



# Healthy People 2020: Focus on Vision Health Data

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**U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES  
Centers for Disease Control and Prevention  
National Center for Health Statistics**

# Presentation Outline

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- **Healthy People – introduction and history**
- **Healthy People 2020 Vision Topic Area goal and objectives**
- **Data sources for vision topic area objectives**
  - **National Health Interview Survey (NHIS)**
  - **National Health and Nutrition Examination Survey (NHANES)**
- **HP2020 vision objectives – data and targets**
- **HP2020 website and DATA2020**







# What is Healthy People?

**National agenda that communicates a vision and specific objectives for improving the population's health and achieving health equity**

- **Requires tracking of data-driven outcomes to monitor progress and to motivate, guide, and focus action**
- **Engages a network of multidisciplinary, multisectoral stakeholders at all levels**
- **Guides national research, program planning, and policy efforts to promote health and prevent disease**

# Evolution of Healthy People

Target Year	1990 	2000 	2010 	2020 
<b>Overarching Goals</b>	<ul style="list-style-type: none"> <li>• Decrease mortality: infants–adults</li> <li>• Increase independence among older adults</li> </ul>	<ul style="list-style-type: none"> <li>• Increase span of healthy life</li> <li>• Reduce health disparities</li> <li>• Achieve access to preventive services for all</li> </ul>	<ul style="list-style-type: none"> <li>• Increase quality and years of healthy life</li> <li>• Eliminate health disparities</li> </ul>	<ul style="list-style-type: none"> <li>• Attain high-quality, longer lives free of preventable disease</li> <li>• Achieve health equity; eliminate disparities</li> <li>• Create social and physical environments that promote good health</li> <li>• Promote quality of life, healthy development, healthy behaviors across life stages</li> </ul>
<b># Topic Areas</b>	15	22	28	42
<b># Objectives/Measures</b>	226/NA	312/NA	467/1,000	>1,200



# Healthy Vision 2020 Workgroup

- National Eye Institute, NIH
- National Center for Health Statistics, CDC
- Office of Disease Prevention and Health Promotion, OS/OASH





# Healthy People 2020 Vision Goal

**Improve the visual health of the Nation through prevention, early detection, treatment, and rehabilitation.**





# Healthy People 2020 Vision Objectives – Adults

- Increase use of a comprehensive dilated eye examination within 2 years
- Increase use of vision rehabilitation among visually impaired adults
- Increase use of personal protective eyewear
- Increase the proportion of Federally Qualified Health Centers that provide comprehensive vision health services





# Healthy People 2020 Vision Objectives – Adults

- Reduce occupational eye injury
- Reduce visual impairment due to
  - ✓ Cataract
  - ✓ Diabetic retinopathy
  - ✓ Glaucoma
  - ✓ Macular degeneration
  - ✓ Uncorrected refractive errors







# Healthy People 2020 Vision Objectives – Children

- Reduce visual impairment and blindness in children
- Increase vision screening among preschool children
- Increase use of personal protective eyewear



# Data Sources

- **National Health Interview Survey (NHIS) – 2002 and 2008 Vision supplement, CDC, NCHS**
- **National Health and Nutrition Examination Survey (NHANES) – Eye exams at NHANES Mobile Examination Centers, CDC, NCHS**
- **Survey of Occupational Injuries and Illnesses (SOII), DOL, BLS**
- **National Electronic Injury and Illness Surveillance System – Occupational Supplement, CDC, NIOSH; Current Population Survey (CPS), DOL, BLS**



# National Health Interview Survey

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- **Conducted by NCHS/CDC annually since 1957**
- **Survey population – U.S. civilian non-institutionalized population**
- **Computer-assisted in-person interview**
- **Self-reported for adults and proxy-reported for children**
- **Over-samples black and Hispanic**
- **Major data source for tracking Healthy People 2020 objectives**

# National Health Interview Survey

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- **Sample size:**
  - 2002: children – 12,524, adults – 31,044
  - 2008: children – 8,815, adults – 21,781
- **Response rate:**
  - 2002: children – 81.3%, adults – 74.3%
  - 2008: children – 72.3%, adults – 62.6%
- **Vision supplement questionnaire:**
  - 2002: children – 5 questions, adults – 9 questions
  - 2008: children – 7 questions, adults – 12 questions

# 1999-2008 NHANES

- **Nationally representative samples of civilian, non-institutionalized population**
- **Sample size ~ 5,000 persons per year**
- **Over-samples some population groups: African Americans, Mexican Americans, persons with low income, persons 12-19 years and 60 years and older**
- **Combines household interview and physical examination at Mobile Examination Centers**
- **Major data source for tracking Healthy People 2020 objectives**



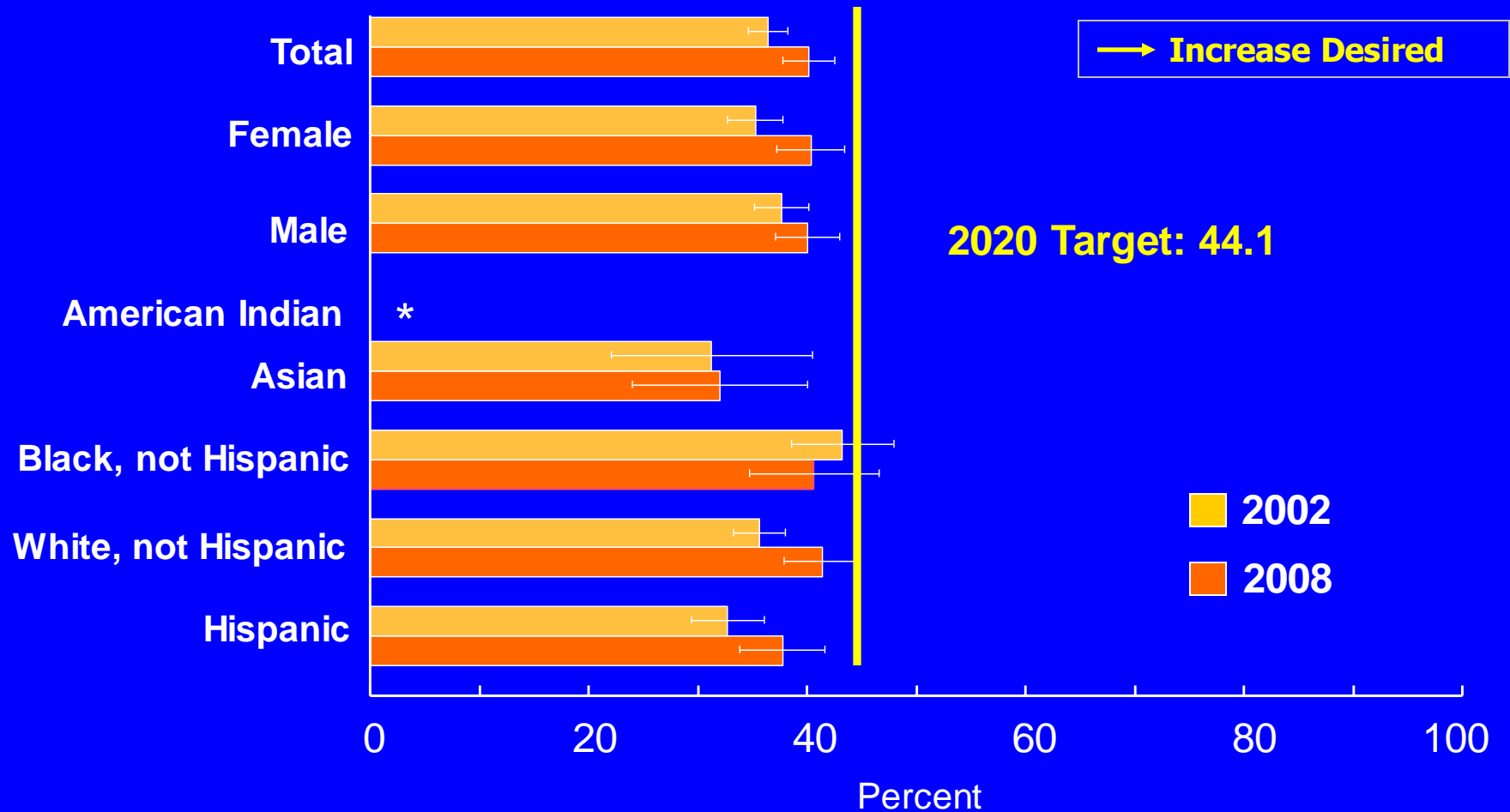
# 1999-2008 NHANES Vision Component

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- Eye diseases and vision health questionnaire
- NHANES vision examination includes:
  - Best corrective vision
  - Current eye glass prescription
  - Near visual acuity
  - Frequency doubling technology
  - Retinal imaging exam



