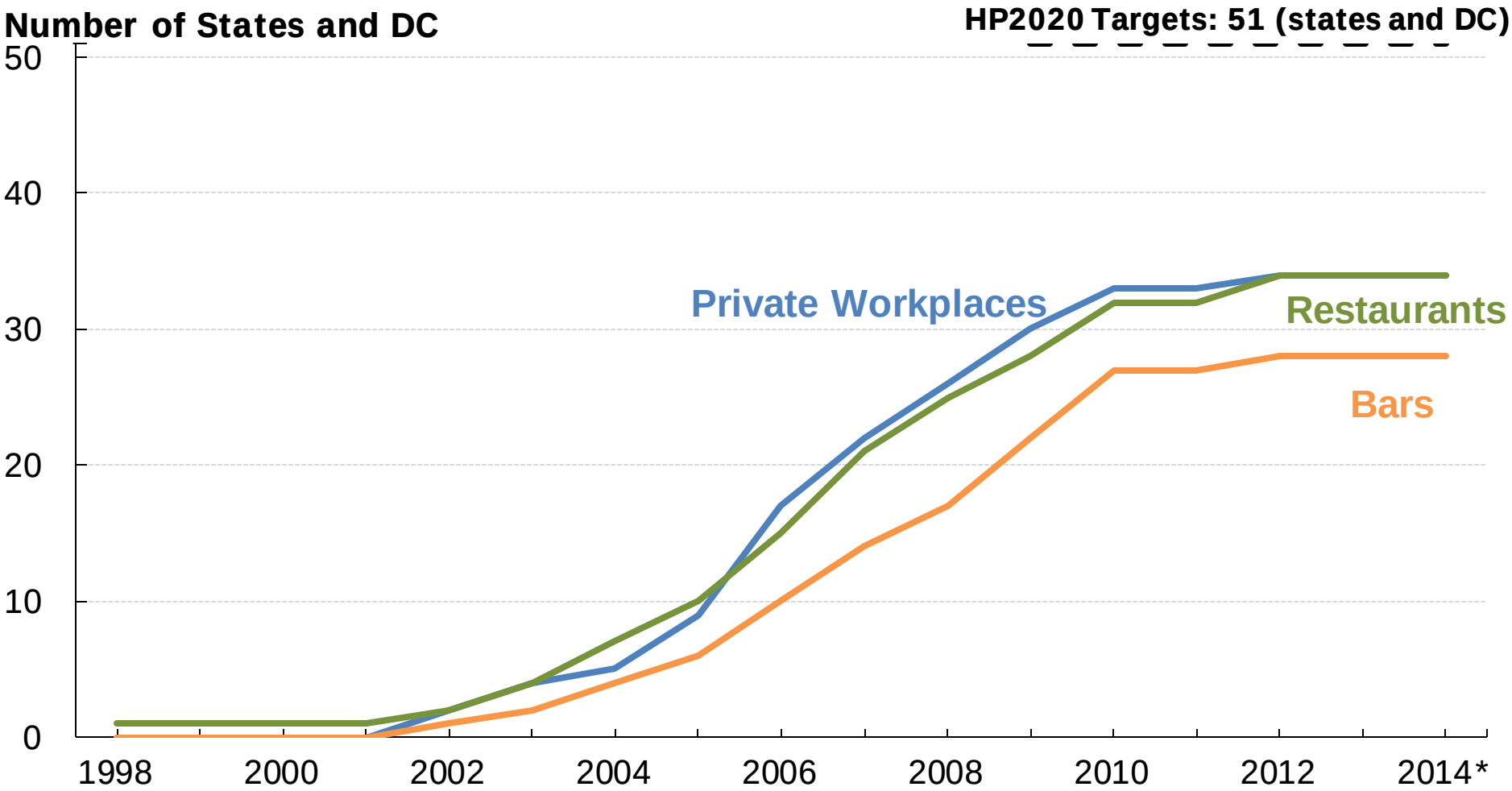


NOTES: I= 95% confidence interval. *2009 is HP2020 baseline.
Students are considered to be exposed to Internet tobacco advertising if they answered 'always' 'most of the time' or 'some of the time' as applicable to seeing marketing or promotion of cigarettes or tobacco products. The question wording and answer categories are periodically revised for this survey, which may affect the interpretation of the trend.

SOURCE: National Youth Tobacco Survey (NYTS), CDC/NCCDPHP/OSH.

Obj. TU-18.1 – 18.4
Decrease desired

Smoke-Free Indoor Air Laws

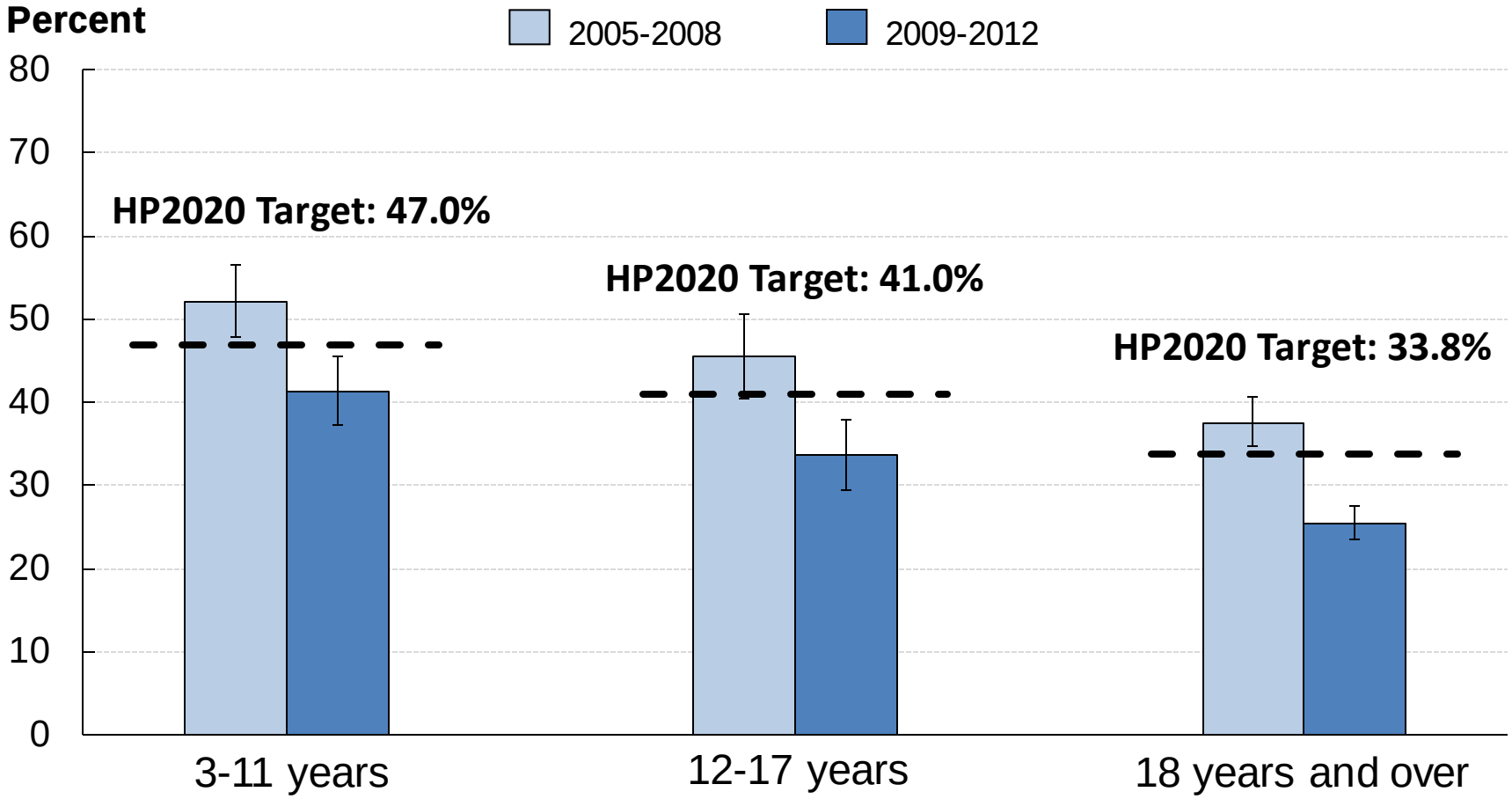


NOTES: *Data for 2014 are as of September 30, 2014. These data will be updated through December 31, 2014 when available. Data for 1998-2013 are as of December 31 of that year. Target applies to all three objectives shown. Data are for the number of states and D.C. with comprehensive laws enacted that banned smoking in private workplaces (TU-13.1), restaurants (TU-13.3), and bars (TU-13.4).

Objs. TU-13.1, TU-13.3, and TU-13.4
Increase desired

SOURCE: State Tobacco Activities Tracking and Evaluation System (STATE), CDC/NCCDPHP.

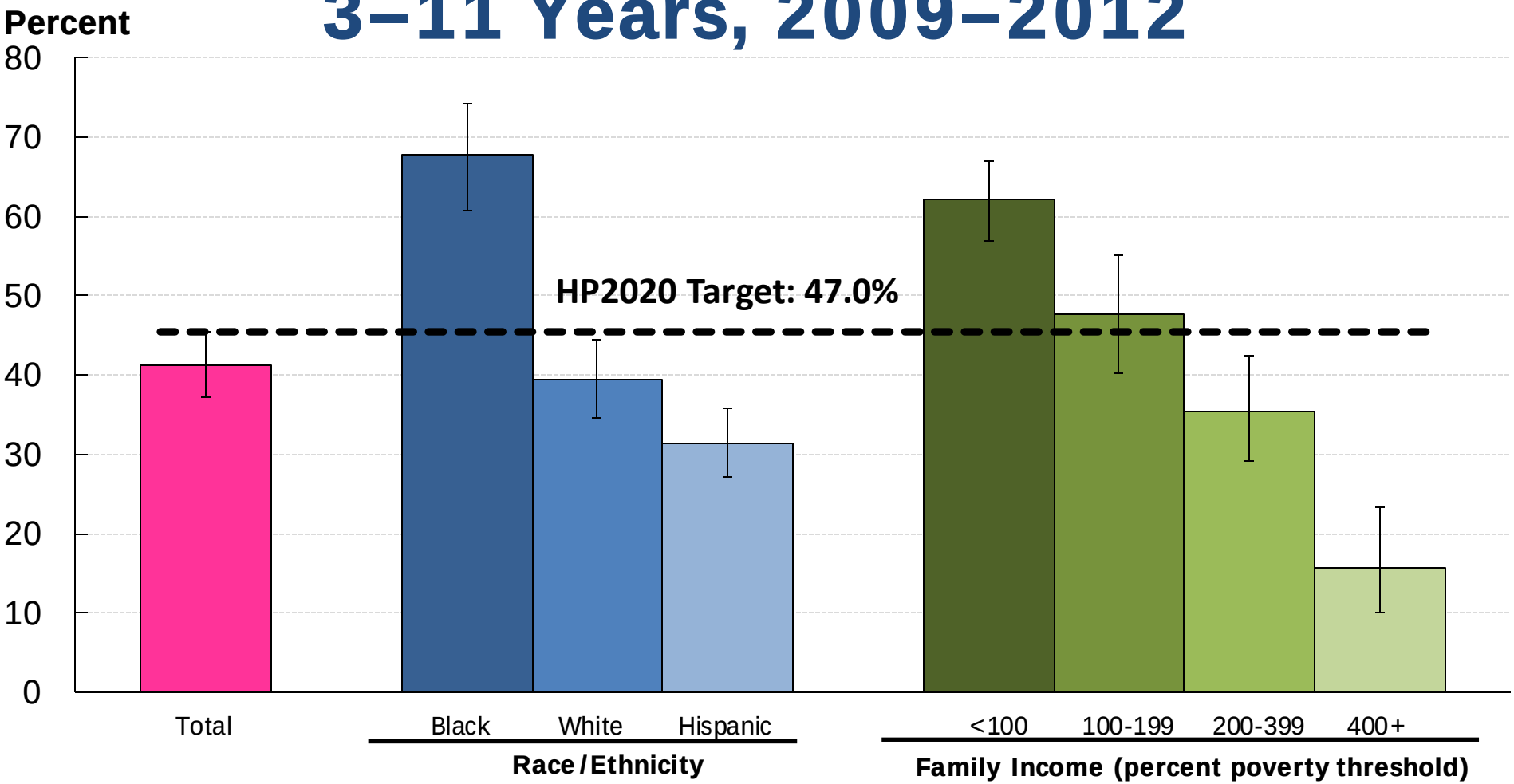
Exposure of Non-Smokers to Secondhand Smoke



