



Immunization and Infectious Diseases



CHAPTER 14

Lead Agency

Centers for Disease Control and Prevention

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GOAL:

Prevent disease, disability, and death from infectious diseases, including vaccine-preventable diseases.



The 87 objectives in this chapter cover five general areas in immunization and infectious diseases:

- › **Diseases preventable through universal vaccination.** This area includes objectives monitoring progress in the reduction of vaccine-preventable diseases such as polio, pertussis, rubella, and hepatitis B.
- › **Diseases preventable through targeted vaccination.** The objectives in this area address diseases affecting high-risk populations or certain endemic areas that can be prevented through targeted vaccination.
- › **Infectious diseases and emerging antimicrobial resistance.** The objectives in this area focus on conditions such as tuberculosis and its treatment, hepatitis C, and hospital-acquired infections.
- › **Vaccine coverage and strategy.** These objectives address immunization rates for children, adolescents, and adults.
- › **Vaccine safety.** These objectives address the monitoring of adverse outcomes to vaccination.

All Healthy People 2010 tracking data quoted in this chapter, along with technical information and Operational Definitions for each objective, can be found in the Healthy People 2010 database, DATA2010, available from <http://wonder.cdc.gov/data2010/>.

More information about this Focus Area can be found in the following publications:

- › *Healthy People 2010: Understanding and Improving Health*, available from <http://www.healthypeople.gov/2010/Document/tableofcontents.htm#under>.

- › *Healthy People 2010 Midcourse Review*, available from <http://www.healthypeople.gov/2010/data/midcourse/html/default.htm#FocusAreas>.

Highlights

- › Substantial progress was achieved in objectives for this Focus Area during the past decade [1]. Over 80% of the Immunization and Infectious Diseases objectives with data to measure progress moved toward or achieved their Healthy People 2010 targets (Figure 14-1). However, health disparities of 10% or more were observed among select population groups (Figure 14-2), as highlighted below [2].

Diseases preventable through universal vaccination

Most of the objectives in this area moved toward or achieved the Healthy People 2010 targets.

- › New cases of hepatitis B among children aged 2–18 years (objective 14-1d) declined 92.9% between 1997 and 2008, from 708 to 50 cases, moving toward the 2010 target of 7 cases.
- › Rubella cases (objective 14-1i) declined 97.3% between 1998 and 2008, from 364 to 10 cases, moving toward the 2010 target of 0 cases. Similarly, cases of varicella (chicken pox) among persons under age 18 (objective 14-1k) declined 73.7% between 1999 and 2008, from 2,229,000 to 586,000 cases, moving toward the 2010 target of 223,000 cases.
- › The prevalence of hepatitis B in adults (objectives 14-3a through g) declined for all age groups and high-risk groups. The number of hepatitis B cases among injection drug users (objective 14-3d) declined 80.3%

between 1997 and 2008, from 7,135 to 1,408 cases, exceeding the 2010 target of 1,784 cases.

Hepatitis B—Persons aged 19–24 (objective 14-3a)

- Among racial and ethnic populations, the Hispanic or Latino population had the lowest (best) rate of hepatitis B for persons aged 19–24, 1.4 cases per 100,000 population in 2008. The Asian or Pacific Islander, American Indian or Alaska Native, and non-Hispanic black populations had hepatitis B rates of 3.1, 5.1 and 5.7 cases per 100,000, respectively.
- The rate for the Asian or Pacific Islander population was more than twice the best group rate (that for the Hispanic or Latino population); the rate for the American Indian or Alaska Native population was more than three and a half times the best group rate; and the rate for the non-Hispanic black population was more than four times the best group rate [2].
- The non-Hispanic white population had the lowest (best) rate in 1997 (7.7 cases per 100,000 population), whereas the Hispanic or Latino population had the lowest (best) rate in 2008 (1.4 cases per 100,000). The rates for the Asian or Pacific Islander population were 33.7 cases per 100,000 in 1997 and 3.1 per 100,000 in 2008. Between 1997 and 2008, the disparity between the Asian or Pacific Islander population and the group with the best rate (non-Hispanic white in 1997; Hispanic or Latino in 2008) declined 216 percentage points [3].

