# Healthy People Data: Transitioning from 2010 to 2020

LCDR David T. Huang, PhD, MPH, CPH

Health Promotion Statistics Branch Office of Analysis and Epidemiology National Center for Health Statistics

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### Role of the National Center for Health Statistics

- Serves as statistical advisor to HHS, 42 Healthy People Topic Area Workgroups, and Federal Interagency Workgroup
  - Healthy People, National Prevention Strategy, etc.
- Maintains comprehensive database of all Healthy People objective data
- Coordinates monitoring of Healthy People goals/objectives
- Develops research on measuring the overarching goals of Healthy People
- Develops analytic and graphical presentations to track HP goals and objectives, including Progress Reviews



### **HP2010 Focus Areas**

- 1. Access to Quality Health Services
- 2. Arthritis, Osteoporosis, and Chronic Back Conditions
- 3. Cancer
- 4. Chronic Kidney Disease
- 5. Diabetes
- 6. Disability and Secondary Conditions
- 7. Educational and Community-Based Programs
- 8. Environmental Health
- 9. Family Planning
- 10. Food Safety
- 11. Health Communication
- 12. Heart Disease and Stroke
- 13. HIV
- 14. Immunization and Infectious Diseases

- 15. Injury and Violence Prevention
- 16. Maternal, Infant, and Child Health
- 17. Medical Product Safety
- 18. Mental Health and Mental Disorders
- 19. Nutrition and Overweight
- 20. Occupational Safety and Health
- 21. Oral Health
- 22. Physical Activity and Fitness
- 23. Public Health Infrastructure
- 24. Respiratory Disease
- 25. Sexually Transmitted Diseases
- 26. Substance Abuse
- 27. Tobacco Use
- 28. Vision and Hearing

SOURCE: Healthy People 2010 Final Review.

# Leading Health Indicators (LHIs)

### **Physical Activity**

Moderate/vigorous physical activity among adults Vigorous physical activity among adolescents

### **Overweight and Obesity**

Obesity in adults
Obesity in children and adolescents

#### **Tobacco Use**

Cigarette smoking among adults
Cigarette smoking among adolescents

#### **Substance Abuse**

Adolescents not using alcohol or illicit drugs Adults using illicit drugs Adult binge drinking

### **Responsible Sexual Behavior**

Condom use by sexually active unmarried persons Adolescent sexual behavior

#### **Mental Health**

Suicides
Treatment of adults with depression

### **Injury and Violence**

Deaths from motor vehicle crashes Homicides

#### **Environmental Quality**

Exposure to ozone Children's exposure to tobacco smoke at home Nonsmoker exposure to tobacco smoke

#### **Immunization**

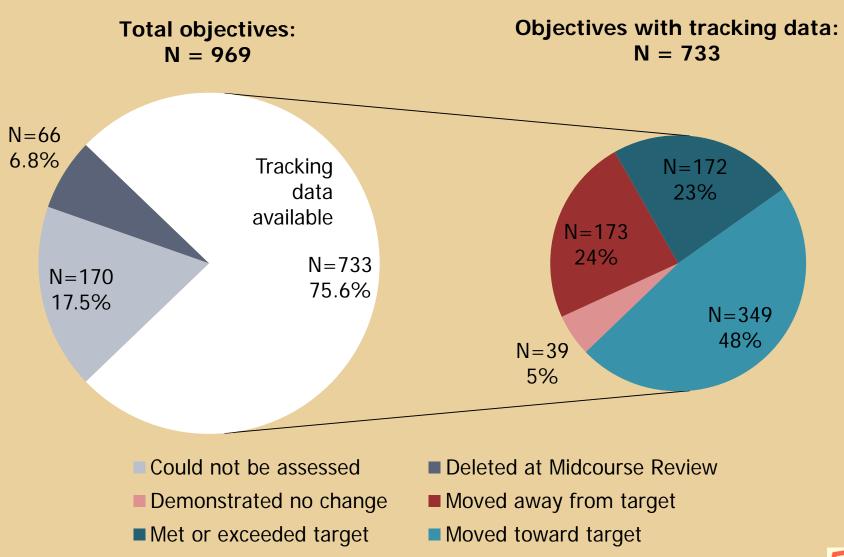
Fully immunized young children
Influenza & pneumonia vaccination of older adults

#### **Access to Health Care**

Persons with health insurance Persons with a source of ongoing care Hospitalizations for pediatric asthma Early prenatal care

SOURCE: Healthy People 2010 Final Review.