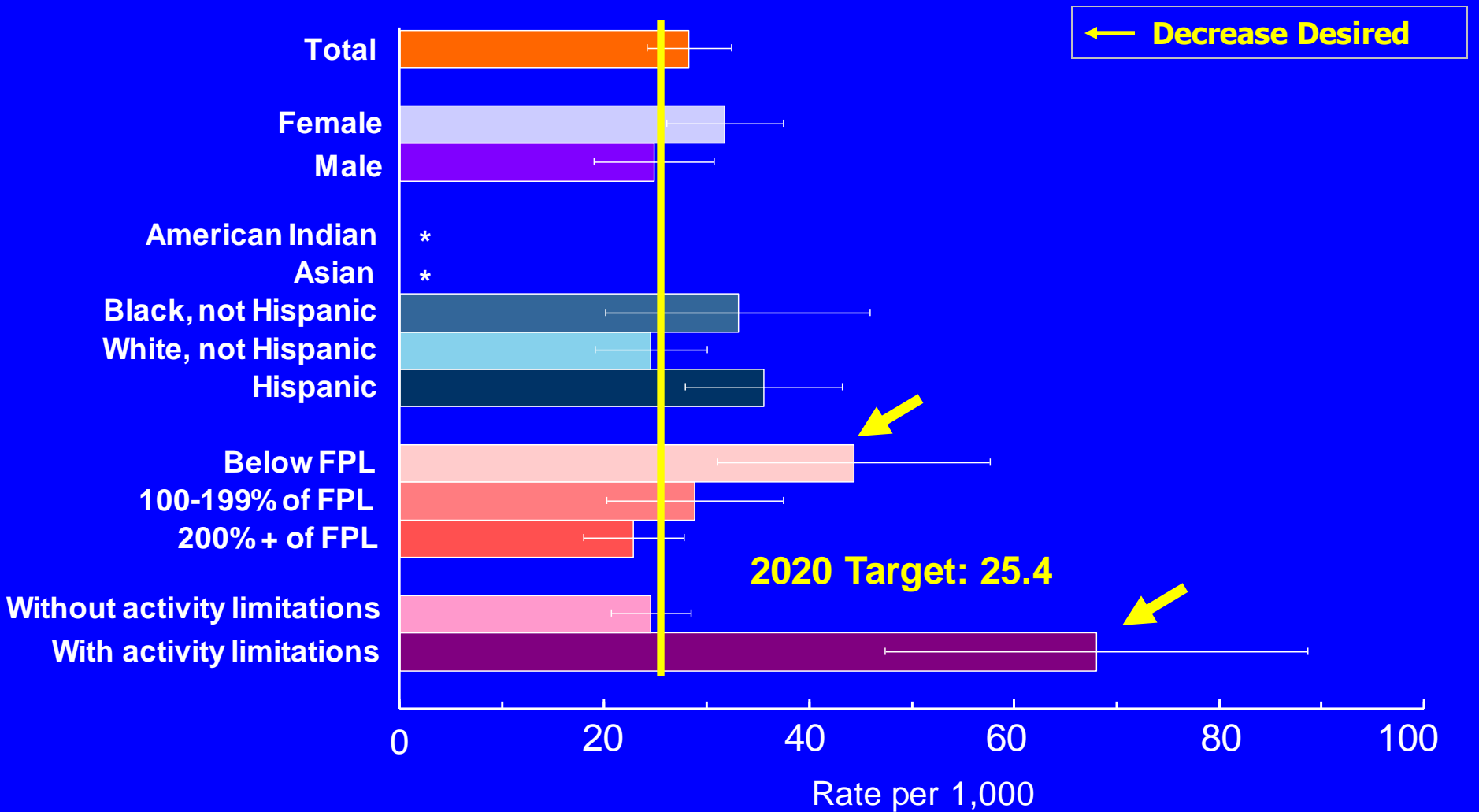
# Vision Screening Among Children <6 Years



**Note:** I is 95% confidence interval. \*Data are statistically unreliable. Data are for children under 6 years who ever had their vision tested. American Indian includes Alaska Native. Persons of Hispanic origin may be any race. Persons were asked to select one or more races. Data for the single race categories shown are for persons who reported only one racial group.

**Source:** National Health Interview Survey, CDC, NCHS.

# Visual Impairment, Children <18 Years, 2011

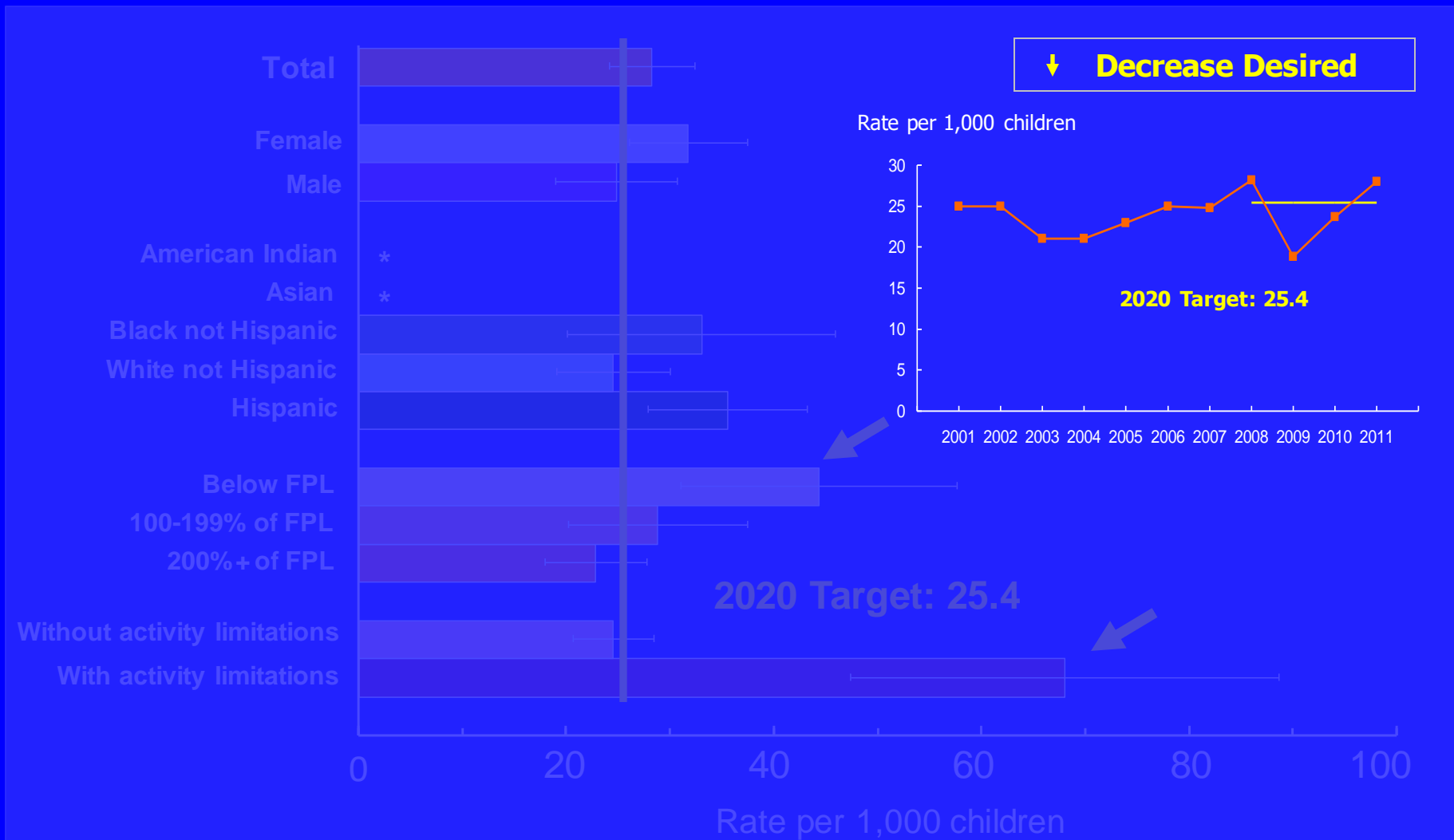


**Note:** I = 95% confidence interval. \*Data are statistically unreliable. Data are for children ages 17 years and under who have trouble seeing even when wearing glasses or contact lenses. The visual impairment data include blindness. American Indian includes Alaska Native. Respondents were asked to select one or more races. Data for the single race categories are for persons who reported only one racial group. Persons of Hispanic origin may be any race. FPL – Federal Poverty Level.