Hepatitis B—Persons aged 25–39 (objective 14-3b)

- The Asian or Pacific Islander population had the lowest (best) rate of hepatitis B for persons aged 25–39, 2.7 cases per 100,000 population in 2008. The rate for the non-Hispanic white population, 5.4 cases per 100,000, was twice the best group rate; the American Indian or Alaska Native population had a rate of 9.7 cases per 100,000, more than three and a half times the best group rate; and the rate for the non-Hispanic black population, 10.7 cases per 100,000, was about four times the best group rate [2].

Hepatitis B—Persons aged 40 and over (objective 14-3c)

- The Asian or Pacific Islander population also had the lowest (best) rate of hepatitis B for persons aged 40 and over, 4.0 cases per 100,000 population in 2008. The American Indian or Alaska Native and non-Hispanic black populations had rates of 10.3 and 13.2 cases per 100,000, respectively.
- The rate for the American Indian or Alaska Native population was more than two and

a half times the best group rate (that for the Asian or Pacific Islander population), whereas the rate for the non-Hispanic black population was almost three and a half times the best group rate [2].

- Among persons aged 40 and over, the hepatitis B rate for males was twice the rate for females, 9.5 and 4.6 cases per 100,000 population in 2008, respectively [2].
- › The incidence of bacterial meningitis in young children aged 1–23 months (objective 14-4) declined 34.6% between 1998 and 2008, from 13.0 to 8.5 cases per 100,000 population, exceeding the 2010 target of 8.6 per 100,000.
- › The incidence of invasive pneumococcal infections among young children and older adults (objective 14-5a and b) declined between 1997 and 2008.
 - Among children under age 5 years (objective 14-5a), the incidence of invasive pneumococcal infections decreased 74.0% between 1997 and 2008, from 77 to 20 new cases per 100,000 population, exceeding the 2010 target of 46 per 100,000.
 - Among adults aged 65 and over (objective 14-5b), the incidence of invasive pneumococcal infections decreased 33.9% between 1997 and 2008, from 62 to 41 new cases per 100,000 population, exceeding the 2010 target of 42 per 100,000.
- › The incidence of penicillin-resistant pneumococcal infections among young children under age 5 years (objective 14-5c) declined 56.3% between 1997 and 2008, from 16 to 7 new cases per 100,000, moving toward the 2010 target of 6 per 100,000.

Diseases preventable through targeted vaccination

Two objectives in this area exceeded their Healthy People 2010 targets.

- › The incidence of hepatitis A (objective 14-6) declined 92.0% between 1997 and 2008, from 11.2 to 0.9 new cases per 100,000 population, exceeding the Healthy People 2010 target of 4.3 per 100,000.
 - Among racial and ethnic groups, the non-Hispanic black population had the lowest (best) rate of hepatitis A, 0.4 new cases per 100,000 population in 2008. The rate for the Asian or Pacific Islander population was 1.3 new cases per 100,000, almost three and a half times the best group rate [2]. The rate for Hispanic or Latino population was 1.0 new cases per 100,000, two and a half times the best group rate.
 - The Asian or Pacific Islander population had the lowest (best) group rate in 1997 (4.4 new cases

per 100,000), whereas the non-Hispanic black population had the lowest (best) group rate in 2008 (0.4 per 100,000). The Hispanic or Latino population had rates of 23.4 per 100,000 in 1997 and 1.0 per 100,000 in 2008. Between 1997 and 2008, the disparity between the Hispanic or Latino population and the group with the best rate (Asian or Pacific Islander in 1997; non-Hispanic black in 2008) declined 282 percentage points [3].

- › The incidence of meningococcal disease (objective 14-7) declined 69.2% between 1997 and 2008, from 1.3 to 0.4 new cases per 100,000 population, exceeding the Healthy People 2010 target of 1.0 per 100,000.

Infectious diseases and emerging antimicrobial resistance

Many objectives in this area moved toward their 2010 targets over the past decade.