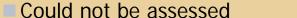
## **Objective status at Final Review**



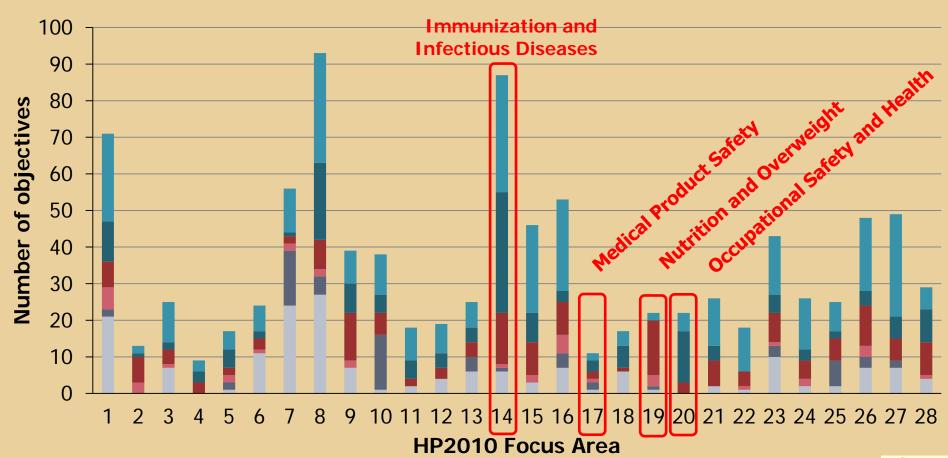


# Progress at Final Review by Focus Area

Total objectives: N = 696



- Deleted at Midcourse Review
- Demonstrated no change
- Moved away from target
- Met or exceeded target
- Moved toward target



SOURCE: Healthy People 2010 Final Review.

# 'Progress Chart' excerpt for LHIs

LEGE	ND Moved away from target <sup>1</sup>	Moved toward	target	M	let or exceed	ed targe	et	
	Objective	Percent of targeted change achieved <sup>2</sup> 0 25 50 75 100	2010 Target	Baseline (Year)	Final (Year)	Differ-	Baseline vs. F Statistically Significant <sup>4</sup>	Percent
	Physical Activity							
22-2.	Regular physical activity—Moderate or vigorous (age adjusted, 18+ years)	0.0%	50%	32% (1997)	32% (2008)	0	No	0.0%
22-7.	Vigorous physical activity in students (grades 9–12)	15.0%	85%	65% (1999)	68% (2009)	3	No	4.6%
	Overweight and Obesity	'						
19-2.	Obesity in adults (age adjusted, 20+ years)		15%	23% (1988–94)	34% (2005–08)	11	Yes	47.8%
19-3c.	Obesity in children and adolescents (6–19 years)		5%	11% (1988–94)	18% (2005–08)	7	Yes	63.6%
	Tobacco Use							
27-1a.	Cigarette use by adults (age adjusted, 18+ years)	25.0%	12%	24% (1998)	21% (2008)	-3	Yes	-12.5%
27-2b.	Cigarette use in past month by students (grades 9–12)	84.2%	16%	35% (1999)	19% (2009)	-16	Yes	-45.7%



# 'Progress Chart' excerpt for LHIs (cont.)

	Injury and Violence							
15-15a.	Deaths from motor vehicle crashes (age adjusted, per 100,000 population)	13.4%	8.0	14.7 (1999)	13.8 (2007)	-0.9	Yes	-6.1%
15-32.	Homicides (age adjusted, per 100,000 population)		2.8	6.0 (1999)	6.1 (2007)	0.1	No	1.7%
*	Environmental Quality							
8-1a.	Percent of persons exposed to ozone	16.3%	0%	43% (1997)	36% (2010)	-7	Not tested	-16.3%
27-9.	Exposure to tobacco smoke at home among children (≤6 years)*	111.8%	10%	27% (1994)	8% (2005)	-19	Yes	-70.4%
27-10.	Exposure to environmental tobacco smoke among nonsmokers (age adjusted, 4+ years)	153.6%	56%	84% (1988–94)	41% (2005–08)	-43	Yes	-51.2%
	Immunization							
14-24a.	Fully immunized young children 19–35 months	71.4%	80%	73% (1998)	78% (2008)	5	Yes	6.8%
14-29.	Vaccination of noninstitutionalized high- risk older adults (age adjusted, 65+ years)							)
	a. Influenza vaccine in past 12 months	11.5%	90%	64% (1998)	67% (2008)	3	Yes	4.7%
	b. Pneumococcal vaccine ever received	31.8%	90%	46% (1998)	60% (2008)	14	Yes	30.4%