**Source:** National Health Interview Survey (NHIS), CDC, NCHS.



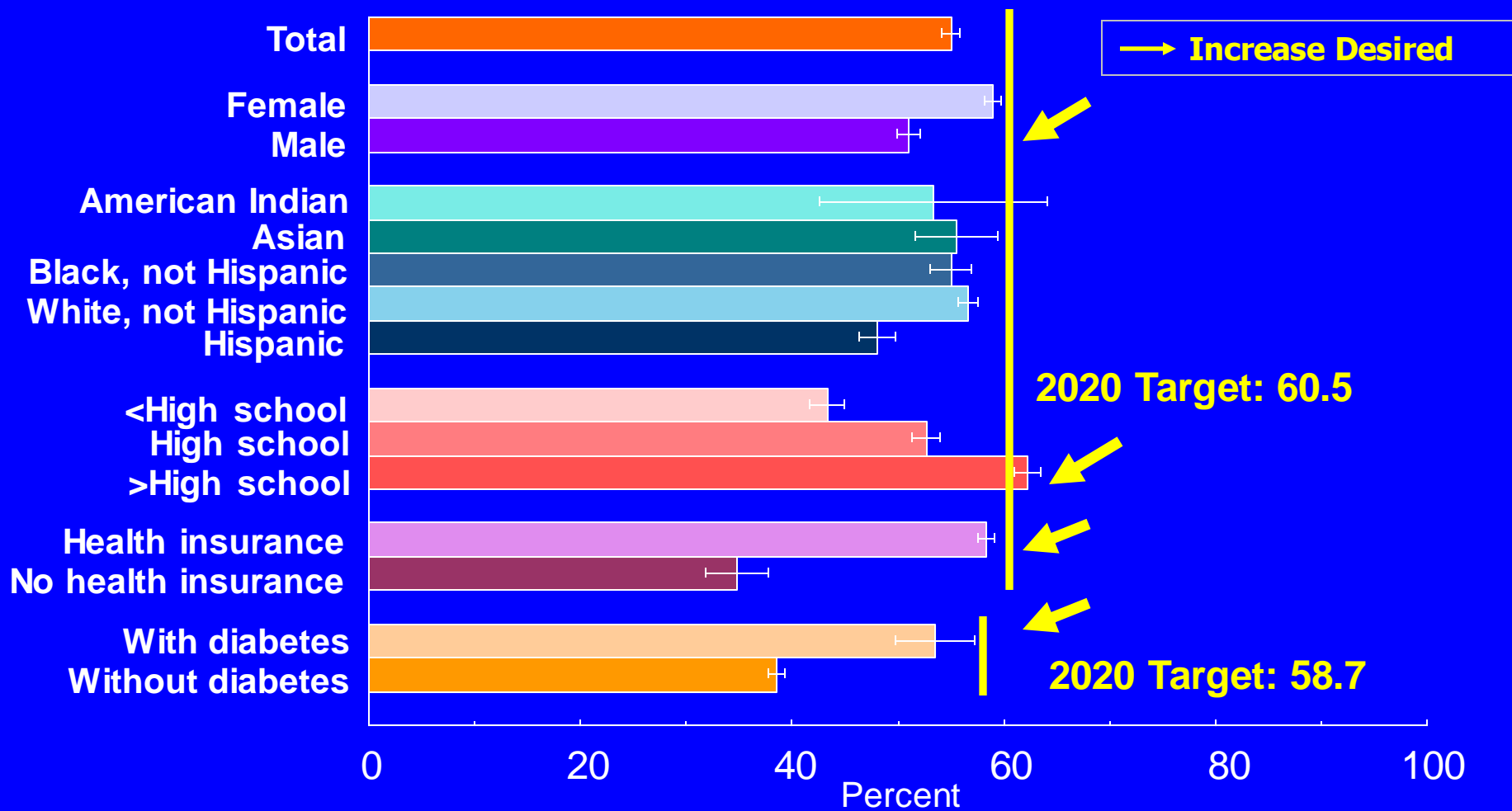
# Visual Impairment, Children <18 Years, 2011



**Note:** I = 95% confidence interval. \*Data are statistically unreliable. Data are for children ages 17 years and under who have trouble seeing even when wearing glasses or contact lenses. The visual impairment data include blindness. American Indian includes Alaska Native. Respondents were asked to select one or more races. Data for the single race categories are for persons who reported only one racial group. Persons of Hispanic origin may be any race. FPL – Federal Poverty Level

**Source:** National Health Interview Survey (NHIS), CDC, NCHS.

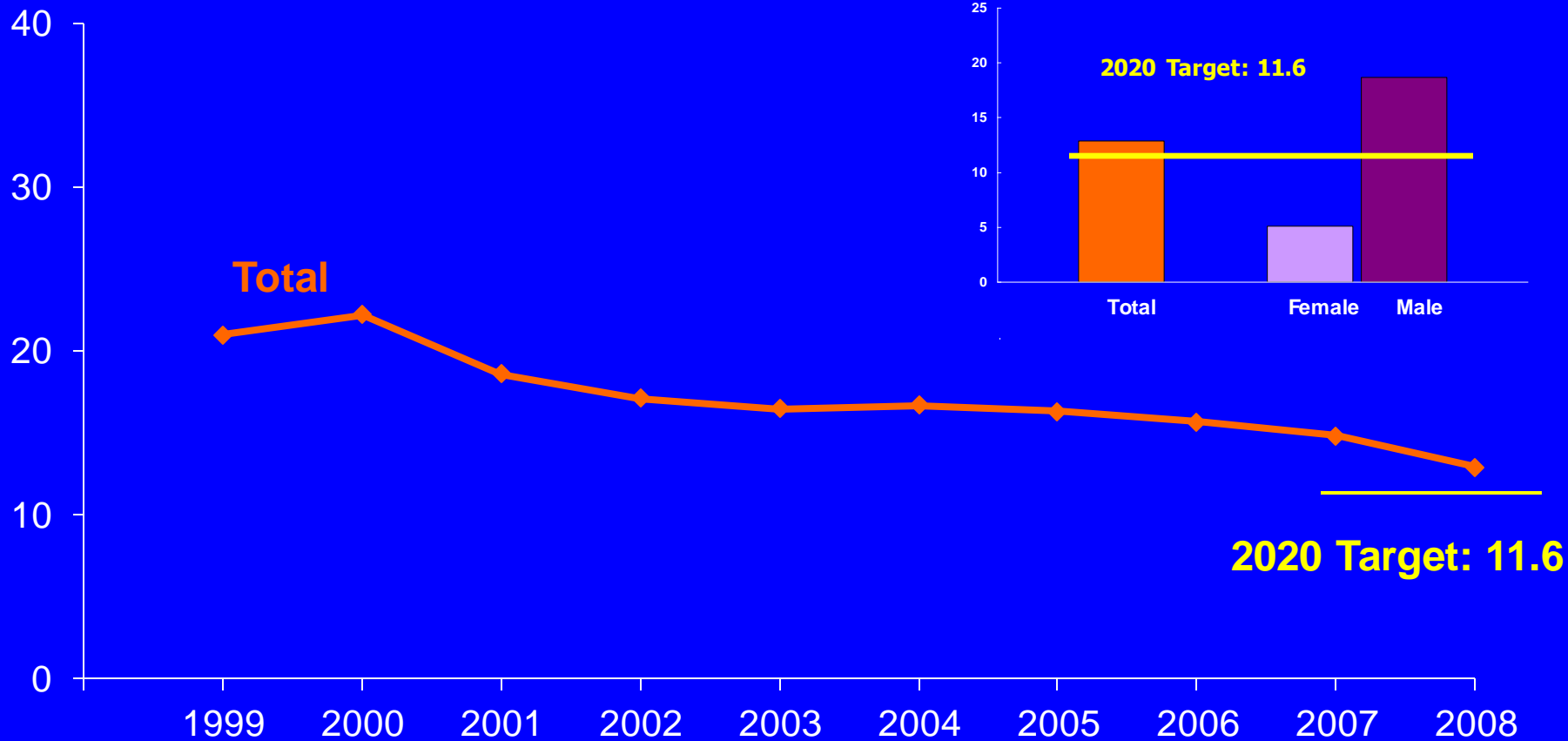
# Dilated Eye Exam in the Past 2 Years, Adults 18+ Years, 2008



**Note:** I is 95% confidence interval. Data are for adults 18+ who received eye exam in the past 2 years, except for diabetes status: adults with diabetes received eye exam in the past 12 months. Data are age adjusted to the 2000 standard population. Education-level data are for adults 25 years and over. Health Insurance data are for adults 18-64 years. American Indian includes Alaska Native. Persons of Hispanic origin may be any race. Persons were asked to select one or more races. Data for the single race categories shown are for persons who reported only one racial group. **Source:** National Health Interview Survey, CDC, NCHS.