NOTES: I= 95% confidence interval. Children ages 3-11 years are considered to be non-smokers if they have a serum cotinine level of less than or equal to 10 ng/ml. Adolescents and adults ages 12 years and over are considered to be non-smokers if they reported that they did not use any product containing nicotine in the past 5 days and if their serum cotinine level is less than or equal to 10ng/ml. Persons of all age groups shown are considered to be exposed to secondhand smoke if they have a serum cotinine level of greater than or equal to 0.05 ng/ml and less than or equal to 10 ng/ml. Data for adults ages 18 years and older are age adjusted to the 2000 standard population.
SOURCE: National Health and Nutrition Examination Survey (NHANES), CDC/NCHS.

Obj. TU-11.1-11.3
Decrease desired

Exposure of Non-Smokers to Secondhand Smoke, Children Ages 3–11 Years, 2009–2012



NOTES: I= 95% confidence interval. Children ages 3-11 years are considered to be non-smokers if they had a serum cotinine level of less than or equal to 10 ng/ml. Children are considered to be exposed to secondhand smoke if they had a cotinine level greater than or equal to 0.05ng/ml and less than or equal to 10 ng/ml. 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. Single race categories are for persons who reported only one racial group.
SOURCE: National Health and Nutrition Examination Survey (NHANES), CDC/NCHS.

Obj. TU-11.1
Decrease desired

Key Takeaways – Tobacco Use

- Mixed results for Tobacco Use thus far in the decade.
- 28 objectives have improved or met their target.
  - Tobacco use among adults has continued to decline gradually.
  - Cigarette use among adolescents has decreased considerably, exceeding the Healthy People 2020 target.
  - Initiation of cigarette/tobacco use has decreased.
  - Number of states with smoke free indoor air laws has increased substantially since 1998, but less progress is seen in Healthy People 2020 tracking period.
  - Exposure to secondhand tobacco smoke has decreased, although disparities remain.
- 27 Objectives have seen little or no change so far this decade.
- 4 objectives are getting worse.
  - Exposure to tobacco marketing has increased among students.

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Key Takeaways – Environmental Health

- Data show mixed results for Environmental Health thus far in the decade.
- Overall arsenic exposure has gotten worse since the baseline.
- The use of in-home radon mitigation and reduction features has improved.
- Since 1999-2000 lead concentrations have improved significantly for all population groups tracked.
- Similarly, concentrations of Bisphenol and Phthalate have decreased, with levels meeting or exceeding the target.
- Ambient air quality as measured by ozone and particulate matter has met the Healthy People target and continues to improve.

Healthy People 2020

Linda S. Birnbaum, Ph.D., D.A.B.T., A.T.S.

Director,
National Institute of Environmental Health Sciences (NIEHS)

December 5, 2014

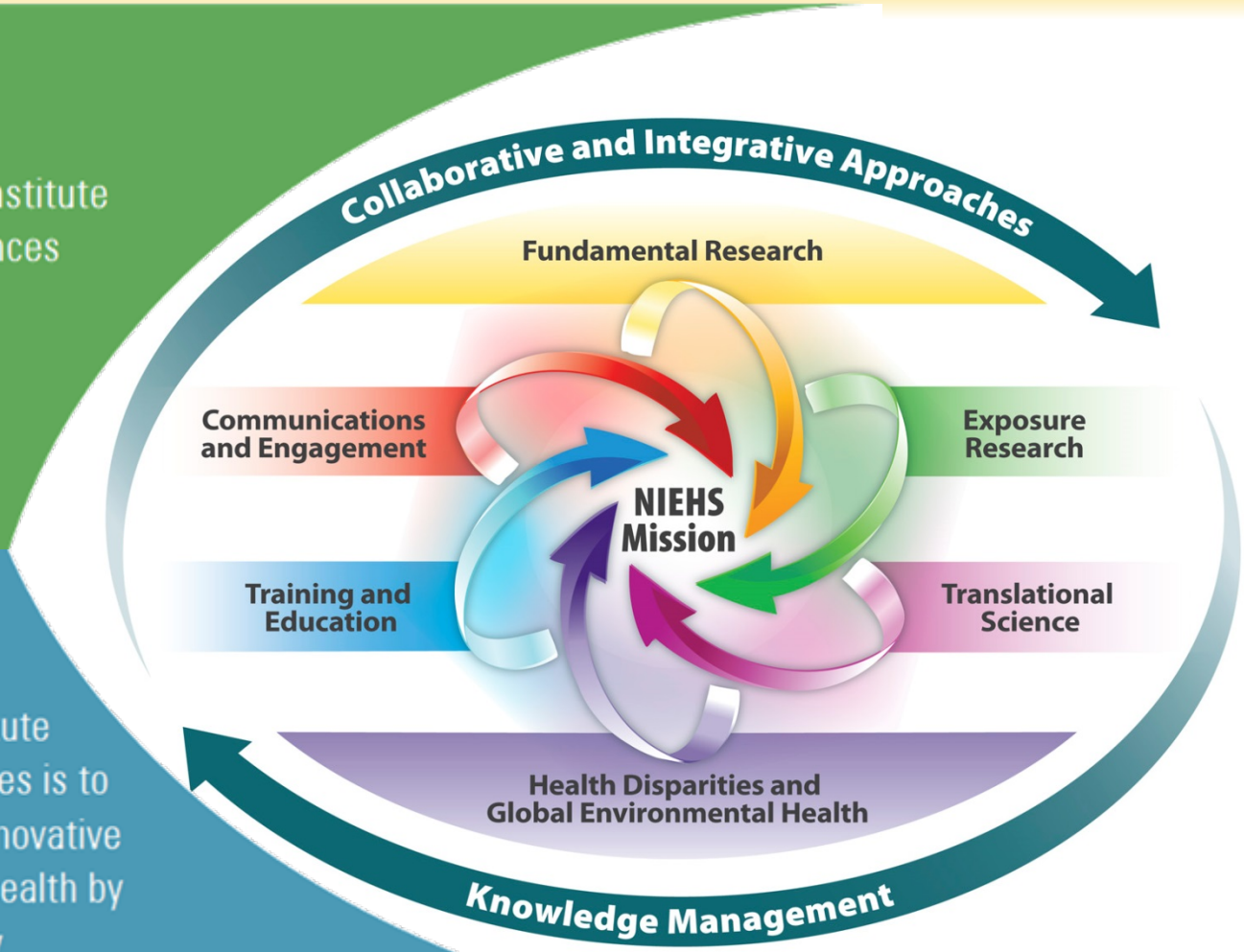
National Institute of Environmental Health Sciences (NIEHS)

Mission

The mission of the National Institute of Environmental Health Sciences is to discover how the environment affects people in order to promote healthier lives.

Vision

The vision of the National Institute of Environmental Health Sciences is to provide global leadership for innovative research that improves public health by preventing disease and disability.



NIEHS and Healthy People 2020

- HP 2020 Environmental Health Goal: “Promote health for all through a healthy environment” is similar to the NIEHS mission.
- The NIEHS conducts or funds research that relates to a number of objectives in Healthy People 2020

AIR Pollution

- Living within 75m of a major roadway associated with increased risk of asthma. This is particularly the case for children without a family history of asthma.
- Genetic variations may offer protection or make a child more susceptible to asthma and autism. Genetic differences vary between ethnic groups, could contribute to health disparities.
- Mothers exposed to urban air pollutants, known as polycyclic aromatic hydrocarbons (PAHs), had children with lower IQ's

Objectives
– EH 1 & 3

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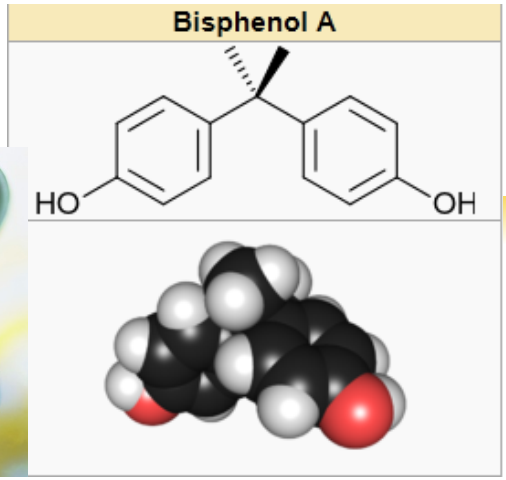
Bisphenol A



- Ubiquitous in the environment and many possible exposures
- Animal and human research has associated BPA with many health problems including infertility, weight gain, behavioral changes, early-onset puberty, prostate and mammary gland cancers, cardiovascular effects, and diabetes.
- CLARITY BPA Program: Consortium-based science - the NIEHS's multipronged, collaborative approach to assessing the health effects of bisphenol A.
- Recent NIEHS funded research: Association of BPA exposure during fetal development may adversely impact cardiovascular fitness.