- › The following objectives exceeded the Healthy People 2010 targets:
 - The incidence of hepatitis C (objective 14-9) decreased 88.0% between 1997 and 2007, from 2.5 to 0.3 new cases per 100,000 population, exceeding the target of 1.0.
 - Treatment for high-risk persons with latent tuberculosis infection (objective 14-13) increased 51.1% between 2000 and 2007, from 45% to 68%, exceeding the target of 57%.
 - Invasive early onset group B streptococcal disease (objective 14-16) declined 70.0% between 1996 and 2008, from 1.0 to 0.3 cases per 1,000 live births, exceeding the target of 0.5.
 - Peptic ulcer hospitalizations (objective 14-17) decreased 39.4% between 1998 and 2007, from 71 to 43 hospitalizations per 100,000 population (age adjusted), exceeding the target of 46.
 - Antibiotics prescribed for ear infections in children under age 5 years (objective 14-18) declined 29.0% from 1996–97 to 2006–07, from 69 to 49 courses per 100 population, exceeding the target of 56.
 - Hospital-acquired infections among adult and infant intensive care patients (objectives 14-20a through e) declined for all categories, exceeding the 2010 targets.
- › The incidence of tuberculosis (TB; objective 14-11) decreased 36.4% between 1998 and 2008, from 6.6 to 4.2 new cases per 100,000 population, moving toward the 2010 target of 1.0 per 100,000.
 - Among racial and ethnic groups, the non-Hispanic white population had the lowest (best) rates of new TB cases, 1.5 per 100,000

population in 1998 and 1.1 per 100,000 in 2008. All other racial and ethnic populations with data to measure disparity had rates that were at least 100% as high as the best rate [2]. The rates for the Hispanic or Latino population were 12.6 new cases per 100,000 population in 1998 and 8.1 per 100,000 in 2008. Between 1998 and 2008, the disparity between the Hispanic or Latino and the non-Hispanic white populations increased 189 percentage points [3].

Vaccination coverage and strategy

Many of the vaccination coverage objectives either achieved or made substantial progress toward their Healthy People 2010 targets.

- › Targets for the vaccination of children aged 19–35 months were exceeded for the *Haemophilus influenzae* type b (Hib), hepatitis B (Hep B), measles-mumps-rubella (MMR), polio, and varicella vaccines (objectives 14-22b through f, respectively). Vaccination rates for pneumococcal conjugate vaccine (PCV) (objective 14-22g) increased 300.0% between 2002 and 2008, from 20% to 80%, moving toward the 2010 target of 90%.
- › All but three states (Montana, Nevada, and Washington) had achieved the 90% target for Hep B vaccination (objective 14-22c) in 2008 (Figure 14-3).
- › Thirty-eight states had achieved the 90% target for MMR vaccination. MMR vaccination rates for the rest of the U.S. were above 85% (Figure 14-4).
- › Vaccination rates for PCV, one of the newest vaccines, still varied among states. Only Connecticut achieved the 90% target for PCV (objective 14-22g) in 2008. The rates were lowest, at or below 70%, in Nevada, Oklahoma, and Wyoming (Figure 14-5).
- › The vaccination targets for children in day care (objective 14-23) were met for diphtheria-tetanus-acellular pertussis (DTap), MMR, polio, and Hib vaccines (objectives 14-23a, b, c, and l, respectively).
- › The proportion of private providers who measured childhood vaccine coverage levels (objective 14-25b) tripled between 1999 and 2009, from 11% to 33%, moving toward the 2010 target of 55%.
- › The percentage of children under age 6 years who participated in population-based immunization registries (objective 14-26) increased 257.1% between 1999 and 2008, from 21% to 75%, exceeding the 2010 target of 62%.
- › Targets for the vaccination of adolescents aged 13–15 were exceeded for Hep B and MMR vaccines (objective 14-27a and b, respectively). The proportion

of adolescents in this age group who received a varicella vaccination (objective 14-27d) increased 91.1% between 1997 and 2008, from 45% to 86%, moving toward the 2010 target of 90%. However, the receipt of a tetanus-diphtheria (Td) booster (objective 14-27c) decreased 23.7% between 1997 and 2008, from 93% to 71%, moving away from the target. The combined tetanus, diphtheria, and pertussis vaccine (Tdap) was introduced in 2006, leading to the decline in Td administration. However, overall tetanus booster vaccination (either through Td or Tdap) had been increasing over time.

Vaccine safety

- › One objective in this area, the proportion of vaccine adverse event reports (VAERS) that were submitted electronically (objective 14-31b) increased 112.5% between 2003 and 2009, from 16% to 34%, exceeding the 2010 target of 30%.