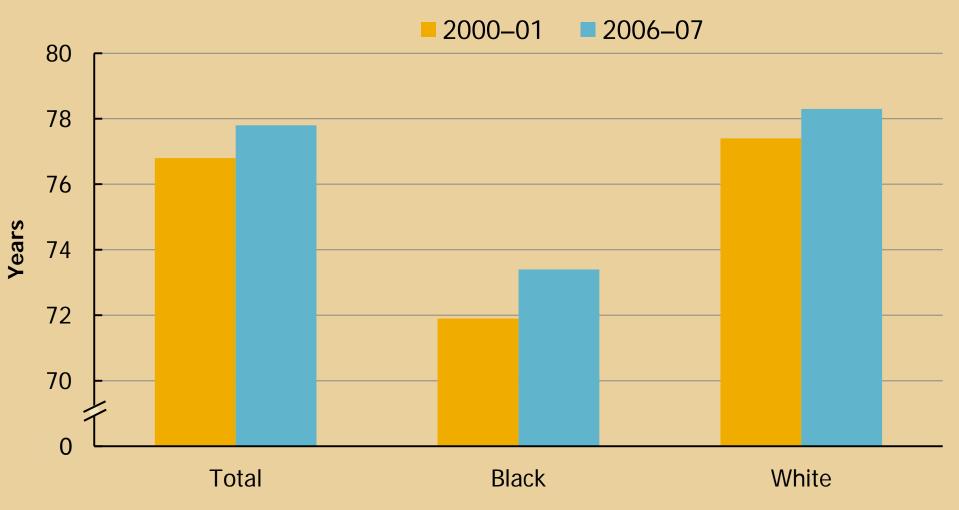
SOURCE: Healthy People 2010 Final Review.



# Two overarching goals: Goal 1

- Goal 1: Increase the quality and years of healthy life
- Goal 2: Eliminate health disparities across
  - Race and ethnicity
  - Sex
  - Educational attainment
  - Income
  - Geographic location
  - Disability status
  - Sexual orientation

# Healthy life expectancy at birth

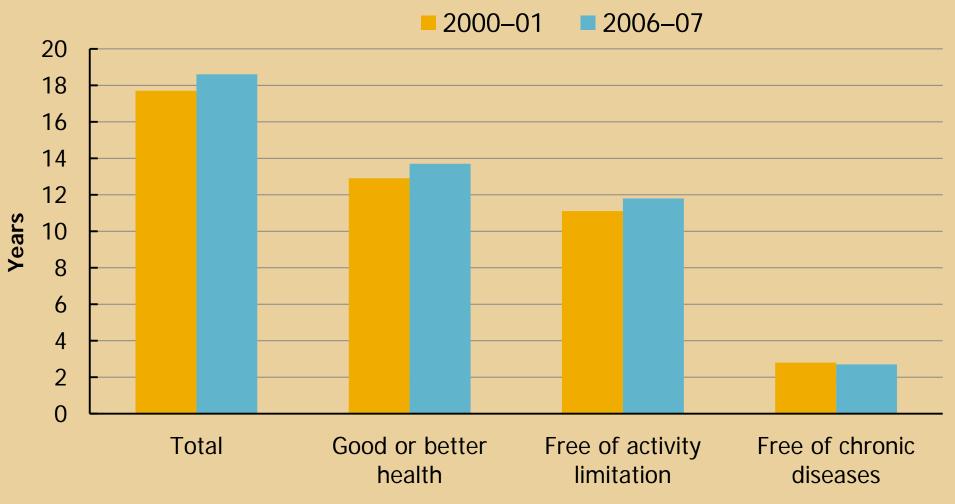


NOTES: Measures of healthy life expectancy combine life expectancy with a measure of health status. Life expectancy is decremented by some aspect of health on a factor between 0 and 1. For the data shown here, health status is assessed by the respondent.

SOURCES: National Health Interview Survey (NHIS), CDC, NCHS; National Vital Statistics System (NVSS), CDC, NCHS.



# Healthy life expectancy at age 65



NOTES: Measures of healthy life expectancy combine life expectancy with a measure of health status. Life expectancy is decremented by some aspect of health on a factor between 0 and 1. For the data shown here, health status is assessed by the respondent.

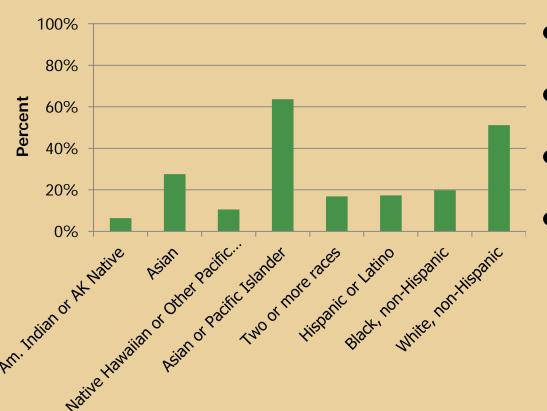


## Two overarching goals: Goal 2

- Goal 1: Increase the quality and years of healthy life
- Goal 2: Eliminate health disparities across
  - Race and ethnicity
  - Sex
  - Educational attainment
  - Income
  - Geographic location
  - Disability status
  - Sexual orientation

# Disparities by race and ethnicity

Percent of objectives in which population group had the "best" rate:



- Non-Hispanic white: 51%
- Non-Hispanic black: 20%
- Hispanic or Latino: 17%
- American Indian or Alaska Native: 6%



# Changes in disparities over the decade

- No significant change in health disparities by race and ethnicity for 117 (69%) of 169 objectives
- Of the 52 objectives with significant changes in disparities:
  - 27 showed a decrease of 10 percentage points or more
  - 25 showed an increase of 10 percentage points or more

# Key Final Review takeaway messages

- 1. Significant progress toward achieving Healthy People 2010 objectives has been made over the decade.
- 2. Health disparities persist across the U.S. population.
- 3. Obesity remains an important challenge to monitor closely.
- 4. Data must be a priority.