Objective – EH 20.15

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Heavy Metals

Real-world Exposures to Metals Often at Low Doses

- Very low levels of Arsenic exposure (5-10ug/L) in drinking water are associated with lower IQ Wasserman *et al.*, Environ Health (2014)
- Exposure to Manganese is associated with poorer memory and attention in children, even at low levels commonly encountered in North America. Oulhote *et al.*, EHP (2014)
- Very low levels of lead exposure (mean 6.4 mg/dl)) are associated with increased risk of behavioral and emotional problems, such as being anxious, depressed, or aggressive. (Liu *et al*., JAMA Pediatr 2014)
- Children exposed to Mercury show decreased visuospatial processing and memory. Grandjean *et al.*, Neurotoxicol Teratol (2014)

Objectives – EH 8, 16.7, 18, 20.1, 20.3-5

Healthy People 2020

Phthalates

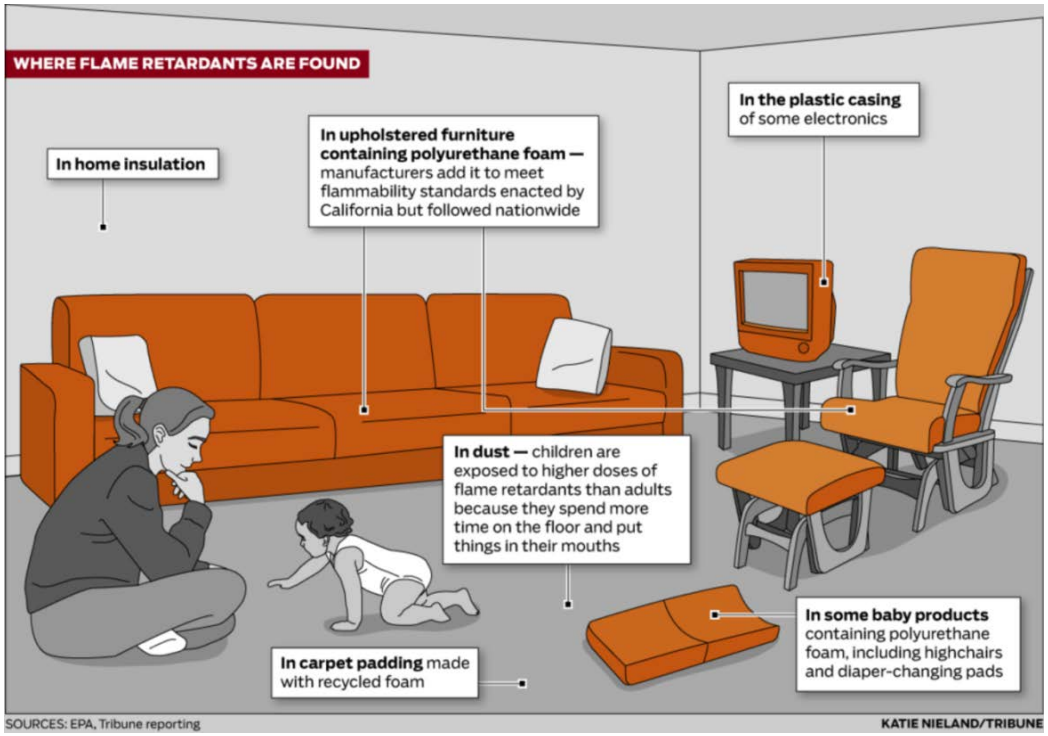
- NIEHS funded researchers at Columbia University found an association between childhood asthma and prenatal exposure to two phthalates used in a diverse array of household products.

Objective – EH 20.17

Healthy People 2020

Flame Retardants

- NIEHS funded researchers at the University of Cincinnati found that prenatal exposure to Polybrominated Diphenyl Ether (PBDE) was associated with lower IQ and higher hyperactivity scores in children.



Objective–
EH 20.18

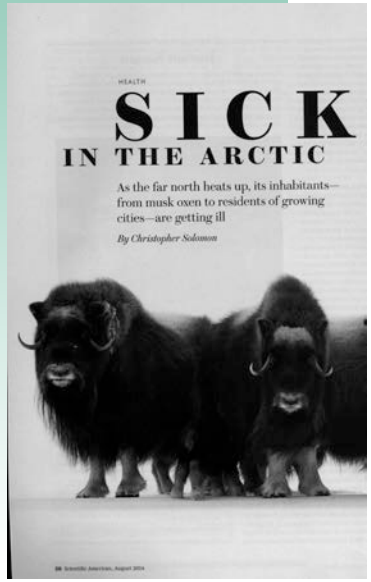
Disease Prevention and Health Promotion

- HP 2020 has 4 “Overarching Goals” that relate to disease prevention and health promotion
- An integral part of the NIEHS research mission
- Prevention is 30% (> $230 million) of the NIEHS budget
- Educate and train the next generation of prevention scientists
- Educate the public and health professionals

Healthy People 2020

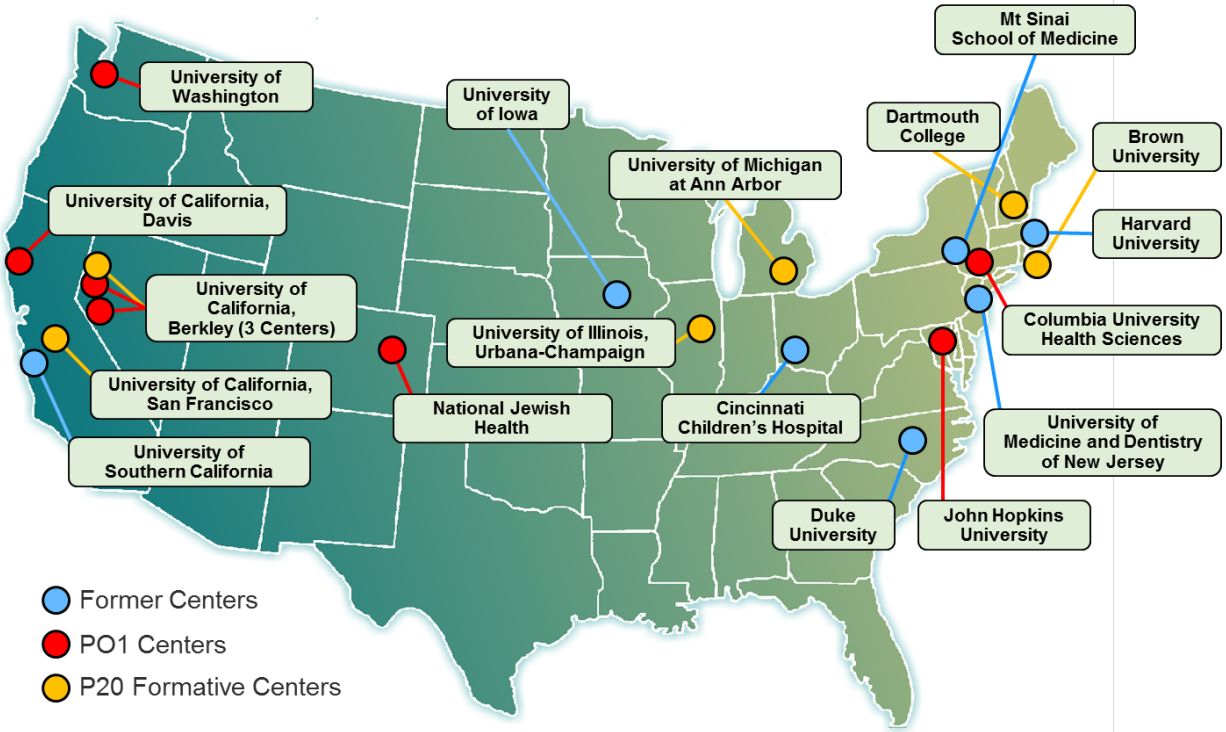
Health Disparities

- Sister Study
  - Women exposed to solvents before the birth of their 1st child may have an increased risk of breast cancer
- Agricultural Health Study
  - Genetic susceptibilities that increase risk of Parkinson disease when exposed to pesticides
- Superfund Worker Training Program
  - National network of over 100 non-profit safety and health training organizations that trained nearly 1,200 Native Americans in FY 2014
- Alaska Community Forums
  - St. Lawrence Island, Chickaloon Village
- Hazardous Waste Risk and Remediation in the Southwest
  - Training modules for Promotores (Mexican women health advocates) are available online in Spanish and English for arsenic, pesticides, and environmental toxicology



Early Exposures

- Developmental Origins of Health and Disease (DOHaD)
  - NIEHS/EPA Children's Environmental Health and Disease Prevention Research Centers
  - Markers of Autism Risk in Babies – Learning Early Signs
  - Breast Cancer and the Environment Research Program (BCERP)



Healthy People 2020

Future Direction

- NIEHS has made great strides in identifying and understanding the role of environment in health and disease.
- NIEHS will continue to invest in research that has a significant, measurable public health impact.
- NIEHS brings new understanding through stakeholder and community engagement in 21st century environmental health challenges.

Healthy People 2020

Dr. Tim McAfee, MD, MPH

Director, Office of Smoking and Health
Centers for Disease Control and Prevention

Healthy People 2020

Office of Disease Prevention and Health Promotion

50 Years Ago

Healthy People 2020

Progress with Leading Health Indicators

TU-1.1 Reduce cigarette smoking by adults

BASELINE 2008 **20.6%**

2013 **17.9%**

of **adults** aged 18 years and older were current cigarette smokers in 2013

(age adjusted to the year 2000 standard population)

Data Source: National Health Interview Survey

TARGET **12%** YEAR 2020

TU-2.2 Reduce use of cigarette by adolescents (past month)

BASELINE 2008 **19.5%**

2013 **15.7%**

of **adolescents** in grades 9 through 12 smoked cigarettes in the past 30 days in 2013

Data Source: Youth Risk Behavior Surveillance System

TARGET **16%** YEAR 2020

TU-11.1 Reduce the proportion of children aged 3 to 11 years exposed to secondhand smoke

BASELINE 2005-2008 **52.2%**

2009-2012 **41.3%**

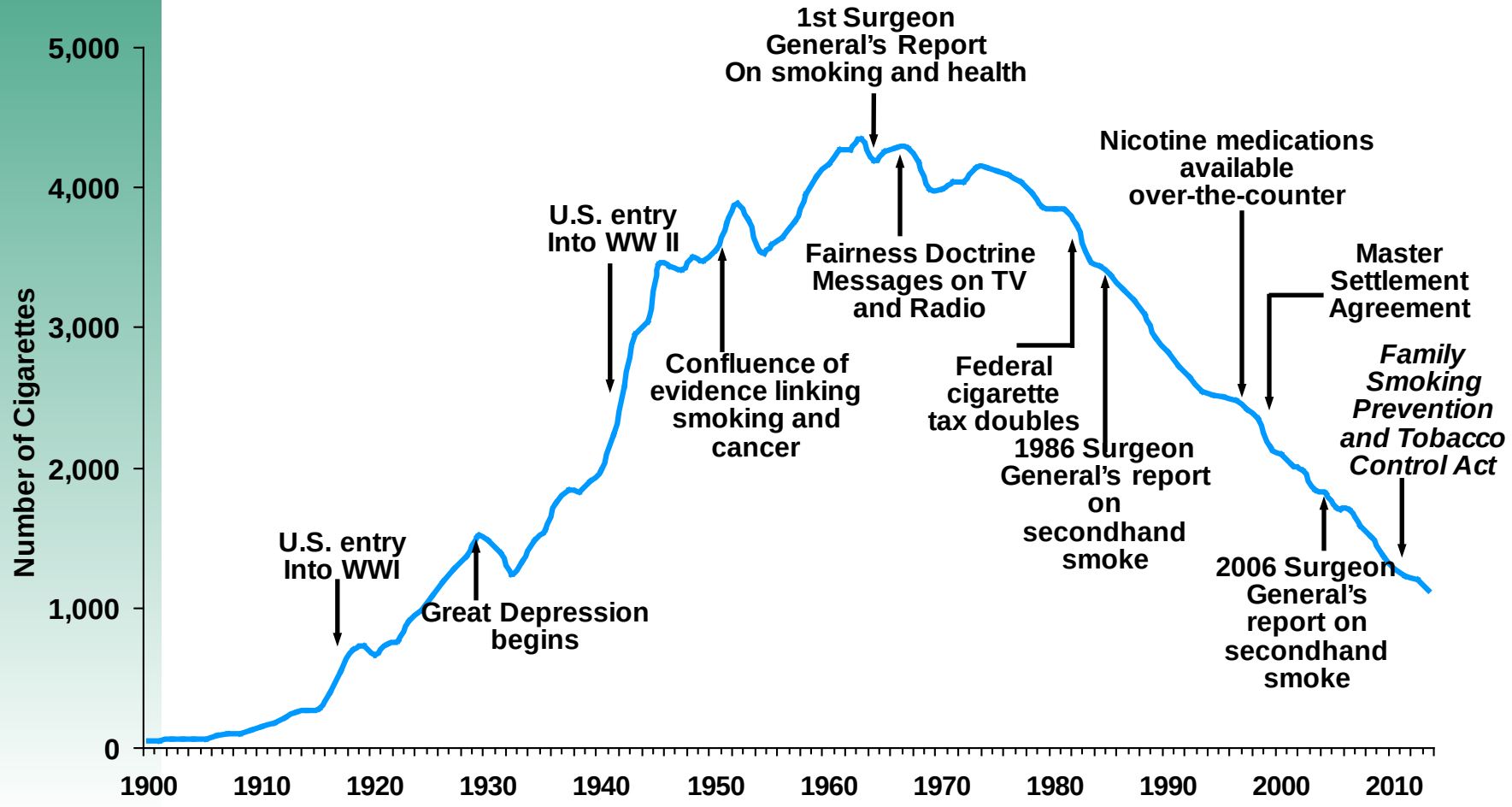
of **children** aged 3 to 11 years were exposed to secondhand smoke in 2009-2012