Summary of Progress

- › Figure 14-1 presents a quantitative assessment of progress in achieving the Healthy People 2010 objectives for Immunization and Infectious Diseases [1]. Data to measure progress toward target attainment were available for 80 objectives. Of these:
 - Thirty-three objectives met or exceeded the Healthy People 2010 targets (objectives 14-1a, b, and h; 14-3d; 14-4; 14-5a and b; 14-6; 14-7; 14-9; 14-13; 14-16 through 14-18; 14-20a through e; 14-22b through f; 14-23a through c, and l; 14-26; 14-27a and b; 14-30a; and 14-31b).
 - Thirty-two objectives moved toward their targets. A statistically significant difference between the baseline and the final data points was observed for eight of these objectives (14-1k, 14-19, 14-24a, 14-27d, and 14-29a through d). No significant difference was observed for one objective (14-22a); and data to test the significance of the difference were unavailable for 23 objectives (14-1d, f, i, and j; 14-2; 14-3a, through c, and e through g; 14-5c; 14-10 through 14-12; 14-22g; 14-25b; 14-28a and b; 14-29f and g; 14-30b; and 14-31a).
 - One objective (14-25a) showed no change.
 - Fourteen objectives moved away from their targets. A statistically significant difference between the baseline and final data points was observed for one objective (14-27c). Data to test the significance of the difference were unavailable for 13 objectives (14-1c, e, and g; 14-5d; 14-8; 14-21; 14-23f through j; 14-28c; and 14-29e).

- › Two objectives (14-22h and 14-24b) remained developmental and four objectives (14-14; and 14-23d, e, and k) had no follow-up data available to measure progress [4]. One objective (14-15) was deleted at the Midcourse Review.
- › Figure 14-2 displays health disparities in Immunization and Infectious Diseases from the best group rate for each characteristic at the most recent data point [2]. It also displays changes in disparities from baseline to the most recent data point [3].
 - Ten objectives had statistically significant racial and ethnic health disparities of 10% or more. An additional 11 objectives had racial and ethnic health disparities of 10% or more but lacked data to test significance. Of these 21 objectives, the non-Hispanic white population had the unique best rate for eight objectives (14-11; 14-22g; 14-27d; and 14-29a, b, and e through g), while the white population (including persons of Hispanic origin) had the best rate for five objectives (14-5a through c, 14-7, and 14-16). The Asian or Pacific Islander (objectives 14-3b and c), Hispanic or Latino (objectives 14-3a and 14-22f), and non-Hispanic black (objectives 14-6 and 14-12) populations had the only unique rate for two objectives each. Persons of two or more races had the best group rate for one objective (14-24a). The Hispanic or Latino and non-Hispanic white populations both had the best rate for one objective (14-24a).
 - Five objectives had statistically significant health disparities of 10% or more by sex. Eleven additional objectives had health disparities of 10% or more by sex, but lacked data to test significance. Females had the better rates for 15 of these 16 objectives (14-3a through c; 14-4; 14-5a, c, and d; 14-6; 14-8; 14-11; 14-12; 14-18; 14-22d; and 14-29b and c). Males had the better rate for the remaining objective (14-27a).
 - Persons with at least some college education had the best rates for all four objectives (14-29a through c, and g) with statistically significant health disparities of 10% or more by education level.
 - Persons living in an urban or metropolitan area had better rates than persons living in rural or nonmetropolitan areas for all three objectives (14-27a, c, and d) with statistically significant health disparities of 10% or more by geographic location.
 - Persons with disabilities had better rates than persons without disabilities for four of the five objectives (14-29a through d) with statistically significant health disparities of 10% or more by disability status, whereas persons without disabilities had the better rate for the remaining objective (14-29e).

- Racial and ethnic health disparities of 100% or more, as well as changes in disparities of 100 percentage points or more over time, were observed for several objectives. Most of these were discussed in the Highlights, above.

Transition to Healthy People 2020

For Healthy People 2020, the focus of the Immunization and Infectious Diseases Topic Area was expanded to include vaccinations against seasonal influenza in more defined segments of the population. Also, the Healthy People 2010 objectives were modified to better address healthcare-associated infections. See [HealthyPeople.gov](https://www.healthypeople.gov) for a complete list of Healthy People 2020 topics and objectives.