# Occupational Eye Injuries Treated in Emergency Departments, Workers 15+ Years

Per 10,000 full time workers

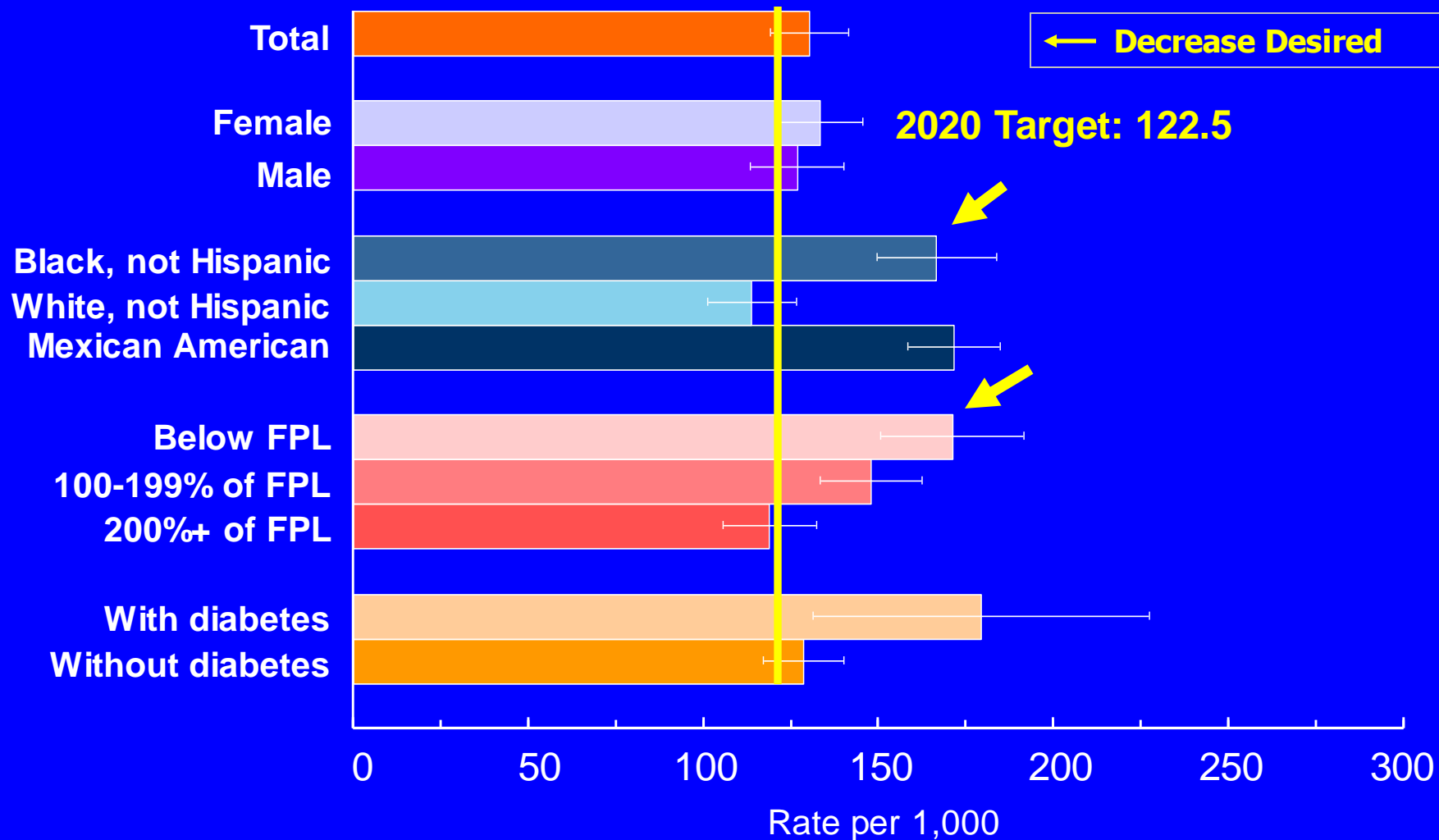


**Note:** Number of injuries and illnesses treated in hospital emergency departments per 10,000 full-time workers aged  $\geq 15$  years. The rates are based on eyeball injuries as defined by the Consumer Product Safety Commission. Work-related eye injuries/illnesses are counted if treated in an emergency department and are a result from an event in the work environment.

**Source:** National Electronic Injury and Illness Surveillance System—Occupational Supplement, CDC, NIOSH; Current Population Survey, DOL, BLS

**Obj. V-3.2**

# Uncorrected Refractive Errors, Adolescents and Adults 12+ years, 2005-08

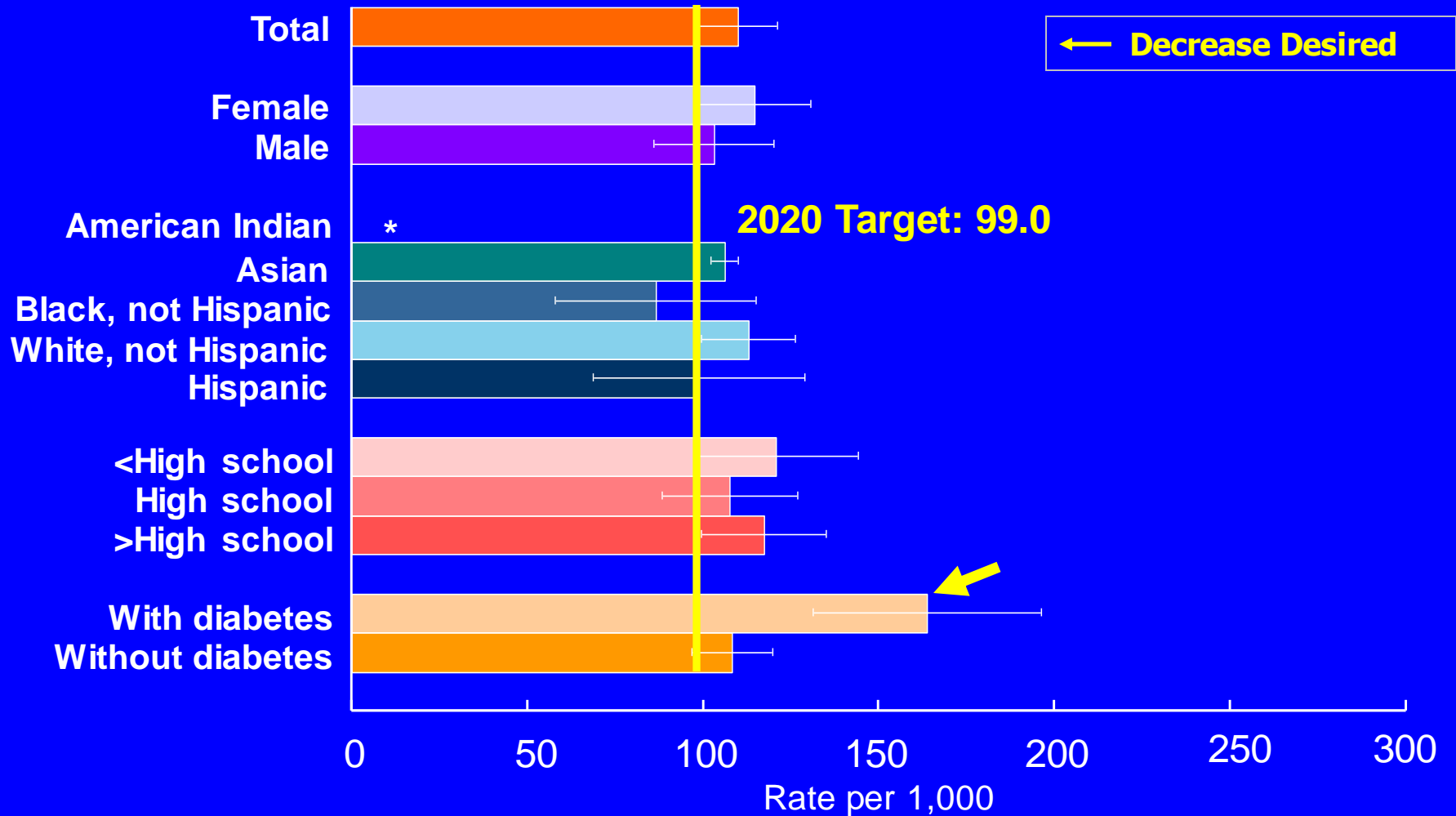


**Note:** I is 95% confidence interval. Data are for persons 12 years and older whose better-eye distance vision tested at 20/30 or worse, and improved to 20/25 or better after objective auto-refraction. Data are age adjusted to the 2000 standard population. Respondents were asked to select one or more races. Black and white include persons who reported only one racial group. Persons of Mexican-American origin may be any race. FPL – Federal Poverty Level.