Data Source: National Health and Nutrition Examination Survey

TARGET **47%** YEAR 2020

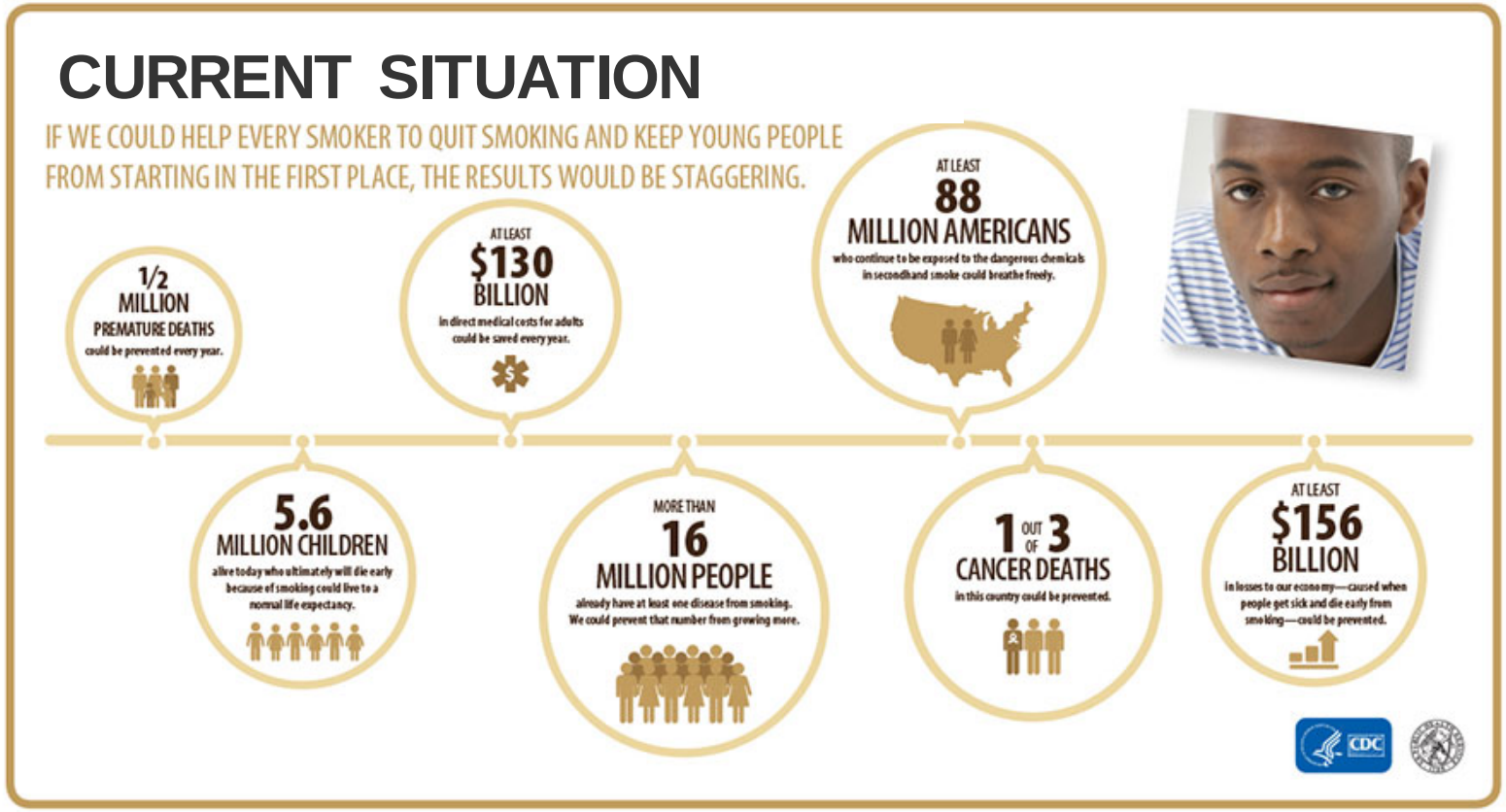
Healthy People 2020

Adult Per Capita Cigarette Consumption and Major Smoking-and-Health Events—United States, 1900-2013



Sources: Adapted from Warner 1985 with permission from Massachusetts Medical Society, ©1985; U.S. Department of Health and Human Services 1989; Creek et al. 1994; U.S. Department of Agriculture 2000; U.S. Census Bureau 2013; U.S. Department of the Treasury 2013.
*Adults ≥18 years of age as reported annually by the Census Bureau.

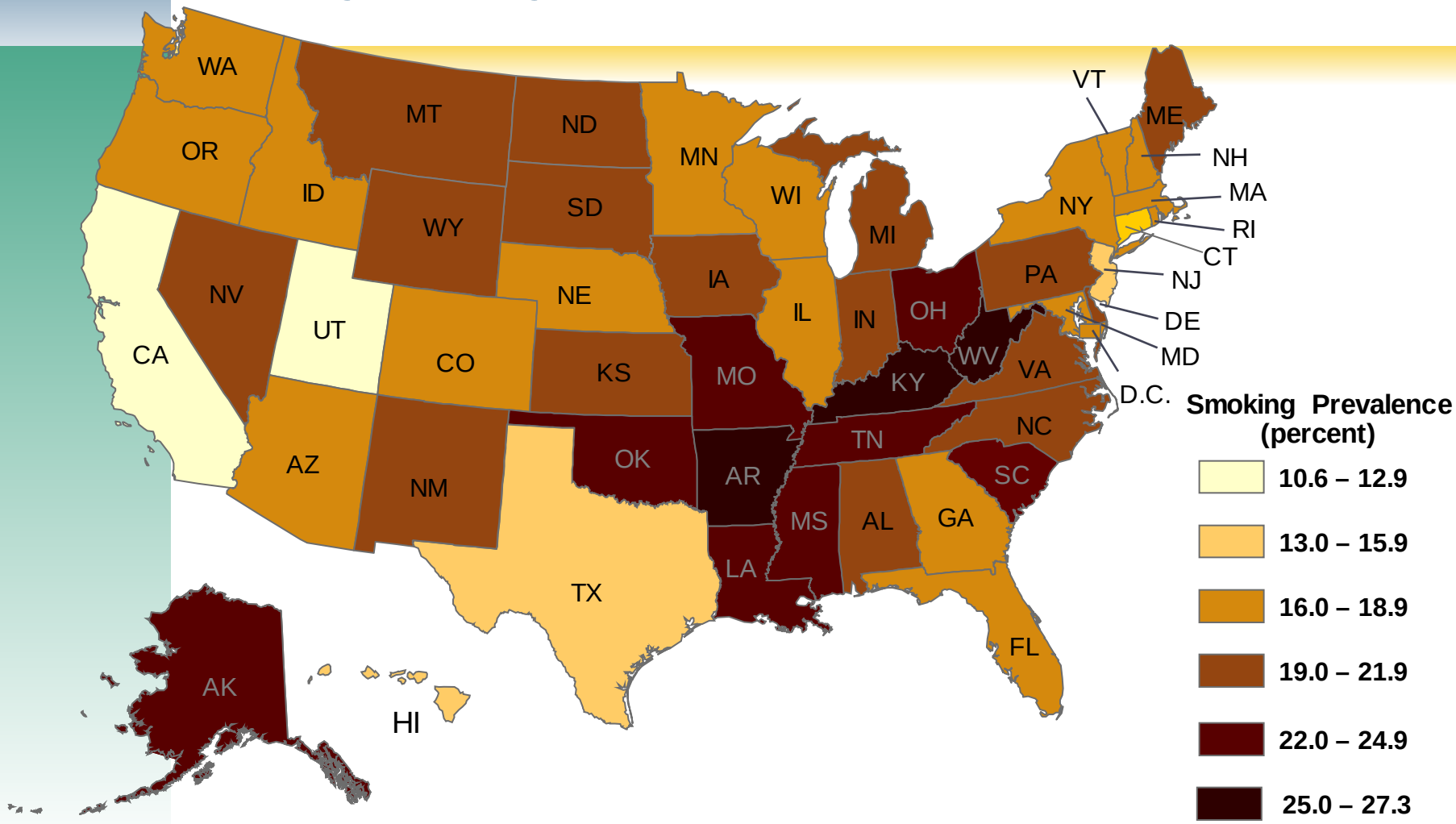
Smoking costs lives and money



Source: The health consequences of smoking – 50 years of progress: a report of the Surgeon General. – Atlanta, GA. : U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health, 2014.