The Healthy People 2020 Immunization and Infectious Diseases Topic Area objectives can be grouped into several sections:

- › Diseases preventable through universal vaccination
- › Diseases preventable through targeted vaccination
- › Infectious diseases and emerging antimicrobial resistance
- › Vaccination coverage and strategies
- › Surveillance and monitoring.

The differences between the Healthy People 2010 and Healthy People 2020 objectives are summarized below:

- › The Healthy People 2020 Immunization and Infectious Disease Topic Area has a total of 77 objectives, five of which are developmental, whereas the Healthy People 2010 Immunization and Infectious Disease Focus Area had 87 objectives, of which two were developmental.
- › Twenty-nine Healthy People 2010 objectives were retained “as is” [5].
 - **Diseases preventable through universal vaccination.** Nine objectives were retained, including: congenital rubella syndrome (CRS) (objective 14-1a), measles (objective 14-1e), mumps (objective 14-1f), polio wild-type virus (objective 14-1h), rubella (objective 14-1i), varicella (objective 14-1k), chronic hepatitis B perinatal infections (objective 14-2), new invasive pneumococcal infections in children under age 5 years (objective 14-5a), and new invasive pneumococcal infections in persons aged 65 and over (objective 14-5b).

- **Diseases preventable through targeted vaccination.** The two retained objectives in this category are new hepatitis A cases (objective 14-6) and new meningococcal disease cases (objective 14-7).

- **Infectious diseases and emerging antimicrobial resistance.** The following six objectives were retained: new tuberculosis (TB) cases (objective 14-11), curative therapy for TB (objective 14-12), treatment for latent TB (objective 14-13), group B streptococcal disease among newborns (objective 14-16), antibiotic misuse for ear infections (objective 14-18), and antibiotic misuse for common cold (objective 14-19).

- **Vaccination coverage and strategies.** Twelve objectives were retained:

- Six childhood vaccination objectives: 4 doses diphtheria tetanus-acellular pertussis (DTaP) (objective 14-22a), 3 doses hepatitis B (Hep B) (objective 14-22c), 1 dose measles-mumps-rubella (MMR) (objective 14-22d), 3 doses polio (objective 14-22e), 1 dose varicella (objective 14-22f), and 4 doses pneumococcal conjugate vaccine (PCV) (objective 14-22g)
- Public health and private providers who measure childhood vaccination coverage levels (objectives 14-25a and b)
- Population-based immunization registries for children under age 6 years (objective 14-26)
- Hep B vaccination among occupationally exposed workers (objective 14-28c); pneumococcal vaccination among noninstitutionalized adults aged 65 and over (objective 14-29b); and pneumococcal vaccination among non-institutionalized high-risk adults aged 18–64 (objective 14-29d).

- › Thirty Healthy People 2010 objectives were modified to created 28 Healthy People 2020 objectives [6].

- **Diseases preventable through universal vaccination.** Ten objectives were modified:

- *Haemophilus influenzae* type b (Hib) among children under age 5 years (objective 14-1c) and new hepatitis B cases among persons aged 2–18 years (objective 14-1d) were modified due to new measurement units.
- The target population for pertussis (objective 14-1g) was changed from children under age 7 years in Healthy People 2010 to children under age 1 year in Healthy People 2020.
- Three hepatitis B infection objectives among high-risk adults aged 19–24, 25–39, and 40 and over (objectives 14-3a through c) were consolidated into one objective for adults aged 19 and over.