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

**Obj. V-5.1**

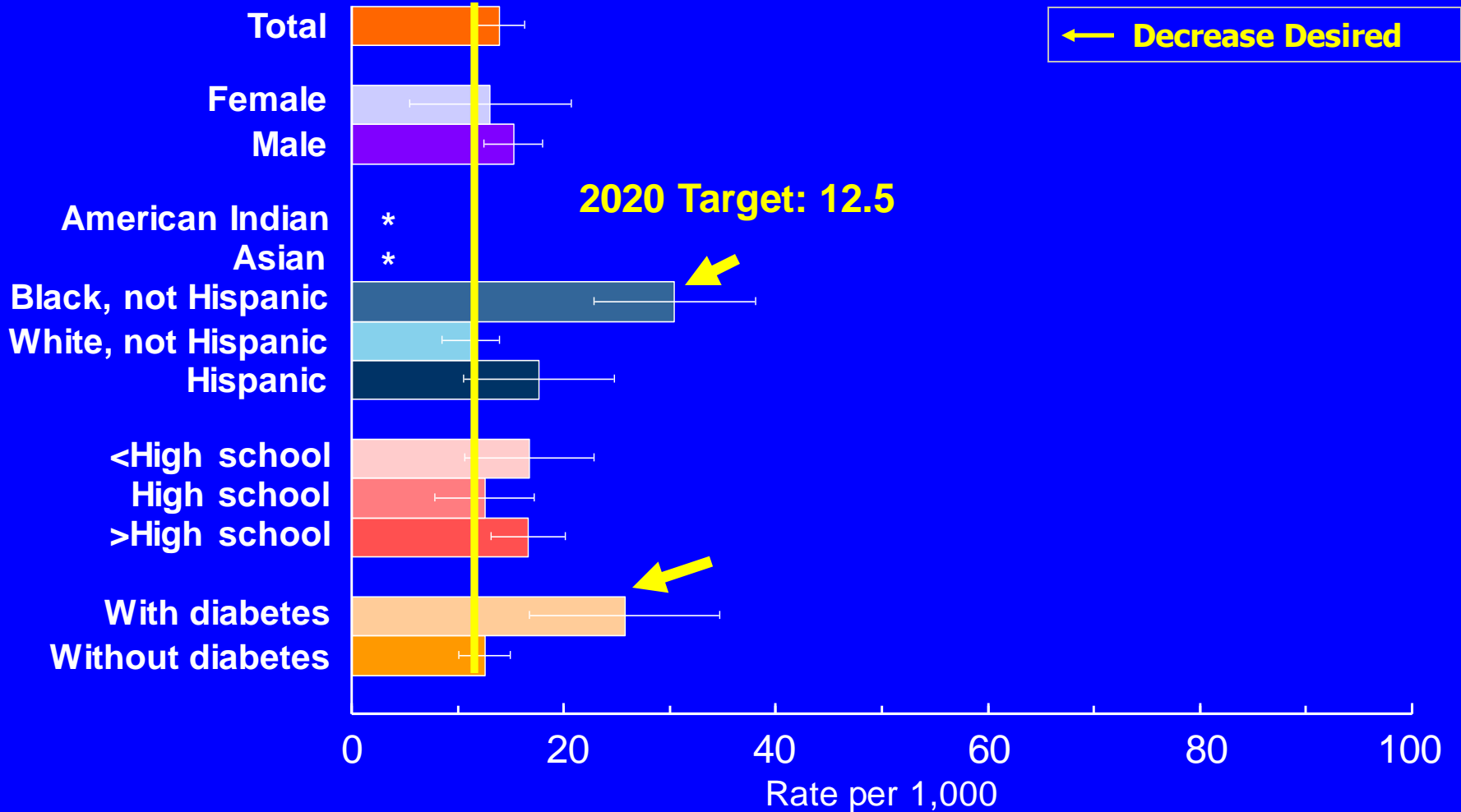
# Visual Impairment Due to Cataract, Adults 65+ years, 2008



**Note:** I is 95% confidence interval. \*Data are statistically unreliable. Data are for adults 65 years and older who reported they had lost their vision because of cataracts and were also told they had cataracts. Data are age adjusted to the 2000 standard population. American Indian includes Alaska Native. Persons of Hispanic origin may be any race. Persons were asked to select one or more races. Data for the single race categories shown are for persons who reported only one racial group.

**Source:** National Health Interview Survey, CDC, NCHS.

# Visual Impairment Due to Glaucoma, Adults 45+ years, 2008



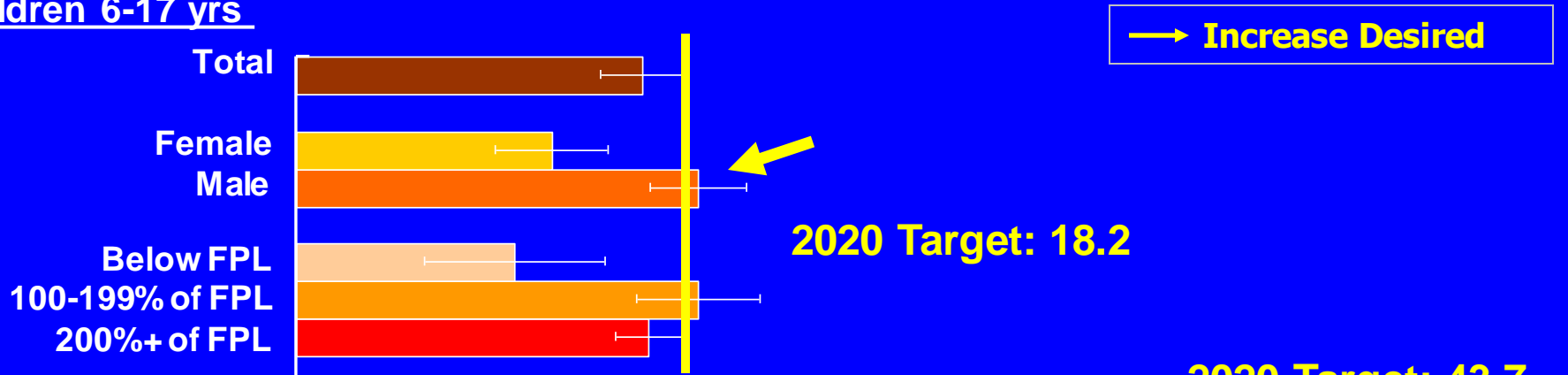
**Note:** I is 95% confidence interval. \*Data are statistically unreliable. Data are for adults 45 years and older who reported they had lost their vision because of glaucoma and were also told they had glaucoma. Data are age adjusted to the 2000 standard population. American Indian includes Alaska Native. Persons of Hispanic origin may be any race. Persons were asked to select one or more races. Data for the single race categories shown are for persons who reported only one racial group.