Healthy People 2020

Current cigarette smoking* among adults aged ≥ 18 years, by state—U.S., 2013



* Persons who have smoked at least 100 cigarettes in lifetime and currently report smoking every day or some days.
Source: Behavioral Risk Factor Surveillance System (BRFSS)

Healthy People 2020

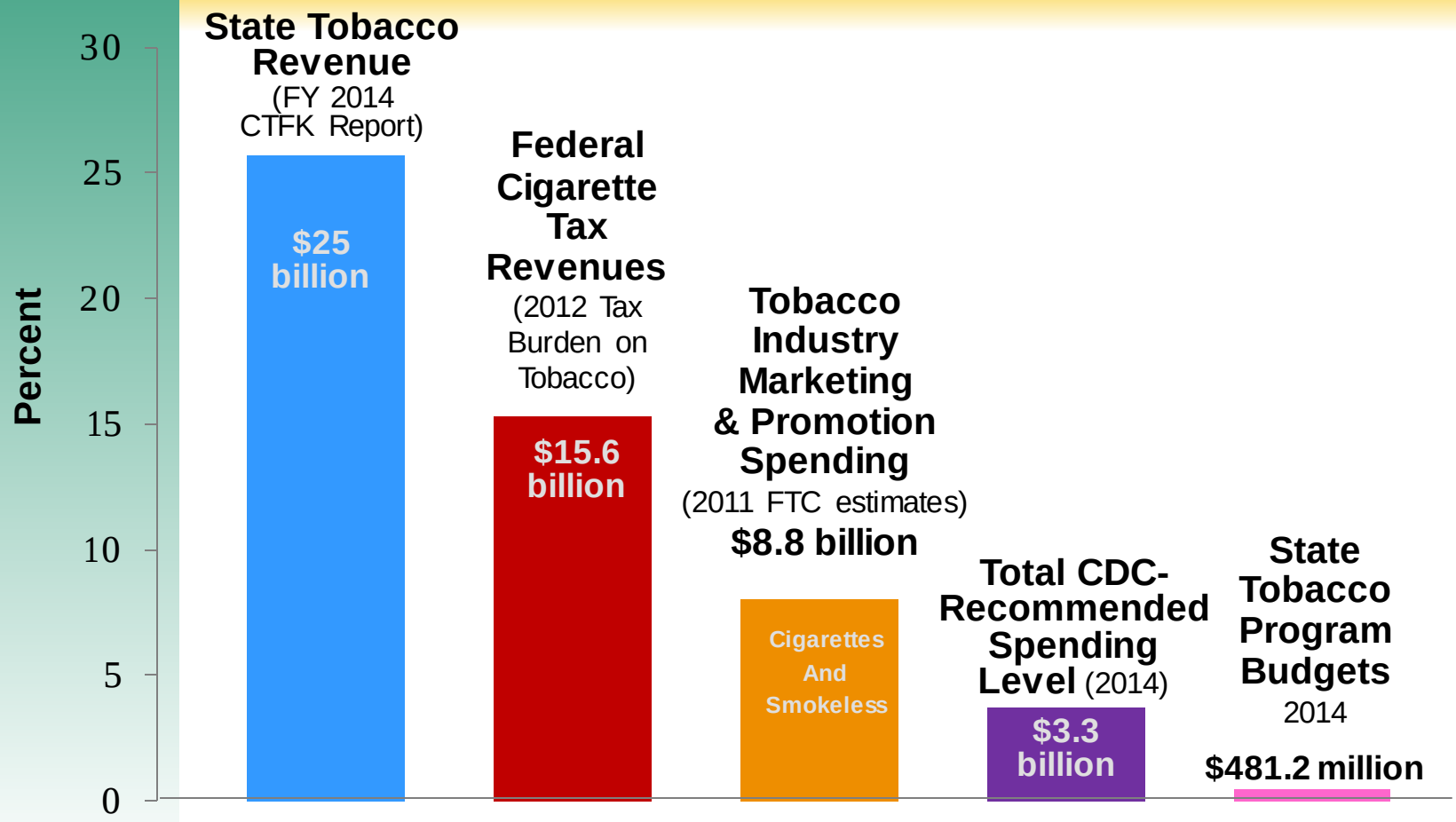
HP2020 TU-1.1 Reduce cigarette smoking by adults

We Know What Works: Evidence-Based Interventions

- Sustained funding of comprehensive programs
- 100% smoke-free policies
- Tobacco price increases
- Hard-hitting media campaigns
- Cessation access

Healthy People 2020

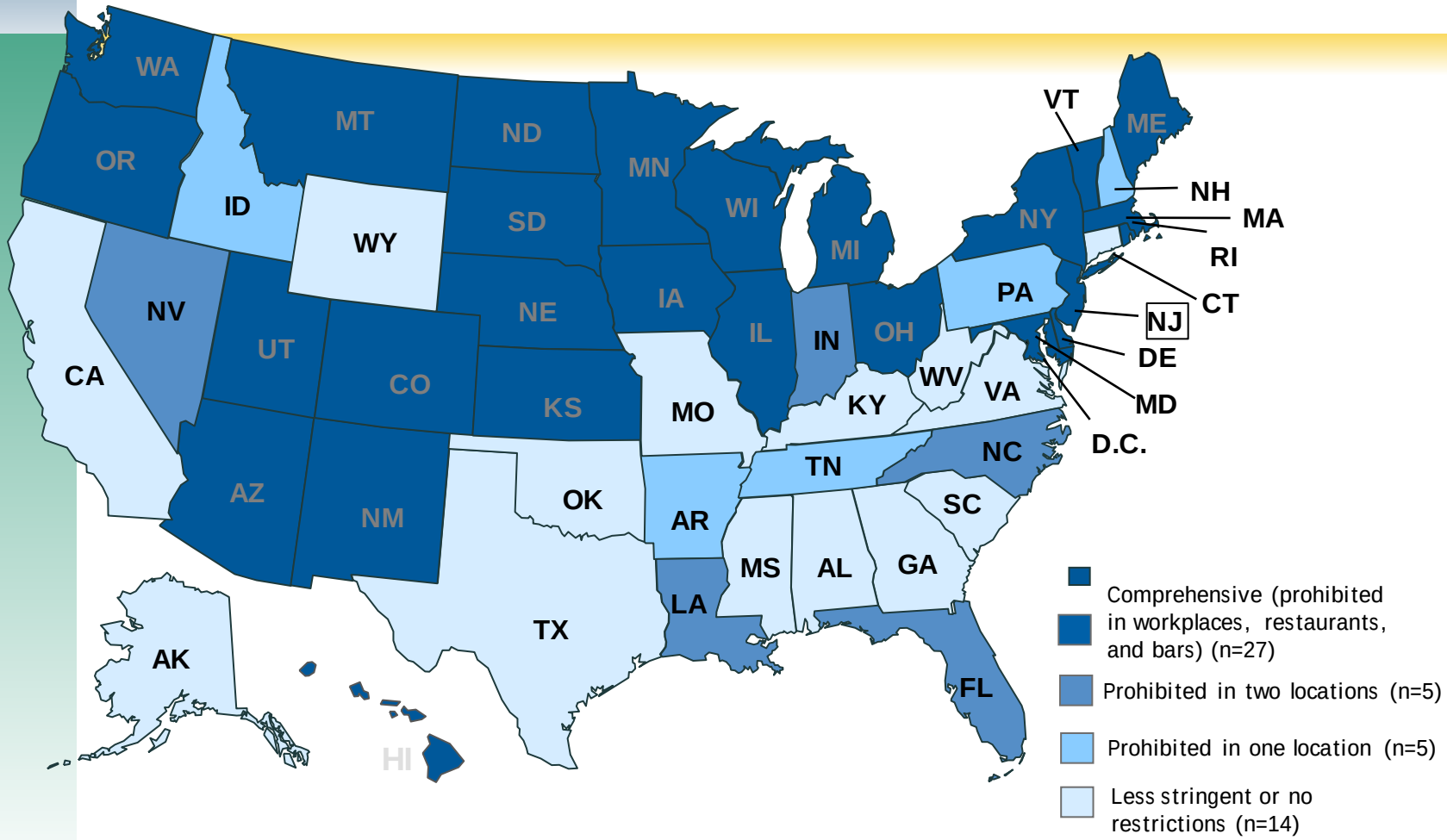
Tobacco Industry is Outspending Prevention Efforts 18:1



Campaign for Tobacco Free Kids, Federal Trade Commission, 2012 Tax Burden on Tobacco Report, CDC's Best Practices for Comprehensive Tobacco Control Programs.

Healthy People 2020

State Smoke-Free Air Laws
Effective September 30, 2014



Centers for Disease Control and Prevention's State Tobacco Activities Tracking and Evaluation (STATE) System. Available at: http://apps.nccd.cdc.gov/statesystem/Default/Default.aspx. Washington, DC is included in states.

HP2020 TU-13.1, 13.3, & 13.4 Establish laws in States, District of Columbia, Territories, and Tribes on smoke-free indoor air that prohibit smoking in Private Worksites, Restaurants, and Bars.

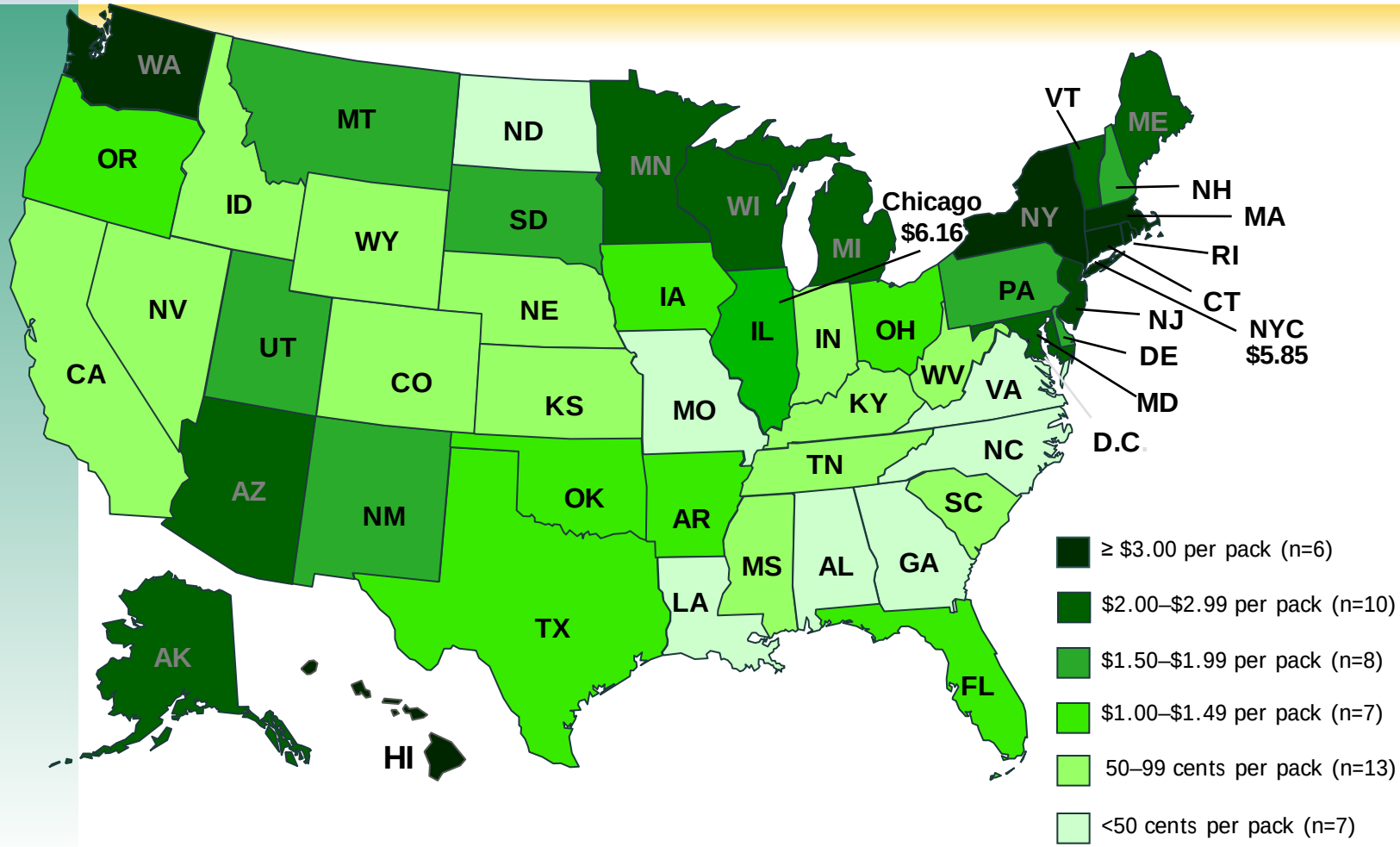
Exposure in Multi-unit Housing and on Campus