- Hepatitis B infection among injection drug users and men who have sex with men (objectives 14-3d and f) were modified because of changes in the case definition.
 - Invasive penicillin-resistant pneumococcal infections among children under age 5 years and adults aged 65 and over (objectives 14-5c and d) were modified because of changes in the case definition.
 - **Infectious diseases and emerging antimicrobial resistance.** Two objectives were modified: the data source for hepatitis C (objective 14-9) was changed, and timely laboratory confirmation of tuberculosis cases (objective 14-14) was modified due to a change in the measurement unit and the data source.
 - **Vaccination coverage and strategies.** Seventeen objectives were modified:
 - Vaccination with 3 doses Hib (objective 14-22b) was modified due to a change in the data collection method.
 - The dosage for influenza vaccination among children aged 6–23 months (objective 14-22h) was modified from 1 dose for the developmental Healthy People 2010 objective to 1–2 doses, depending on age appropriateness, for the measurable Healthy People 2020 objective.
 - All five vaccination objectives for kindergarten (DTaP, MMR, polio, Hep B, and varicella; objectives 14-23f through j, respectively) were modified to exclude children in licensed day care settings.
 - Complete vaccination coverage among children (objective 14-24a) was updated to be consistent with the current guidelines established by the Advisory Committee for Immunization Practices. The revised series reflects a recommendation of: at least 4 doses DTaP, at least 3 doses polio, at least 1 dose MMR, at least 3 or 4 doses Hib (depending on vaccine brand), at least 3 doses Hep B, at least 1 dose varicella, and at least 4 doses PCV.
 - Among teens aged 13–15, the tetanus and diphtheria (Td) booster (objective 14-27c) was changed to the combined tetanus-diphtheria-acellular-pertussis (Tdap) booster, and the dosage was changed for the varicella vaccine from 1 or more (objective 14-27d) to 2 doses.
 - Two Hep B vaccination objectives among high-risk adults including long-term hemodialysis patients and men who have sex with men (objectives 14-28a and b) were reverted to developmental status [4].
 - The data source for influenza and pneumococcal vaccination among institutionalized adults (objective 14-29f) was changed in Healthy People 2020. All four influenza vaccination objectives (14-29a, c, e, and g) were modified to conform to a new definition of seasonal flu.
 - **Vaccine Safety.** Active surveillance for vaccine safety via large linked databases (objective 14-31a) was modified to address the scientific knowledge on vaccine safety and adverse events. This objective is developmental in Healthy People 2020.
- › Twenty-five Healthy People 2010 objectives were archived [7].
- **Diseases preventable through universal vaccination.** Five objectives were archived: diphtheria (objective 14-1b) and tetanus (objective 14-1j) among persons under age 35, hepatitis B among heterosexually active persons (objective 14-3e), hepatitis B among occupationally exposed workers (objective 14-3g), and bacterial meningitis in young children (objective 14-4).
 - **Diseases preventable through targeted vaccination.** One objective (14-8), Lyme disease, was archived because it was dependent on the availability of the vaccine for Lyme disease, which was pulled off the market by the manufacturer.
 - **Infectious diseases and emerging antimicrobial resistance.** Seven objectives were archived due to changes in program priorities: identification of persons with chronic hepatitis C (objective 14-10); hospitalizations for peptic ulcer (objective 14-17); four hospital intensive care unit-acquired infections objectives (objectives 14-20a, and c through e); and antimicrobial use in intensive care unit (objective 14-21).
 - **Vaccination coverage and strategies.** Seven vaccination (DTaP, MMR, polio, Hep B, varicella, PCV, and Hib) objectives for day care (objectives 14-23a through e, and 14-23k and l) were archived due to lack of a data source; and two vaccination objectives for teens (Hep B and MMR, objectives 14-27a and b) were archived.
 - **Vaccine safety.** Three objectives were archived: vaccine-associated paralytic polio (objective 14-30a), febrile seizures following pertussis vaccines (objective 14-30b), and the number of vaccine adverse event reports (VAERS) that are submitted electronically (objective 14-31b).
- › The Healthy People 2010 objective on prevention services for international travelers (objective 14-15) was deleted at the Midcourse Review due to lack of a data source. The objective intended to track adolescents aged 13–15 years who received the recommended vaccines (objective 14-24b), which remained developmental, was removed during the Healthy People 2020 planning process, also due to lack of a data source.

› Twenty new objectives were added to the Healthy People 2020 Immunization and Infectious Diseases Topic Area:

- **Diseases preventable through universal vaccination.** One objective, pertussis among adolescents, was added.
 - **Vaccination coverage and strategies.** Fifteen new objectives were added to this section: 2 doses hepatitis A vaccine, 1 birth dose Hep B vaccine, 2 or 3 doses rotavirus vaccine, 1 dose meningococcal vaccine (MCV) among adolescents, 3 doses human papillomavirus vaccine (HPV) among female adolescents, five influenza (flu) vaccine objectives, zoster (shingles) vaccination, Hep B vaccination among injection drug users (developmental), the number of states collecting kindergarten vaccination records using minimum standards, and State participation in the Immunization Information System for adolescent vaccination. An objective that measures zero doses of vaccine among children aged 19–35 months was also added.
 - **Infectious diseases and emerging antimicrobial resistance.** Four new objectives were added: electronic surveillance of rabies, influenza-virus resistance to antiviral agents, awareness of hepatitis C infection status and hepatitis B testing within minority communities experiencing health disparities (developmental).
- › One objective, central line-associated bloodstream infection among intensive care unit patients (objective 14-20b), was moved to the Healthcare-Associated Infections Topic Area.