**Source:** National Health Interview Survey, CDC, NCHS.

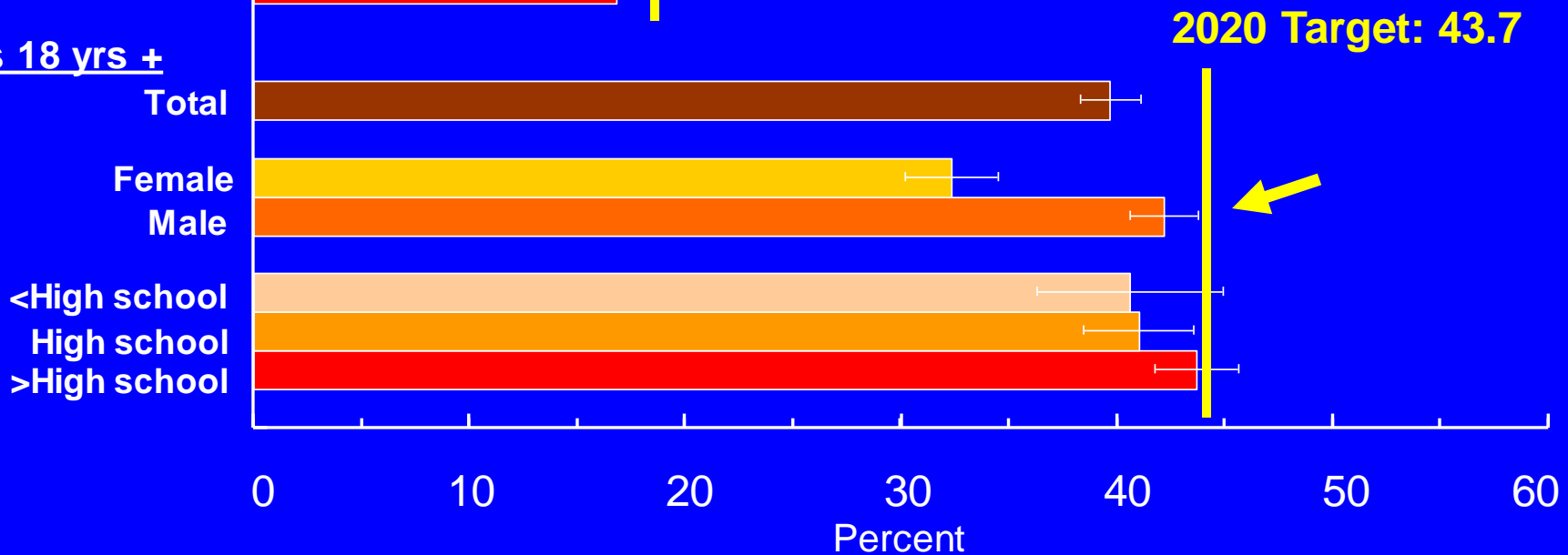
**Obj. V-5.3**

# Use of Protective Eyewear: Always or Most of the Time, 2008

## Children 6-17 yrs



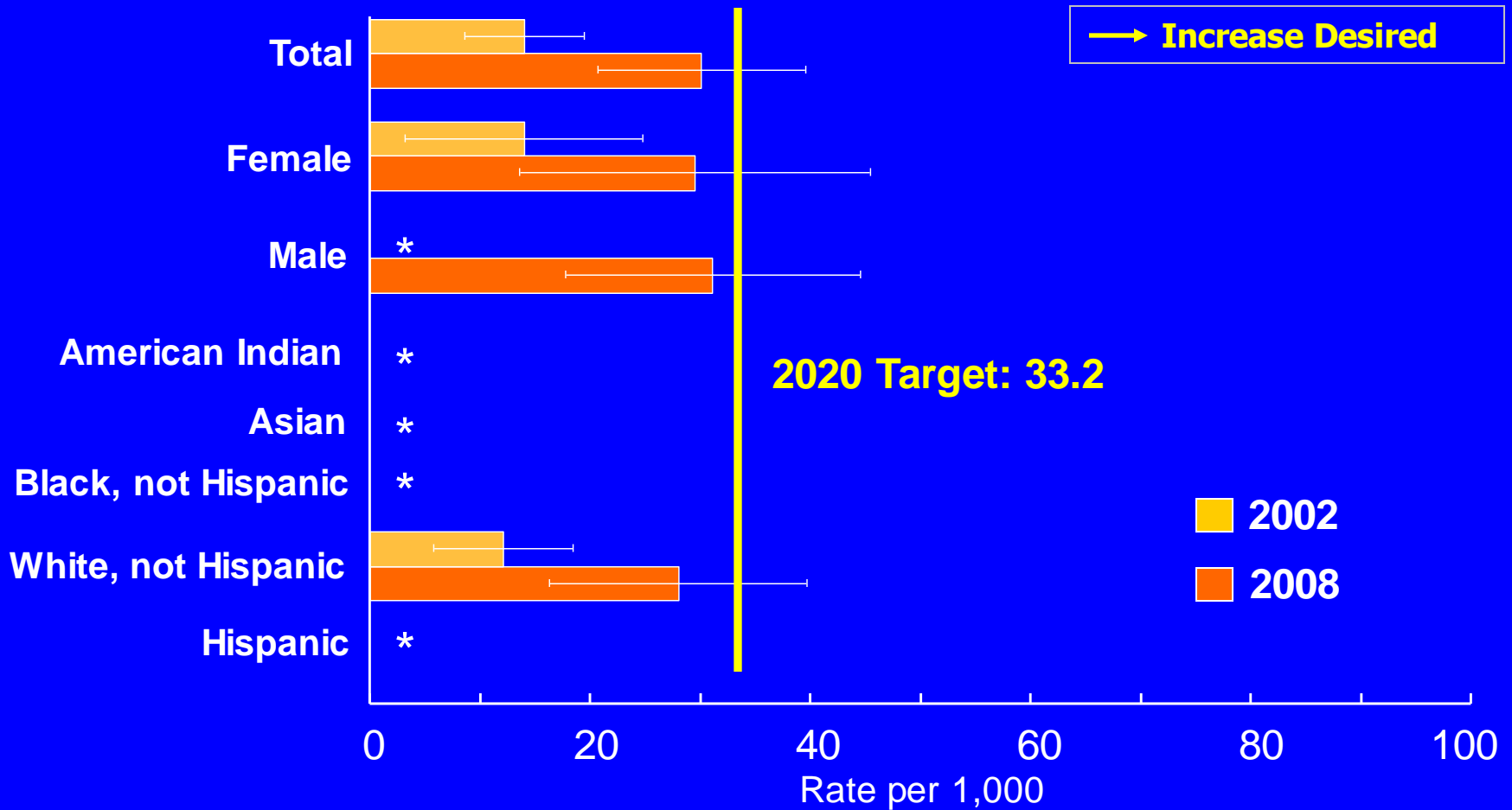
## Adults 18 yrs +



**Note:** I = 95% confidence interval. Data are for persons 6 years and older who wore protective eyewear always or most of the time when engaging in recreational activities or activities outside of work that can cause eye injury. Adult data are age adjusted to the 2000 standard population. Education-level data are for adults 25 years and over. FPL – Federal Poverty Level.  
**Source:** National Health Interview Survey, CDC, NCHS.

**Obj. V-6.1, 2**

# Use of Visual Rehabilitation Services: Adults 18+ years with Visual Impairment

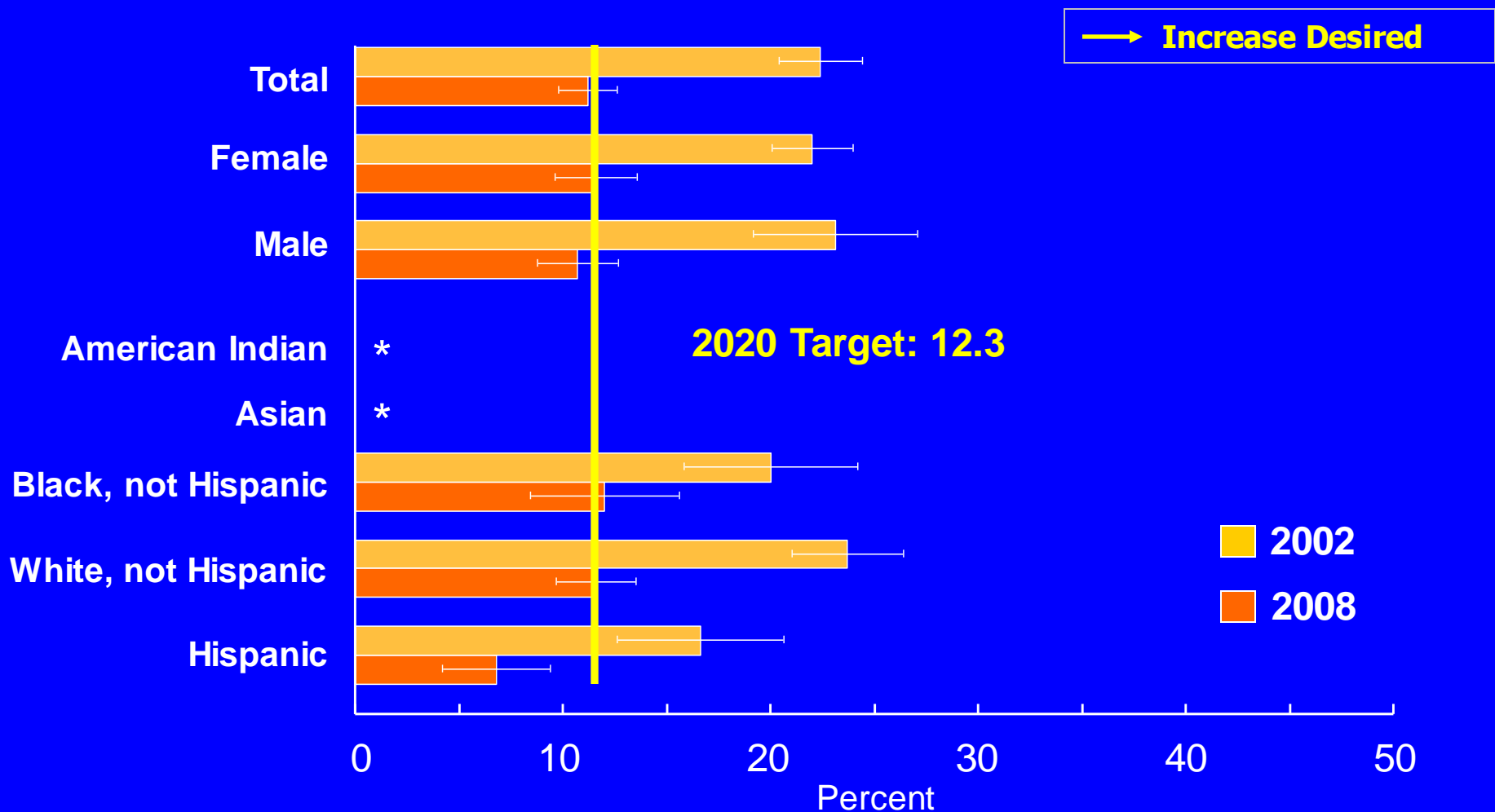


**Note:** I is 95% confidence interval. \*Data are statistically unreliable. Data are for adults 18 years and over who reported visual impairment and used any vision rehabilitation services. Data are age adjusted to the 2000 standard population. American Indian includes Alaska Native. Persons of Hispanic origin may be any race. Persons were asked to select one or more races. Data for the single race categories shown are for persons who reported only one racial group.