- Despite considerable success in reducing exposure of nonsmokers to secondhand smoke; half of the population remains unprotected by comprehensive smoke-free laws
- At least 250 public housing authorities have implemented 100% smoke-free policies, including all those in Maine. *

- As of October 2014 there were 1,478 smoke-free campuses. About 976 (2/3rds) were fully tobacco free**

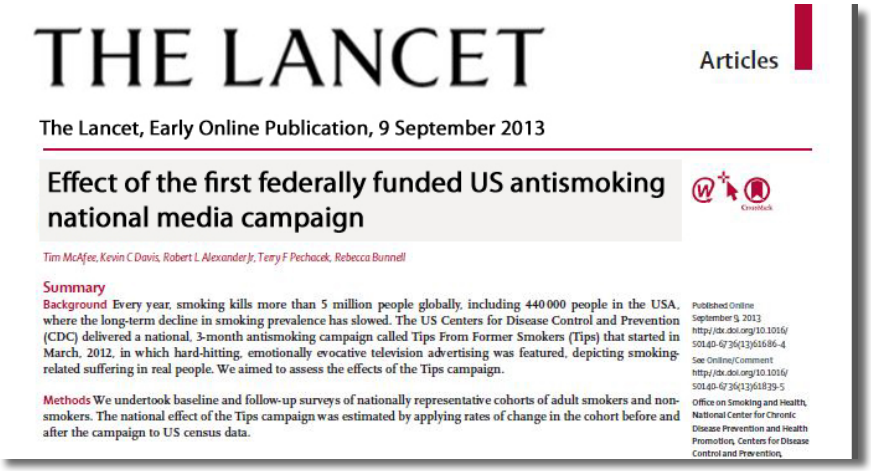
Sources:
*Americans for Nonsmokers' Rights (ANR)
**Tobacco Free College Campus Initiative

State Cigarette Excise Tax Rates
Effective September 30, 2014



Centers for Disease Control and Prevention's State Tobacco Activities Tracking and Evaluation (STATE) System. Available at: http://apps.nccd.cdc.gov/statesystem/Default/Default.aspx. Local taxes from Campaign for Tobacco-Free Kids, December 2013.

Tips From Former Smokers Campaign



THE LANCET

Articles

The Lancet, Early Online Publication, 9 September 2013

Effect of the first federally funded US antismoking national media campaign

Tim McAfee, Kevin C Davis, Robert L Alexander Jr, Terry F Pechacek, Rebecca Bunnell

Summary

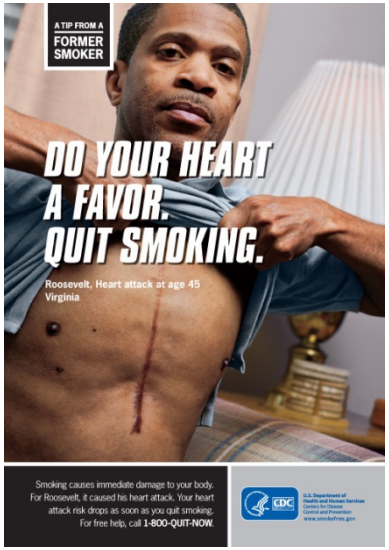
Background Every year, smoking kills more than 5 million people globally, including 440 000 people in the USA, where the long-term decline in smoking prevalence has slowed. The US Centers for Disease Control and Prevention (CDC) delivered a national, 3-month antismoking campaign called Tips From Former Smokers (Tips) that started in March, 2012, in which hard-hitting, emotionally evocative television advertising was featured, depicting smoking-related suffering in real people. We aimed to assess the effects of the Tips campaign.

Methods We undertook baseline and follow-up surveys of nationally representative cohorts of adult smokers and non-smokers. The national effect of the Tips campaign was estimated by applying rates of change in the cohort before and after the campaign to US census data.

Published Online September 9, 2013 http://dx.doi.org/10.1016/S0140-6736(13)61686-4

See Online/Comment http://dx.doi.org/10.1016/S0140-6736(13)61839-5

Office on Smoking and Health, National Center for Chronic Disease Prevention and Health Promotion, Centers for Disease Control and Prevention,



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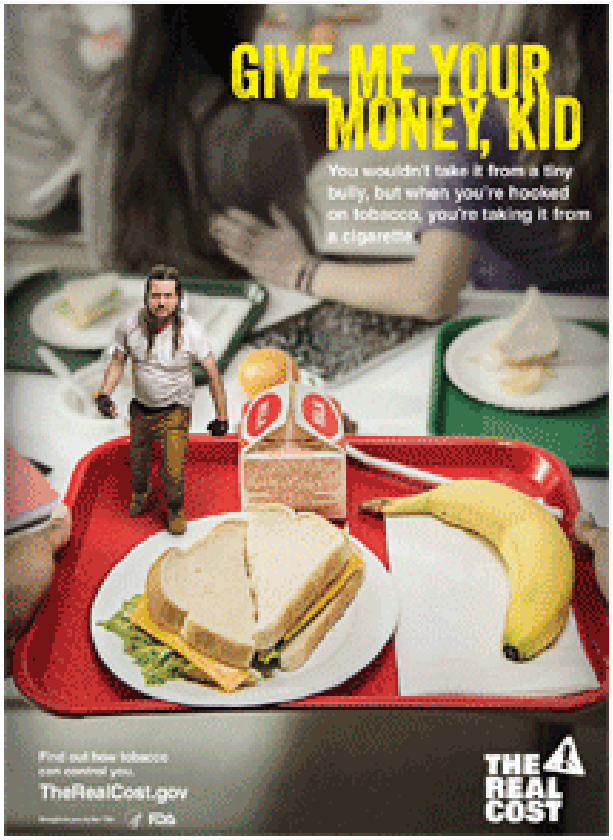
Tips, Truth, The Real Cost

-



TIPS FROM FORMER SMOKERS

Healthy People 2020

New Opportunities to Increase Cessation

- Affordable Care Act

- Health Systems Change

Healthy People 2020

"A defective and unreasonably dangerous product"

MAJOR CONCLUSION

"The burden of death and disease from tobacco use in the United States is overwhelmingly caused by cigarettes and other combusted tobacco products; rapid elimination of their use will dramatically reduce this burden."

- End Game scenarios for the U.S. include:
  - **FDA regulation**
  - **Sales restrictions**

Sources:

The health consequences of smoking – 50 years of progress: a report of the Surgeon General. – Atlanta, GA. : U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health, 2014.

Proctor RN. Why ban the sale of cigarettes? The case for abolition. *Tobacco Control* 2013;22:i27-i30

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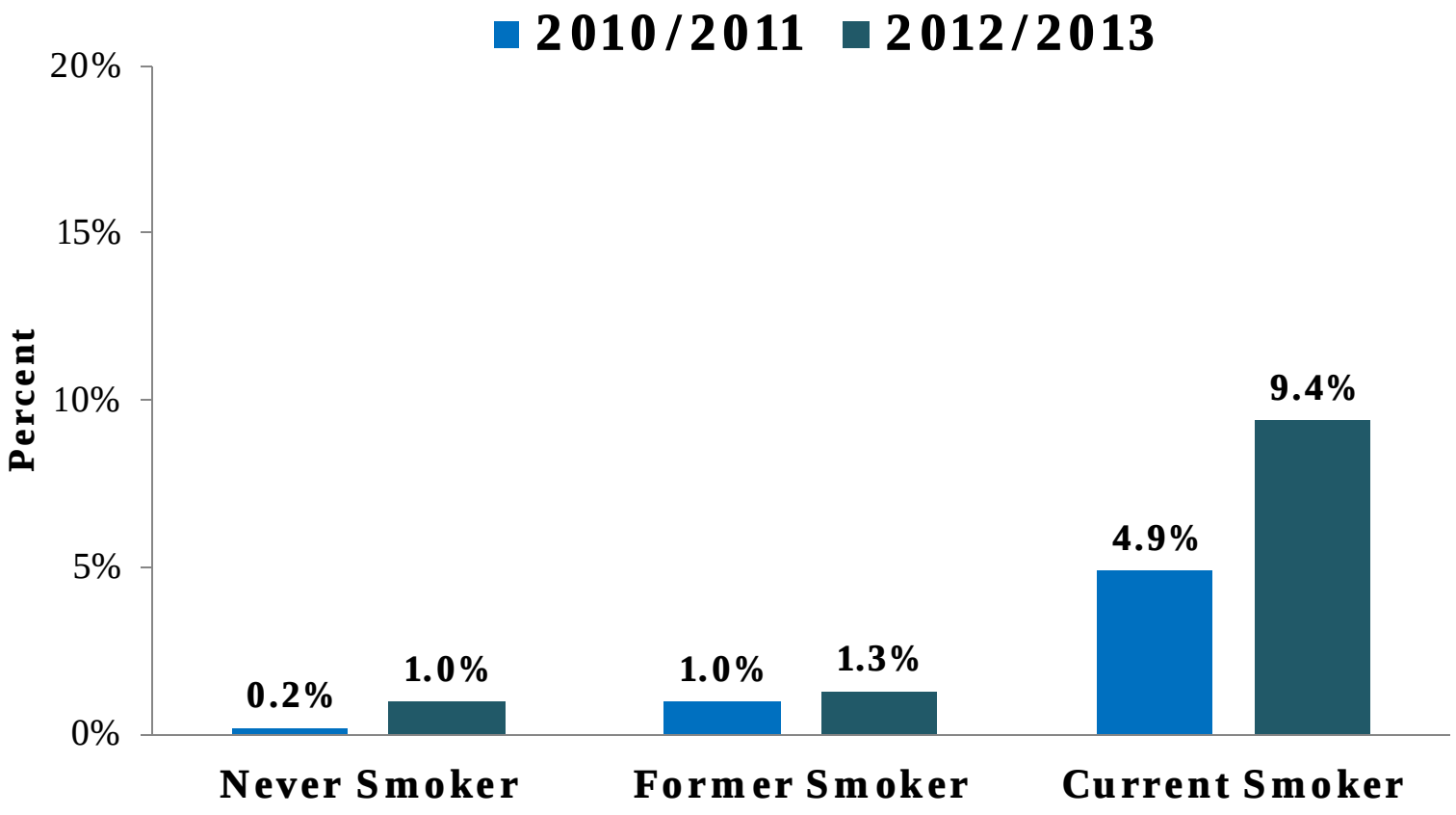
Past 30 day use of e-cigarettes among U.S. adults – HealthStyles, 2010/2011 and 2012/2013