[Appendix D](#), “A Crosswalk Between Objectives From Healthy People 2010 to Healthy People 2020,” summarizes the changes between the two decades of objectives, reflecting new knowledge and direction for this area.

Data Considerations

The data source used to track the four vaccination coverage objectives among adolescents, (objectives 14-27a through d) was the National Health Interview Survey for data years between 1997 and 2003. Starting in 2006, the data source was the newly implemented National Immunization Survey—Teen (NIS-Teen).

Education and income are the primary measures of socioeconomic status in Healthy People 2010. Most data systems used in Healthy People 2010 define income as a family’s income before taxes. To facilitate comparisons among groups and over time, while adjusting for family size and for inflation, Healthy People 2010 categorizes income using the poverty thresholds developed by the

Census Bureau. Thus, the three categories of family income that are primarily used are:

- › Poor—below the Federal poverty level
- › Near poor—100% to 199% of the Federal poverty level
- › Middle/high income—200% or more of the Federal poverty level.

These categories may be overridden by considerations specific to the data system, in which case they are modified as appropriate. See *Healthy People 2010: General Data Issues*, referenced below.

In general, data on educational attainment are presented for persons aged 25 and over, consistent with guidance given by the Census Bureau. However, because of the requirements of the different data systems, the age groups used to calculate educational attainment for any specific objective may differ from the age groups used to report the data for other Healthy People 2010 objectives, as well as from select populations within the same objective. Therefore, the reader is urged to exercise caution in interpreting the data by educational attainment shown in the Health Disparities Table. See *Healthy People 2010: General Data Issues*, referenced below.

Additional information on data issues is available from the following sources:

- › All Healthy People 2010 tracking data can be found in the Healthy People 2010 database, (DATA2010), available from <http://wonder.cdc.gov/data2010/>.
- › Detailed information about the data and data sources used to support these objectives can be found in the Operational Definitions on the DATA 2010 website, available from <http://wonder.cdc.gov/data2010/focusod.htm>.
- › More information on statistical issues related to Healthy People tracking and measurement can be found in the [Technical Appendix](#) and in *Healthy People 2010: General Data Issues*, which is available in the General Data Issues section of the NCHS Healthy People website under Healthy People 2010; see http://www.cdc.gov/nchs/healthy_people/hp2010/hp2010_data_issues.htm.

Notes

1. Displayed in the Progress Chart (Figure 14-1), the percent of targeted change achieved expresses the difference between the baseline and the final value relative to the initial difference between the baseline and the Healthy People 2010 target. As such, it is a

relative measure of progress toward attaining the Healthy People 2010 target. See the [Reader's Guide](#) for more information. When standard errors were available, the difference between the baseline and the final value was tested at the 0.05 level of significance. See the Figure 14-1 footnotes, as well as the [Technical Appendix](#), for more detail.