**Source:** National Health Interview Survey, CDC, NCHS.



# Use of Visual and Adaptive Devices: Adults 18+ Years with Visual Impairment



**Note:** I is 95% confidence interval. \*Data are statistically unreliable. Data are for adults 18 years and over who reported visual impairment and used any visual and adaptive devices. Data are age adjusted to the 2000 standard population. American Indian includes Alaska Native. Persons of Hispanic origin may be any race. Persons were asked to select one or more races. Data for the single race categories shown are for persons who reported only one racial group.

**Source:** National Health Interview Survey, CDC, NCHS.

# Healthy People 2020 Website and Data

HP 2020 Healthy People 2020 - Improving the Health of A... Home Print Page Safety Tools

HealthyPeople.gov  Search HealthyPeople.gov.  Log In Find us on:

[Home](#) [About Healthy People](#) [2020 Topics & Objectives](#) [Data](#) [Learn](#) [Implement](#) [Get Involved](#) [Leading Health Indicators](#)

### Healthy People 2020 Spotlight on Health Webinar

Join us on Wednesday, April 24, 2013 at 1:00 p.m. EDT for a Healthy People 2020 Spotlight on Health Webinar focused on Social Determinants of Health.

### Closer Look: Health Disparities

Compare the Top 10 Causes of Death across Populations

Race/Ethnicity:

Age Range:



### Get the Latest Healthy People News & Events



### Healthy People 2020 Brochure: Updated with LHIs!

 [PDF - 948 KB]

### HHS Prevention Strategies

Healthy People supports prevention efforts across the U.S. Department of Health and Human Services (HHS) to create a healthier Nation.



### Spotlight

**Evidence-Based Resources** *New*

Search our database to find evidence-based resources to improve the health of your community!



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[Freedom of Information Act](#) | [Healthy People 2010 Archive](#) | [Healthfinder.gov](#)

A Federal Government Web site managed by the [U.S. Department of Health and Human Services](#)  
200 Independence Avenue, S.W., Washington, DC 20201

Page last updated: Thursday, April 04, 2013



Home > [2020 Topics & Objectives](#) > Vision

## Vision

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Overview Objectives **Interventions & Resources** National Snapshot National Data

**Collapse All Objectives**

**V-1** Increase the proportion of preschool children aged 5 years and under who receive vision screening

[Close Details](#) ▼

Baseline:	40.1 percent of preschool children aged 5 years and under received vision screening in 2008
Target:	44.1 percent
Target-Setting Method:	10 percent improvement
Data Source:	National Health Interview Survey (NHIS), CDC/NCHS
More Information:	<div style="display: flex; align-items: center;"> <a href="#">Data for this objective</a> <span>The HP2010 objective with the same definition was 28-02. <a href="#">View on DATA2010</a></span> </div> <div style="margin-top: 10px;"> <a href="#">Search PubMed for Literature Relating to this Objective</a> </div>

[Close Details](#) ▲

**V-2** Reduce blindness and visual impairment in children and adolescents aged 17 years and under

[Close Details](#) ▼

Baseline:	28.2 per 1,000 children and adolescents aged 17 years and under were blind or visually impaired in 2008
Target:	25.4 per 1,000
Target-Setting Method:	10 percent improvement

- Home
- About Healthy People
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Home > 2020 Topics & Objectives > Vision > Data2020 Search Results

## DATA2020 Search Results

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### Show Data For:

- All Groups
- Total
- Sex
- Race/Ethnicity
- Age group
- Educational attainment
- Family income
- Family type
- Country of birth
- Disability status
- Geographic location
- Health insurance status
- Sexual orientation
- Marital status
- Student/school characteristics
- Gender identity
- All other populations

- Show Confidence Interval (when available)  Show Standard Error (when available)

**Refresh Data ▶**

## Vision

### V-2 Reduce blindness and visual impairment in children and adolescents aged 17 years and under

Display Years

Blindness and visual impairment in children and adolescents ≤17 years (per 1,000 population)

**2020 Baseline (year):** 28.2 (2008)

**2020 Target:** 25.4

**Desired Direction:** ↓ Decrease

[Tech Specs](#)

POPULATIONS

◀ 2008 2009 2010 2011 ▶

Total

Year	2008	2009	2010	2011
Value	28.2	18.8	23.7	28.0
CI	CI 24.1 / 32.2	CI 15.5 / 22.2	CI 20.5 / 26.9	CI 24.4 / 31.7

Footnotes [View Footnotes](#)

**View Populations ▼**

## V-2 Reduce blindness and visual impairment in children and adolescents aged 17 years and under

Display Years





Blindness and visual impairment in children and adolescents  $\leq 17$  years (per 1,000 population)

- 2008
- 2009
- 2010
- 2011

**2020 Baseline (year):** 28.2 (2008)

**2020 Target:** 25.4

**Desired Direction:** ↓ Decrease

POPULATIONS	2008	2009	2010	2011
<b>Total</b> 	28.2 CI 24.1 / 32.2	18.8 CI 15.5 / 22.2	23.7 CI 20.5 / 26.9	28.0 CI 24.4 / 31.7
<b>SEX</b> 				
Male	24.8 CI 19.3 / 30.3	16.1 CI 11.5 / 20.6	21.3 CI 16.9 / 25.7	24.1 CI 19.5 / 28.6
Female	31.7 CI 25.7 / 37.7	21.7 CI 16.6 / 26.7	26.2 CI 21.3 / 31.1	32.2 CI 26.4 / 37.9
<b>AGE GROUP</b> 				
0-4	15.8 CI 9.8 / 21.7	10.0 CI 4.3 / 15.7	12.1 CI 7.5 / 16.6	20.4 CI 14.5 / 26.4
5-11	32.0 CI 24.3 / 39.6	21.2 CI 15.8 / 26.6	27.5 CI 21.7 / 33.2	30.7 CI 24.3 / 37.2
12-17	34.2 CI 27.3 / 41.1	23.6 CI 17.3 / 29.9	29.4 CI 23.1 / 35.8	31.4 CI 25.3 / 37.6
<b>FAMILY INCOME (PERCENT FEDERAL POVERTY LEVEL)</b> 				
<100	44.3 CI 31.0 / 57.6	27.2 CI 19.0 / 35.5	33.6 CI 25.5 / 41.7	47.1 CI 36.2 / 58.0
100-199	28.8 CI 19.7 / 37.9	22.9 CI 15.0 / 30.8	27.3 CI 19.7 / 34.8	31.9 CI 23.5 / 40.2
200-399	25.9 CI 18.3 / 33.5	18.0 CI 11.4 / 24.7	20.7 CI 14.9 / 26.5	20.7 CI 14.8 / 26.6

# Data Chart Example

Adults receiving a dilated eye examination within the past 2 years (age adjusted, percent, 18+ years)

By Health insurance status (<65 years)