Source: Source: Brian A. King, Roshni Patel, Kimberly Nguyen, and Shanta R. Dube. Trends in Awareness and Use of Electronic Cigarettes among U.S. Adults, 2010-2013 *Nicotine Tob Res ntu191 first published online September 19, 2014 doi:10.1093/ntr/ntu191*

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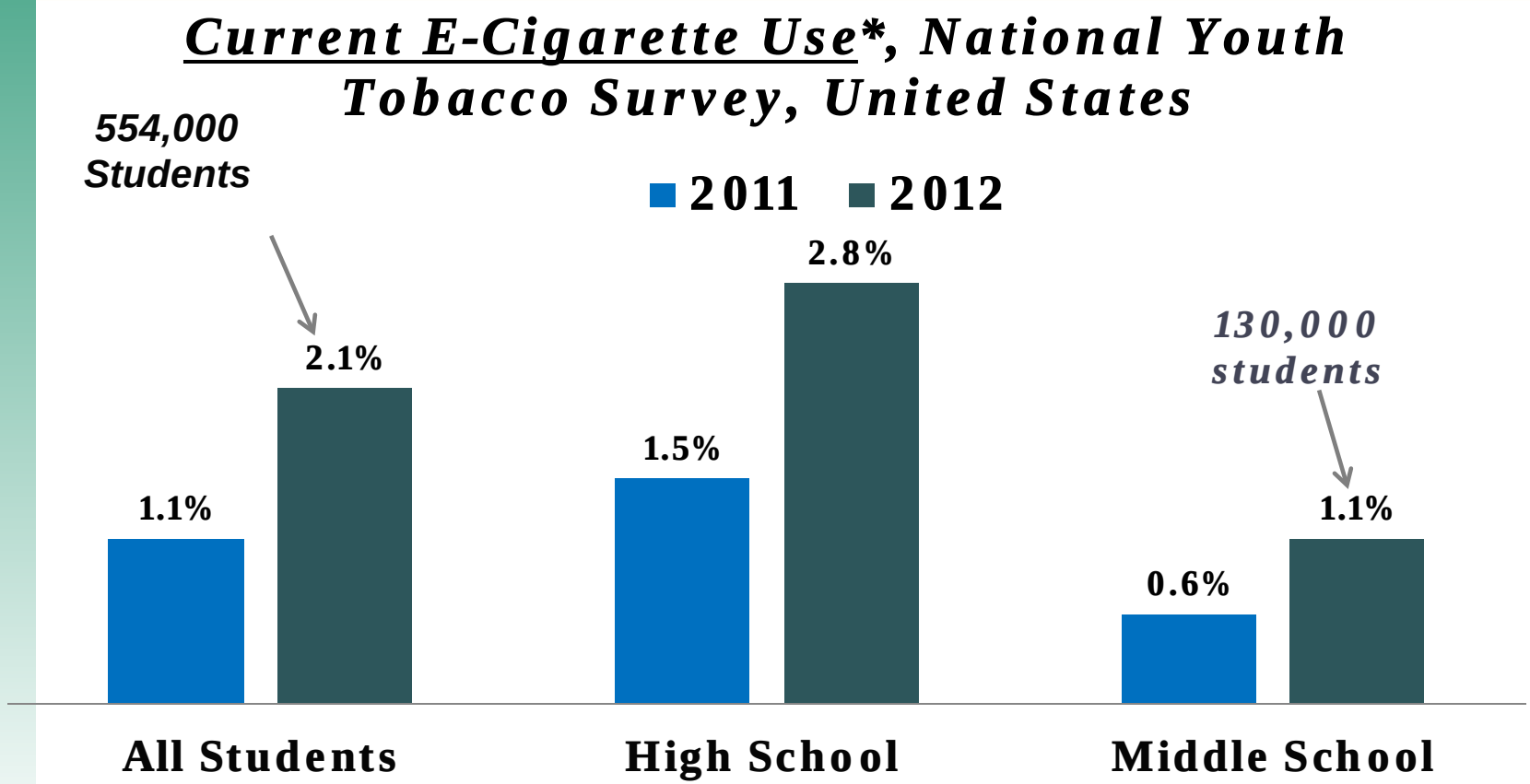
Current e-cigarette use among students more than doubled between 2011 and 2012



* Current use is defined as use on one or more days in the last 30 days

*Centers for Disease Control and Prevention (2013). "Notes from the Field: Electronic Cigarette Use Among Middle and High School Students — United States, 2011–2012." Morbidity and Mortality Weekly Report **62**(35): 729-730.*

Industry Advertising

We Know What Works: Evidence-Based Interventions

- Sustained funding of comprehensive programs
- 100% smoke-free policies
- Tobacco price increases
- Hard-hitting media campaigns
- Cessation access

Healthy People 2020

Live Smoke Free:

Healthier Buildings, Happier Residents, a Smart Investment

December 5, 2014

Kara Skahen MSW, MPP
Program Director

Why Smoke-Free Housing?

- **Minnesotans living in multi-unit housing:**
  - 21.5%
  - 504,648 units (US Census, 2010)
- **Residents of multi-unit housing are disproportionately:**
  - Low-Wage Workers, People of Color, the Elderly, and the Young (under 18).
  - Struggle with poverty, chronic disease, mental illness, and chemical dependency.
  - Exposed to secondhand smoke at high rates.
- **Members of these special populations often have:**
  - Limited housing options, resources to move, and access to health care.
- **Members of these special populations cannot prevent exposure:**
  - Due to secondhand smoke drift, residents cannot 100% control the air in their unit.

Everyone deserves to have a healthy, safe place to call home.

Societal Benefits

- Smoke-Free Housing policies:
  - Protect priority populations from second and thirdhand smoke exposure.
  - Encourage people who smoke to reduce their consumption or quit.
  - Help to reduce cigarette-caused fires.
  - Protect housing investments.
  - Save money for residents, property owners, and taxpayers.
    - Smoke-free subsidized housing would save $521 million a year.

(Centers for Disease Control and Prevention, 2013)

Healthy People 2020

Live Smoke Free directly addresses the following Healthy People 2020 objectives:

- TU-11 Reduce the proportion of nonsmokers exposed to secondhand smoke
  - TU-11.1 Reduce the proportion of children aged 3 to 11 years exposed to secondhand smoke
  - TU-11.2 Reduce the proportion of adolescents aged 12 to 17 years exposed to secondhand smoke
  - TU-11.3 Reduce the proportion of adults aged 18 years and older exposed to secondhand smoke
- TU-14 Increase the proportion of smoke-free homes

The Association for Nonsmokers Minnesota (ANSR)

- Non-profit, member-based organization.
- Located in St. Paul, Minnesota.
- Dedicated to reducing the human and economic costs of tobacco use.
- In 1975, ANSR helped pass the nation's first comprehensive state clean indoor air legislation.

Live Smoke Free Program

- 1990s: Started receiving phone calls from concerned renters.
- Early 2000s:“Initiative for Smoke-free Apartments”
- 2007: Full time funding; “Live Smoke Free”
- Currently:
  - 5 full time staff
- Funding:
  - Grants from
    - Minnesota Department of Health (MDH)
    - Subcontracts from local public health departments
  - ANSR Member Donations & Fundraising Efforts

Program Evolution

2000-2003: Research Phase

- Statewide studies on air movement, legal questions, survey of renters and managers.

2003-2006: Smoke-Free Policy Work Phase I

- Direct policy work begins part time.

2007-2012: Smoke-Free Policy Work Phase II & Technical Assistance

- Direct policy work begins full time.
- Technical assistance to statewide grantees begins.

2011-2012: Communities Putting Prevention to Work (CPPW)

- Recipient of a CPPW Mentoring Supplement from the MDH to mentor U.S. communities

2012-Current: Smoke-Free Policy Work Phase III & Technical Assistance

- Direct policy work continues, emphasis on affordable and supportive housing.
- Technical Assistance to statewide grantees.

Policy Approach

- Voluntary policy approach
- Beginning to adopt alternative policy options such as housing tax credits
- Work on all housing types: subsidized, market rate, public, private, common interest communities, etc.
- Partner with a number of public and private groups statewide
  - Public Health Law Center at William Mitchell College of Law

What Makes for a Good Policy?

- Written in a lease or house rules.
- Defines “smoke free” and what areas of the property are covered.
- Consequences for violations are clearly defined; violations may result in eviction.
- No grandfathering.
- 100% of indoors are covered (outdoor areas are a plus!)

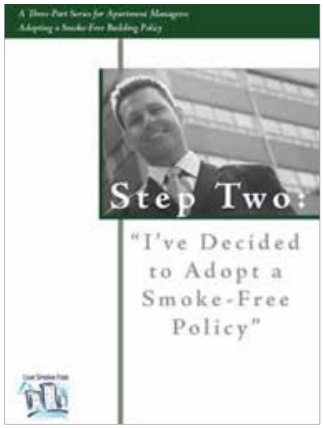
Scope of Work: Direct Policy Assistance

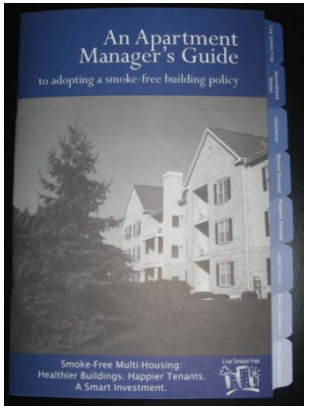
- Policy adoption support to Minnesota-based property owners, managers, developers, and residents.

- Resources Live Smoke Free can offer:
  - Consultations.
  - Promotions (Press Releases, Signage, Listing in a Statewide Housing Directory).
  - Implementation Tools (Surveys, Notification letters, Lease addendums, Translated documents).
  - Educational Resources (Tailored for Management, Staff, and Residents).
  - Presentations to Staff and Residents.
  - Cessation Referrals.