# HP2010 Leading Health Indicators (LHIs)

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### **Responsible Sexual Behavior**

Condom use by sexually active unmarried persons Adolescent sexual behavior

#### **Mental Health**

Suicides
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#### **Injury and Violence**

Deaths from motor vehicle crashes Homicides

#### **Environmental Quality**

Exposure to ozone Children's exposure to tobacco smoke at home Nonsmoker exposure to tobacco smoke

#### **Immunization**

Fully immunized young children
Influenza & pneumonia vaccination of older adults

#### **Access to Health Care**

Persons with health insurance Persons with a source of ongoing care Hospitalizations for pediatric asthma Early prenatal care

## HP2020 Leading Health Indicators (LHIs)

#### **Access to Health Services**

Persons with health insurance

Persons with a usual primary care provider

#### **Clinical Preventive Services**

Colorectal cancer screening

Hypertension under control

Poor glycemic control

Fully immunized young children

#### **Environmental Quality**

Air quality index

Children's exposure to tobacco smoke at home

#### **Injury and Violence**

Fatal injuries

**Homicides** 

#### Maternal, Infant, and Child Health

Infant deaths

Preterm births

#### **Mental Health**

**Suicides** 

Adolescents who experience Major Depressive

Episode (MDE)

# Nutrition, Physical Activity, and Obesity

Physical activity / muscle strengthening among adults

Obesity in adults

Obesity in children and adolescents

Total vegetable intake

#### **Oral Health**

Oral health system use

#### **Reproductive and Sexual Health**

Female reproductive health service use

HIV serostatus knowledge

#### **Social Determinants**

Graduation with a regular diploma 4 years after 9<sup>th</sup> grade

#### **Substance Abuse**

Adolescents using alcohol or illicit drugs Adult binge drinking

#### **Tobacco**

Cigarette smoking among adults

Cigarette smoking among adolescents

# **HP2010 Population Template**

Race and ethnicity

**Optional** 

Sex

Age

**Education level** 

Less than high school High school graduate At least some college **Geographic location** 

Urban/metropolitan Rural/non-metropolitan

OR

Family income level

Poor Near poor Middle/high income **Disability status** 

Persons with disabilities Persons without disabilities

# **HP2020 Population Template**

#### Race and ethnicity

Age

Sex

#### **Education level**

Less than high school High school graduate At least some college Associates degree 4 year college degree Advanced degree

# Family income level (% Federal Poverty Limit)

<100

100-199

200-399

400-599

600 +

#### Family type

Single
Married couple or partners
Two parent family with children
Single parent with children
Other

#### **Country of birth**

US Outside US

#### **Disability status**

Persons with disabilities
Persons without disabilities

#### Geographic location

Metropolitan
Non-metropolitan

#### **Health insurance status**

Insured
Any private
Public only

Uninsured

#### **Select Populations**

Sexual orientation
People with chronic
conditions
People in nursing homes
People in active military
service
People in prisons
Marital status
Veteran status
Obesity status

# **Progress**

	HP2010	HP2020
Targets	All objectives have targets.	Informational objectives and Foundation Health Measures do not have targets.
Assessment	<ul> <li>2 rounds of progress reviews (in-person)</li> <li>Midcourse Review (book)</li> <li>Final Review (book + web)</li> </ul>	<ul> <li>1 round of progress reviews (web-based)</li> <li>Midcourse Review (book? + web)</li> <li>Final Review (book? + web)</li> </ul>
Measurement	Percent of targeted change achieved	Percent of targeted change achieved, complemented by supplemental measures for selected objectives (e.g., Leading Health Indicators)

# **Disparities**

	HP2010	HP2020
Overarching Goal	Eliminate health disparities	Achieve health equity, eliminate disparities, and improve the health of all groups
Disparity Targets	No separate disparities targets	No separate disparities targets
Disparity Definition	Any difference in health – a quantity that separates a group from a reference point for a health indicator.	A particular type of health difference that is closely linked with social or economic disadvantage.
Measurement	Relative disparity: percent difference from the "best" group rate Change in disparity over time: difference between relative disparities	Comparable methods to the ones used in HP2010, complemented by supplemental measures for selected objectives (e.g., Leading Health Indicators)