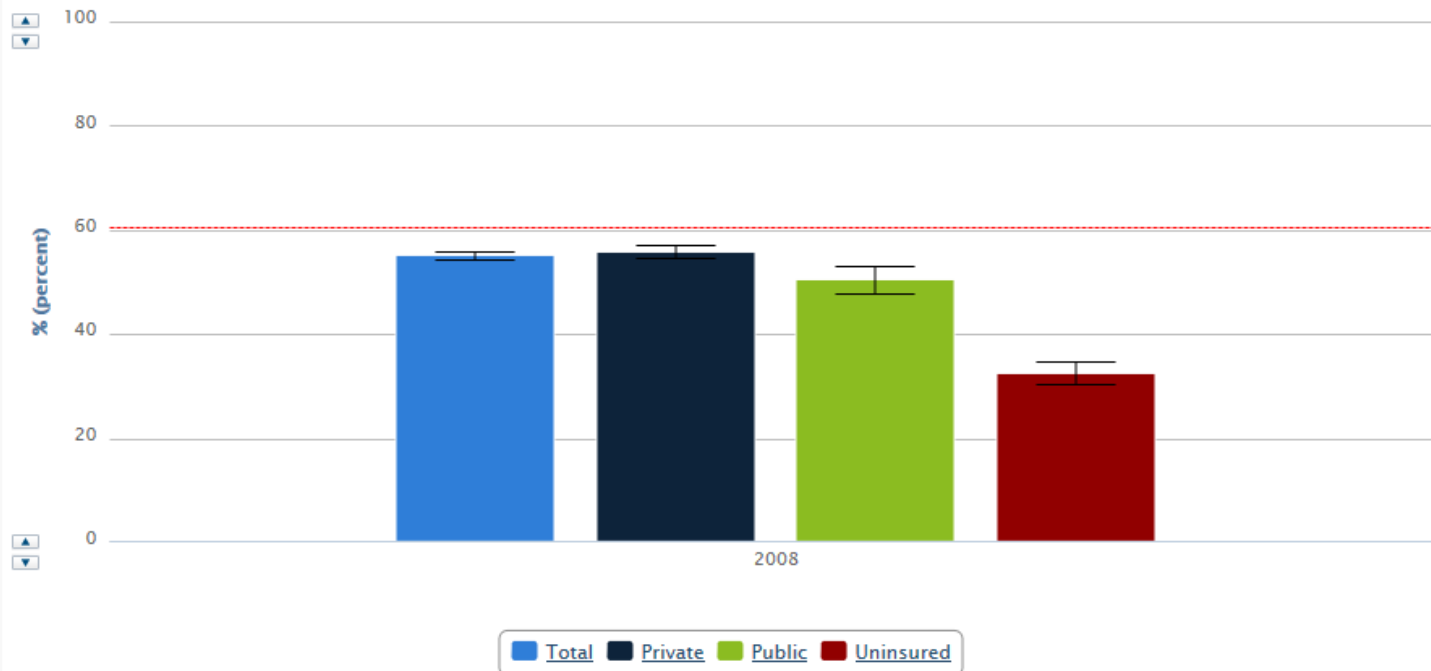
2020 Baseline (year): 55.0 (2008)

2020 Target: 60.5

Desired Direction: ↑ Increase

[Tech Specs](#)

Auto Scale



---- 2020 Target : 60.5

Data Source : National Health Interview Survey (NHIS)

Error Bar (I) represents the 95% confidence interval

# Evidence-Based Interventions and Resources

Overview

Objectives

Interventions & Resources

National Snapshot

National Data

Find evidence-based information and recommendations related to vision.

[Clinical Recommendations](#)

[Community Interventions](#)

[Consumer Information](#)



## Clinical Recommendations

The following clinical recommendations come from the [US Preventive Services Task Force \(USPSTF\)](#).

### Screening for Visual Impairment in Children Ages 1 to 5 Years

The U.S. Preventive Services Task Force (USPSTF) recommends vision screening for all children at least once between the ages of 3 and 5 years, to detect the presence of amblyopia or its risk factors. [Learn more](#)

[Back to Top](#)

## Community Interventions

The following evidence-based community interventions come from the [Guide to Community Preventive Services](#), Centers for Disease Control and Prevention (CDC).

### Health Communication & Social Marketing: Health Communication Campaigns That Include Mass Media & Health-Related Product Distribution

Health communication campaigns can increase the use of health-related products when they use mass media messaging and distribute the products at free or reduced prices. [Learn more](#)

[Back to Top](#)

## Consumer Information

The following consumer resources are from the Quick Guide to Healthy Living at [healthfinder.gov](#).

### Get Your Vision Checked

Your vision changes as you get older. Learn the signs and symptoms of eye problems.





# Healthy People 2020 – Vision

- **HP2020 Vision Topic Area includes 15 objectives**
  - Only one vision objective has no baseline data
  - Next NHIS Vision supplement – 2017 and NHANES eye examination – 2017-18?
- **HealthyPeople.gov is web-based interactive resource:**
  - Data, charts, and technical specifications
  - Links to evidence-based interventions
- **Healthy People 2020 main coming events:**
  - Healthy People 2020 Progress Review webinars and the Midcourse Review in 2015

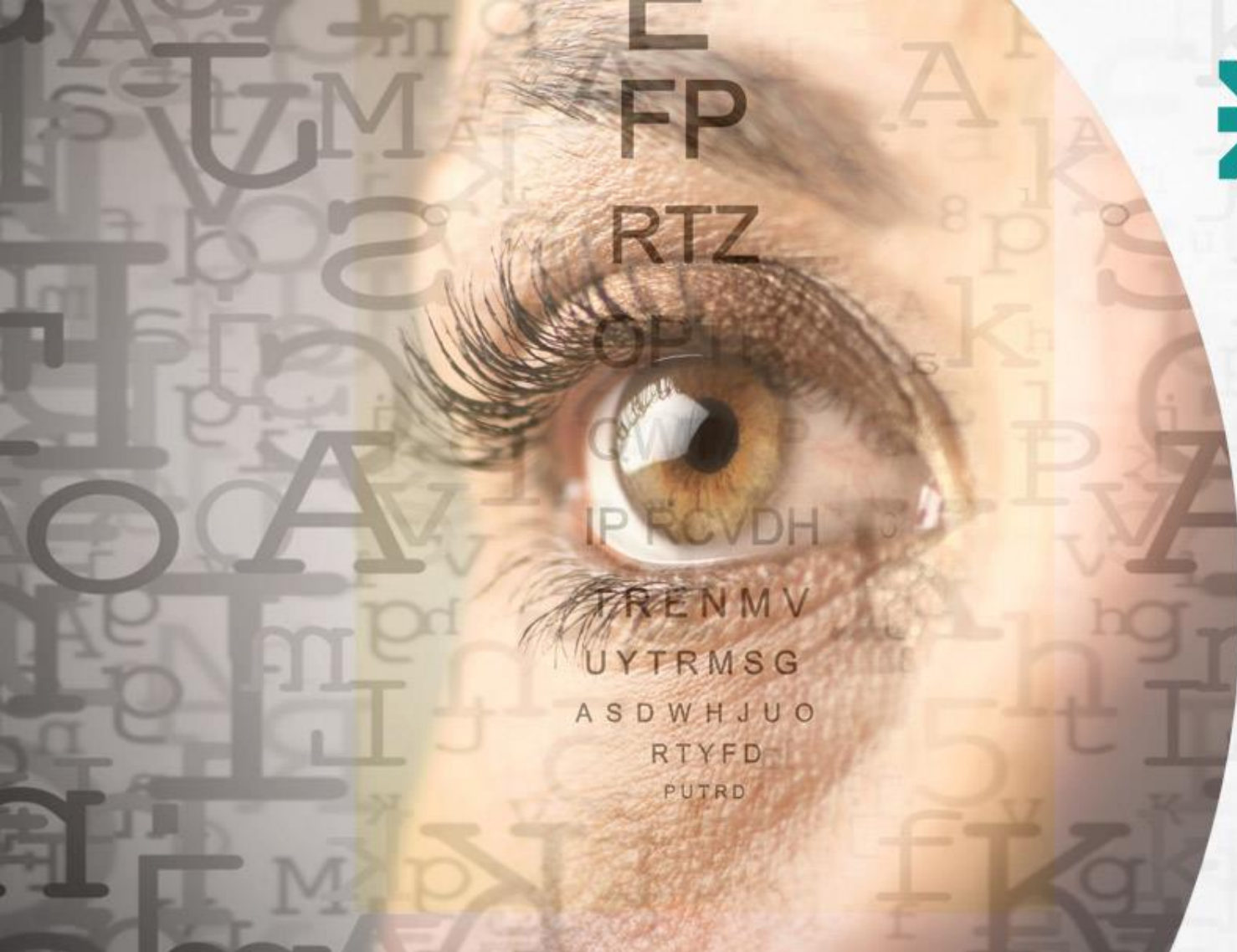




# Online Resources

- **HHS Healthy People portal:**  
[www.healthypeople.gov](http://www.healthypeople.gov)
- **NCHS Healthy People portal:**  
[www.cdc.gov/nchs/healthy\\_people.htm](http://www.cdc.gov/nchs/healthy_people.htm)
- **HP2010 data archive:**  
[wonder.cdc.gov/data2010](http://wonder.cdc.gov/data2010)
- **NCHS surveys and data systems:**  
[http://www.cdc.gov/nchs/data\\_access.htm](http://www.cdc.gov/nchs/data_access.htm)





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Blindness  
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OP  
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TRENMV  
UYTRMSG  
ASDWHJUO  
RTYFD  
PUTRD