Resources for Property Managers

3-Part “How To” Module Series



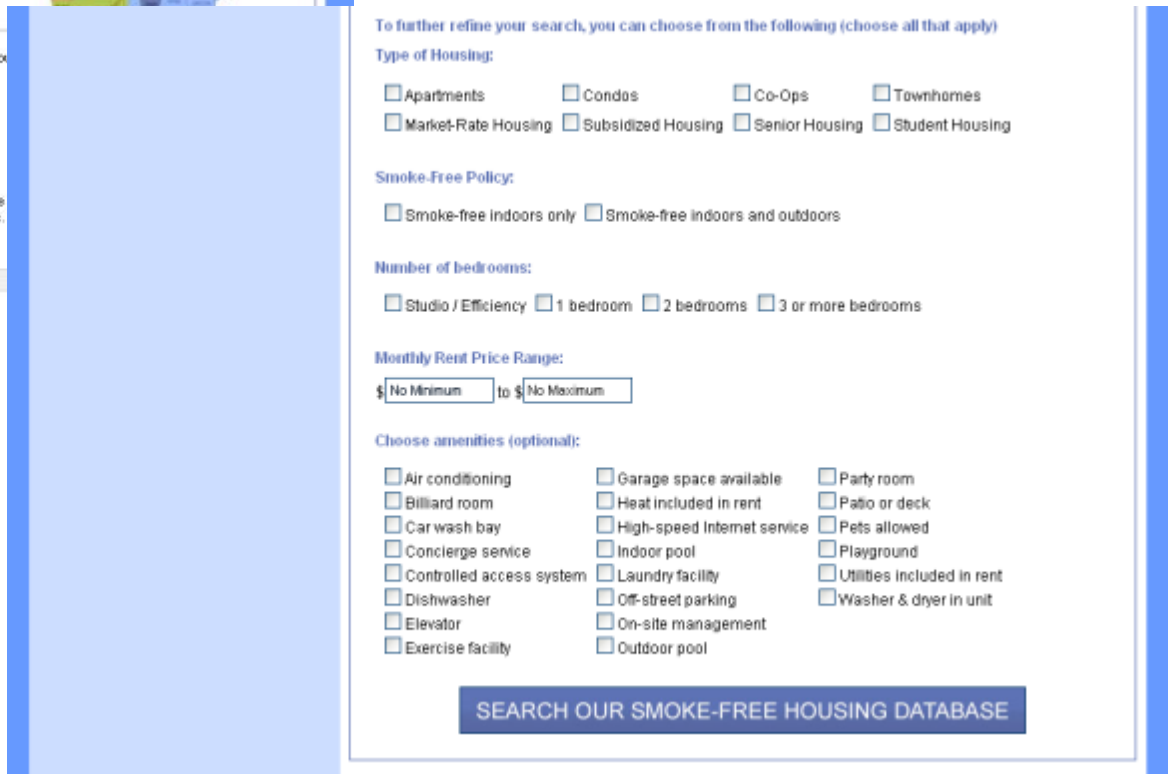


Educational Resources and Trinkets

Smoke-Free Signage

It’s all FREE!

Minnesota's Statewide Smoke-Free Housing Directory



Scope of Work: Training & Technical Assistance

Statewide and National Technical Assistance

Resources Live Smoke Free can offer:

- Individual consultations (including site visits), strategy development, and educational materials.
- Sample Implementation Tools
  - Smoke-Free lease addendums in multiple languages.
- Training Resources for Staff
- Educational Resources to provide to Property Managers

Photo Credit: Kelly Corbin, Olmsted County Public Health Services

Stages of Smoke-Free Multi-Housing Program Development

Phase 1: Understanding the Need for Smoke-Free Multi-Unit Housing

Stages of Smoke-Free Multi-Unit Housing Program Development

Continued...

The Case for Smoke-Free MUH	Getting to Know the MUH Industry	Building Your Smoke-Free MUH Program	Understanding Legal Issues
The importance of adopting smoke-free MUH policies	Assessing the MUH stock and learning what's important to the industry	Creating goals, materials, and procedures to sustain a program	Learning the local, state, and federal laws pertaining to MUH

Phase 2: Working Toward Smoke-Free Multi-Unit Housing Policy Adoption

...Continued

Stages of Smoke-Free Multi-Unit Housing Program Development

Strategies to Reach the Housing Industry	Working with MUH to Adopt a Policy	Providing Cessation in Smoke-Free Buildings	Working with Renters Exposed to Smoke	Program Sustainability
Getting your message to landlords	The policy adoption process	Helping current residents make the transition to a smoke-free environment	Empowering renters suffering from secondhand smoke drift	Partnering with other smoke-free MUH programs

Outcomes

- Smoke-Free Apartments in Minnesota:
  - 2007: 50 properties
  - 2014: 1,500+ properties
  - Over half of Public Housing Authorities
- Smoke-Free Apartment in Minnesota Since 2011:
  - 523 new or expanded policies (1086 buildings and 35,300 units)
  - Subsidized properties
    - 171 new or expanded policies (161 buildings, 10,930 units)
  - Senior properties
    - 104 new or expanded policies (34 buildings and 6,373 units)
- Thousands of Minnesotans protected from secondhand smoke
- Exposure to Secondhand Smoke at Home:
  - 2003: 16.9%, 2007: 12.0%, 2010: 9.5% (Minnesota Adult Tobacco Survey, 2010)

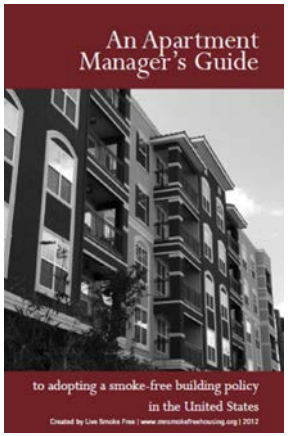
Lessons Learned

- Communicate and partner with other local grants.
- Track your progress, keep in touch with managers that have already gone smoke free.
- No need to reinvent the wheel.
- Utilize appropriate messaging.
- Maintain a strong web presence.
- Have fun!

Resources for Public Health Professionals

"Developing a Smoke-Free Multi-Unit Housing Program" Training Manual

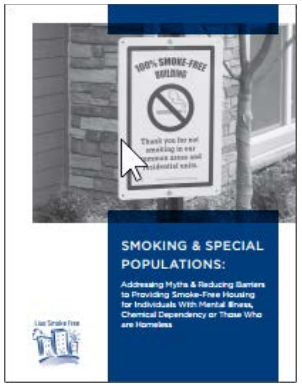
"An Apartment Manager's Guide to Adopting a Smoke-Free Building Policy in the United States" Booklet for Property Managers



Resources for Public Health Professionals

"Smoking & Special Populations" Booklet

Addressing Myths & Reducing Barriers to Providing Smoke-Free Housing for Individuals with Mental Illness, Chemical Dependency or Those who are Homeless



Global Directory of Smoke-Free Multi-Housing Programs:

http://www.mnsmokefreehousing.org/organizations/Resources

Model Smoke Free Lease Addendum

- Available in English, Spanish, Hmong, Oromo, Somali, Vietnamese

http://www.mnsmokefreehousing.org/materials

Webinar Series

Based on the Smoke-Free Multi-Unit Housing Program Continuum:

- *The Case for Smoke-Free Housing*
- *Getting to Know the Multi-Housing Industry*
- *Building Your Smoke-Free Housing Program*
- *Understanding Legal Issues*
- *Strategies to Reach the Housing Industry*
- *Working with Property Owners/Managers to Adopt a Smoke-Free Policy*
- *Providing Cessation in Smoke-Free Buildings*
- *Working with Renters Exposed to Secondhand Smoke*
- *Program Sustainability*

View archives and recorded webinars at:
http://www.mnsmokefreehousing.org/organizations/archivedweb

Contact Information

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Live Smoke Free: Smoke-Free Multi-Housing

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Phone: 651.646.3005 x301
Fax: 651-646-0142
www.mnsmokefreehousing.org

Roundtable Discussion

Please take a moment to fill out our brief survey

Healthy People 2020

Office of Disease Prevention and Health Promotion

FDA'S PUBLIC HEALTH ACTIONS TO DATE

- Prohibited
  - Sales to people younger than 18; requires proof of age for purchase if < 27 years of age
  - Sales of cigarette packs with less than 20 cigarettes
  - Distribution of free samples of cigarettes; restricts the distribution of free samples of smokeless tobacco products
  - Brand name sponsorship of athletic, musical, or other social events, teams
  - Hats and tee shirts, etc., with brand names or logos
  - Sales in vending machines, self-service displays except in adult-only facilities
- Enforced the ban on cigarettes not have characterizing flavors (except tobacco or menthol).
- Prohibited misleading descriptors (light, low, mild) on regulated tobacco products

FDA'S PUBLIC HEALTH ACTIONS TO DATE

- Required larger smokeless tobacco warnings on packs and ads
- Required graphic health warnings on cigarettes (overturned by the courts)
- Ongoing monitoring of online websites for violation of Federal tobacco promotion and advertising restrictions such as marketing or selling flavored cigarettes, having modified risk claims, or selling to a minor.
- Conducted over 356,000 retailer inspections covering 54 states and territories
- Issued more than 20,300 warning letters for violations
- Issued more than 2,100 civil money penalties for violations
- Educated at risk teens on the dangers of smoking (the "Real Cost" campaign)

Healthy People 2020 Stories from the Field

A library of stories highlighting ways organizations across the country are implementing Healthy People 2020

Healthy People in Action

http://www.healthypeople.gov/2020/healthy-people-in-action/Stories-from-the-Field

Stay Connected

Join the Healthy People Listserv & Consortium

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Email	hp2020@hhs.gov
Twitter	@gohealthypeople
LinkedIn	Healthy People 2020
YouTube	ODPHP (search “healthy people”)

In This Section
- Development and Framework
- Who's Leading the Leading Health Indicators?
- LHI Progress Update
- LHI Infographic Gallery
- 2020 LHI Topics
  - Access to Health Services
  - Clinical Preventive Services
  - Environmental Quality
  - Injury and Violence
  - Maternal, Infant, and Child Health
  - Mental Health
  - Nutrition, Physical Activity, and Obesity
  - Oral Health
  - Reproductive and Sexual

LHI Infographic Gallery

Target has been exceeded.

Featured Infographic:

Injury and Violence

November 2014 ►

The Leading Health Indicators are high-priority health issues in the United States that serve as measures of the Nation's health. Each month healthypeople.gov displays one or more infographics to visually communicate the existing health disparities for the featured Leading Health Indicator Topic.

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Healthy People 2020 Progress Review Webinar

Please join us as we review select Healthy People 2020 objectives in the **Social Determinants of Health** and **Lesbian, Gay, Bisexual and Transgender Health** topic areas.

February 2015

Hear from a community-based organization that is working to improve outcomes in the community.

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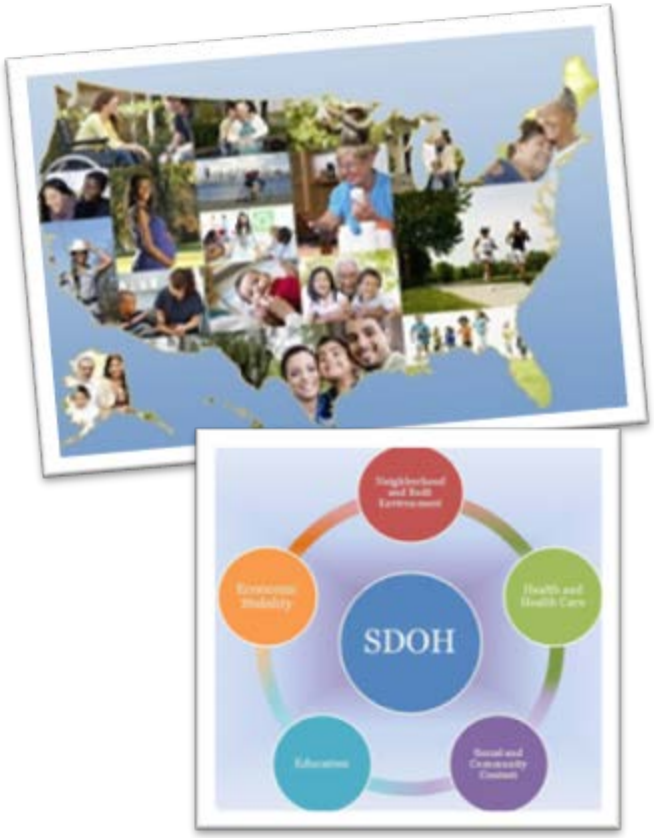

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