## **Healthy People Data Sources**

- About 45% of objectives were measured by four NCHS data sources:
  - National Health Interview Survey (NHIS)
  - National Health and Nutrition Examination Survey (NHANES)
  - National Vital Statistics System—Mortality (NVSS-M)
  - National Survey of Family Growth (NSFG)
- Remaining 55% were measured by more than 150 other data sources
- Many objectives lack critical demographic specificity

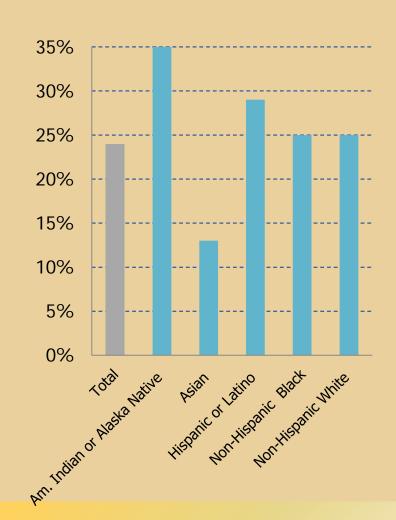


## **HP2010 Target-Setting Methods**

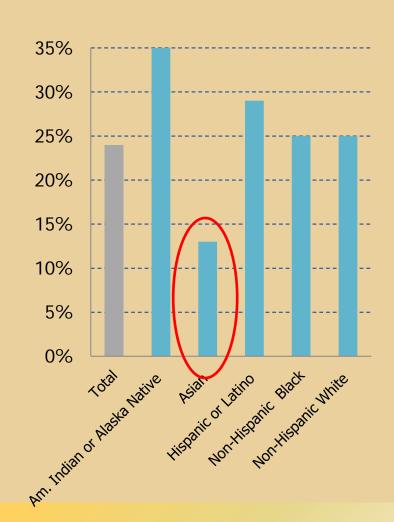
Method	No. (%) measures
Better than the best racial/ethnic grou	p 325 (44.3)
Percent improvement	210 (28.6)
Total coverage or elimination	64 (8.7)
Consistent with another program	39 (5.3)
Projection of trend	25 (3.4)
Percentage point improvement	22 (3.0)
Expert opinion	30 (4.1)
Retain year 2000 target	13 (1.8)
No increase from baseline	5 (0.7)
Total	733 (100)

NOTE: Includes measurable objectives (n=733) that had at least 2 data points for the HP2010 Final Review.

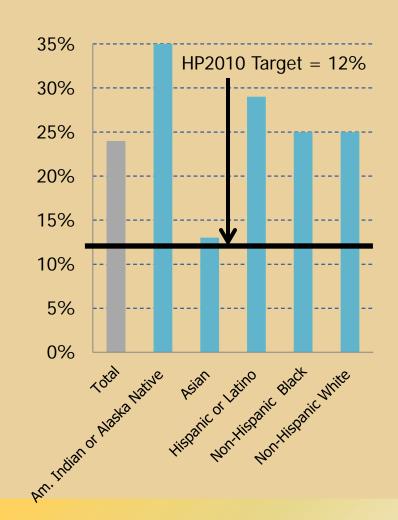
Race/ethnicity	Baseline (1998)	
Total	24%	
American Indian or Alaska Native	35%	
Asian	13%	
Hispanic or Latino	29%	
Non-Hispanic Black	25%	
Non-Hispanic White	25%	



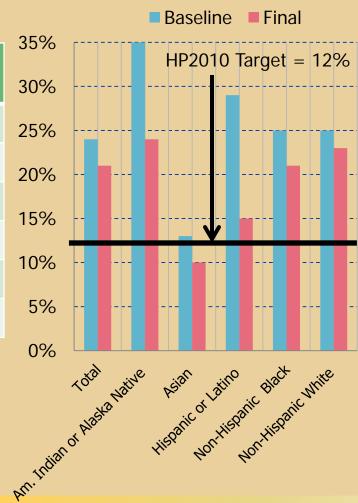
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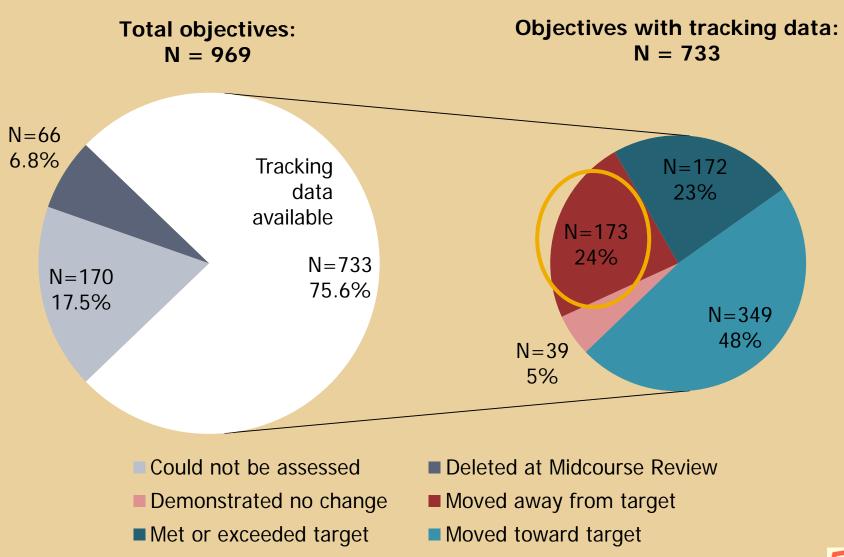
Race/ethnicity	Baseline (1998)
Total	24%
American Indian or Alaska Native	35%
Asian	13%
Hispanic or Latino	29%
Non-Hispanic Black	25%
Non-Hispanic White	25%



Race/ethnicity	Baseline (1998)	Final (2008)
Total	24%	21%
American Indian or Alaska Native	35%	24%
Asian	13%	10%
Hispanic or Latino	29%	15%
Non-Hispanic Black	25%	21%
Non-Hispanic White	25%	23%

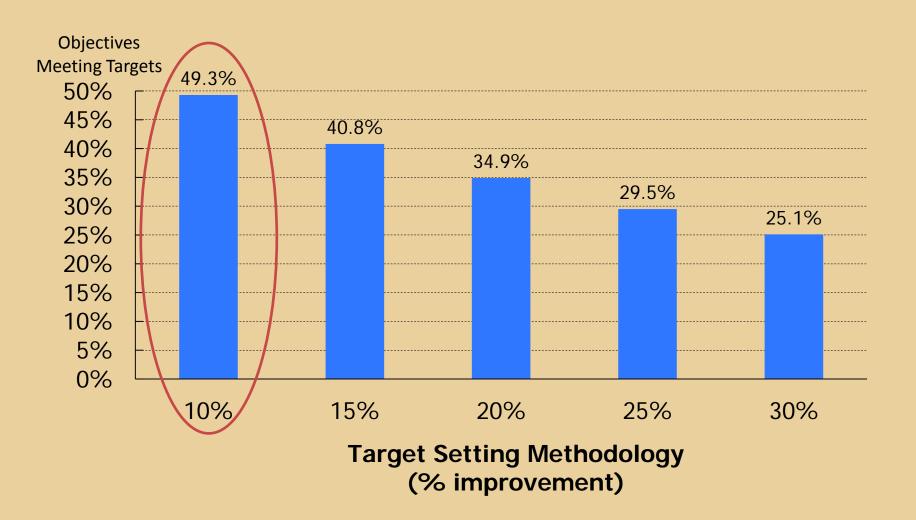


## **Objective status at Final Review**





### **HP2010 Objectives Meeting Hypothetical Targets**



NOTE: Includes measurable objectives and subobjectives (n=635) that have at least 2 data points during the decade as of August 2009.

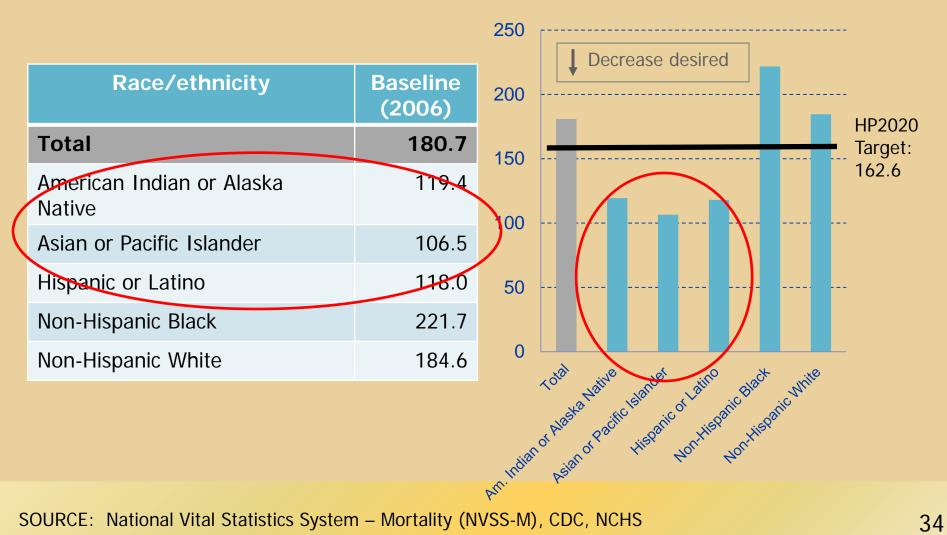
## **HP2020 Target-Setting Methods**

Method	No. (%) measures
1. Desired/Recommended Approach	
Modeling/Projection/Trend Analysis	65 (7.3)
Evidence-based	10 (1.1)
2. Standard default: 10% improvement	578 (64.6)
3. Alternative/Other	
Total coverage or elimination	66 (7.4)
Consistent with national programs, policies	s, etc. 58 (6.5)
Other specific percent change	43 (4.8)
Minimal statistically significant change	21 (2.3)
Retention of HP2010 target	16 (1.8)
Maintain current level / no change	13 (1.5)
Tracked for informational purposes only	17 (1.9)
Other	8 (0.9)
Total	895 (100)

NOTE: Includes non-developmental objectives (n=895) that had a target setting method listed as of December 2011.

# 10 Percent Improvement

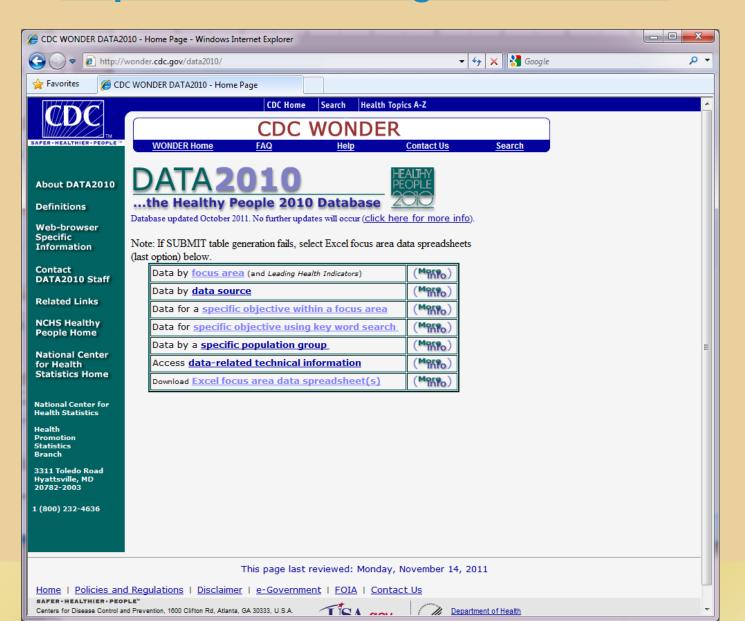
□ **Objective C-1**: Overall cancer death rate (per 100,000)



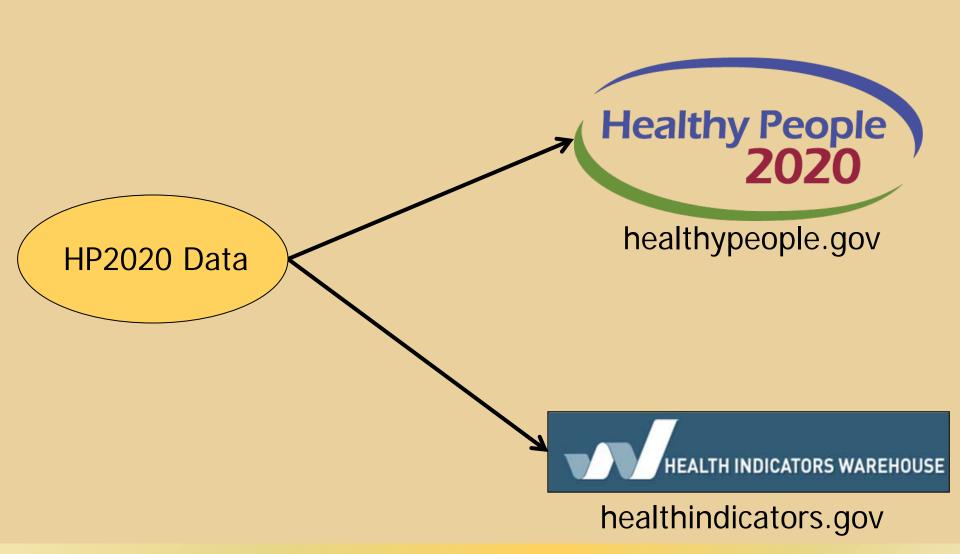


## **DATA2010 (HP2010 Data)**

http://wonder.cdc.gov/data2010



### **HP2020 Data Flow**



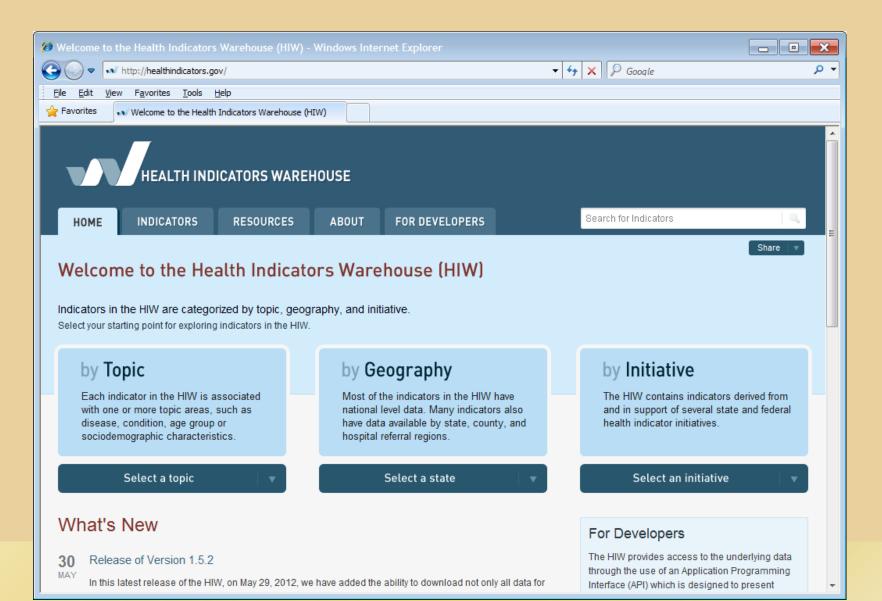
### **Healthy People**

## http://www.healthypeople.gov

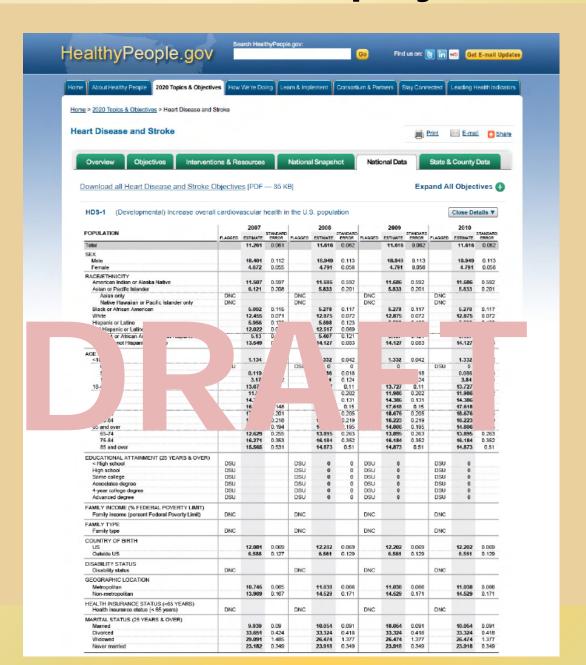


### Health Indicators Warehouse (HIW)

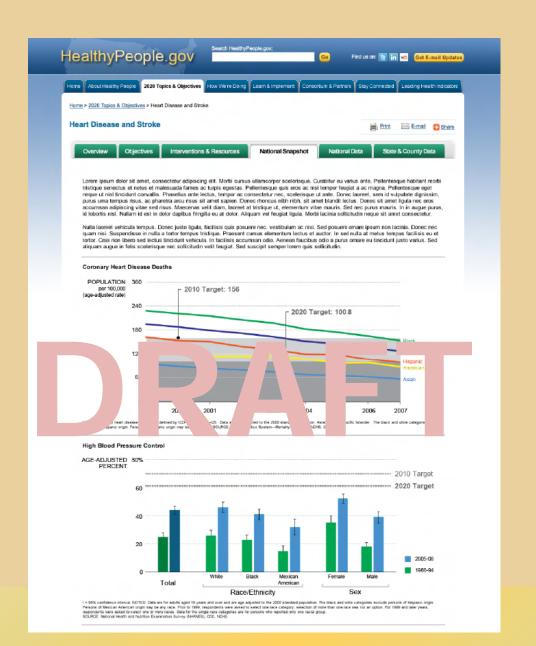
### http://www.healthindicators.gov



# **DATA2020 (Display Tool)**



## **National Snapshot**



# Challenges and Future Opportunities

- Many objectives lack demographic specificity
  - Difficult to measure and assess disparities between population groups
  - Catalyst for more robust data collection

- Objectives are measured and tracked using over 150 diverse data sources
  - Home agencies include federal and nongovernmental, health and non-health
  - Significant data coordination and integration challenges and opportunities

## Acknowledgements

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Bruce Jonas Jean Williams

Deepthi Kandi Sirin Yaemsiri

**Insun Kim** 

## **Key Websites**

- Main Healthy People: <a href="https://www.healthypeople.gov">www.healthypeople.gov</a>
  - Staying connected (listservs, Leading Health Indicators, webinars):
     www.healthypeople.gov/2020/connect/default.aspx
- NCHS/Healthy People:
  - www.cdc.gov/nchs/healthy\_people.htm
  - Healthy People 2010 Final Review:
     <a href="https://www.cdc.gov/nchs/healthy\_people/hp2010/hp2010\_final\_review.htm">www.cdc.gov/nchs/healthy\_people/hp2010/hp2010\_final\_review.htm</a>
  - DATA2010: wonder.cdc.gov/data2010
- Health Indicators Warehouse:
  - www.healthindicators.gov









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