2. Information about disparities among select populations is shown in the Health Disparities Table (Figure 14-2). Disparity from the best group rate is defined as the percent difference between the best group rate and each of the other group rates for a characteristic. For example, racial and ethnic health disparities are measured as the percent difference between the best racial and ethnic group rate and each of the other racial and ethnic group rates. Similarly, disparities by sex are measured as the percent difference between the better group rate (e.g., female) and the rate for the other group (e.g., male). Some objectives are expressed in terms of favorable events or conditions that are to be increased, while others are expressed in terms of adverse events or conditions that are to be reduced. To facilitate comparison of health disparities across different objectives, disparity is measured only in terms of adverse events or conditions. For comparability across objectives, objectives that are expressed in terms of favorable events or conditions are re-expressed using the adverse event or condition for the purpose of computing disparity, but they are not otherwise restated or changed. For example, objective 1-1, to increase the proportion of persons with health insurance (e.g., 72% of the American Indian or Alaska Native population under age 65 had some form of health insurance in 2008), is expressed in terms of the percentage of persons without health insurance (e.g., $100\% - 72\% = 28\%$ of the American Indian or Alaska Native population under age 65 did not have any form of health insurance in 2008) when the disparity from the best group rate is calculated. See the [Reader's Guide](#) for more information. When standard errors were available, the difference between the best group rate and each of the other group rates was tested at the 0.05 level of significance. See the Figure 14-2 footnotes, as well as the [Technical Appendix](#), for more detail.
3. The change in disparity is estimated by subtracting the disparity at baseline from the disparity at the most recent data point and, therefore, is expressed in percentage points. See the [Reader's Guide](#) for more information. When standard errors were available, the change in disparity was tested at the 0.05 level of significance. See the Figure 14-2 footnotes, as well as the [Technical Appendix](#), for more detail.
4. To be included in Healthy People 2010, an objective must have a national data source that provides a baseline and at least one additional data point for tracking progress. Some objectives lacked baseline data at the time of their development but had a potential data source and were considered of sufficient national importance to be included in Healthy People. These are called “developmental” objectives. When data become available, a developmental objective is moved to measurable status and a Healthy People target can be set.
5. As of the Healthy People 2020 launch, Healthy People 2020 objectives that were retained “as is” from Healthy People 2010 had no change in the numerator or denominator definitions, the data source(s), or the data collection methodology. These include objectives that were developmental in Healthy People 2010 and are developmental in Healthy People 2020, and for which no numerator information is available.
6. As of the Healthy People 2020 launch, objectives that were modified from Healthy People 2010 had some change in the numerator or denominator definitions, the data source(s), or the data collection methodology. These include objectives that went from developmental in Healthy People 2010 to measurable in Healthy People 2020, or vice versa.
7. Archived objectives had at least one data point in Healthy People 2010 but were not carried forward into Healthy People 2020.

Comprehensive Summary of Objectives: Immunization and Infectious Diseases

Objective	Description	Data Source or Objective Status
14-1a	Vaccine-preventable diseases—Congenital rubella syndrome (no. cases, <1 year)	National Congenital Rubella Syndrome Registry (NCRSR), CDC, NCIRD.
14-1b	Vaccine-preventable diseases—Diphtheria (no. cases, <35 years)	National Notifiable Diseases Surveillance System (NNDSS), CDC, NCPHI.
14-1c	Vaccine-preventable diseases— <i>Haemophilus influenzae</i> type b (Hib) and unknown (no. cases, <5 years)	National Notifiable Diseases Surveillance System (NNDSS), CDC, NCPHI; Active Bacterial Core Surveillance (ABCs), CDC, NCIRD.
14-1d	Vaccine-preventable diseases—Hepatitis B (no. cases, 2–18 years)	National Notifiable Diseases Surveillance System (NNDSS), CDC, NCPHI.
14-1e	Vaccine-preventable diseases—Measles (no. cases)	National Notifiable Diseases Surveillance System (NNDSS), CDC, NCPHI.
14-1f	Vaccine-preventable diseases—Mumps (no. cases)	National Notifiable Diseases Surveillance System (NNDSS), CDC, NCPHI.
14-1g	Vaccine-preventable diseases—Pertussis (no. cases, <7 years)	National Notifiable Diseases Surveillance System (NNDSS), CDC, NCPHI.
14-1h	Vaccine-preventable diseases—Polio (wild-type virus) (no. cases)	National Notifiable Diseases Surveillance System (NNDSS), CDC, NCPHI.
14-1i	Vaccine-preventable diseases—Rubella (no. cases)	National Notifiable Diseases Surveillance System (NNDSS), CDC, NCPHI.
14-1j	Vaccine-preventable diseases—Tetanus (no. cases, <35 years)	National Notifiable Diseases Surveillance System (NNDSS), CDC, NCPHI.
14-1k	Vaccine-preventable diseases—Varicella (chicken pox) (no. cases in thousands, <18 years)	National Health Interview Survey (NHIS), CDC, NCHS.
14-2	Perinatal hepatitis B infections in infants and young children (no. cases, 1–24 months)	Perinatal Hepatitis B Prevention Program, CDC, NCHHSTP; National Vital Statistics System—Nativity (NVSS-N), CDC, NCHS.
14-3a	Hepatitis B in adults 19–24 years (cases per 100,000)	National Notifiable Diseases Surveillance System (NNDSS), CDC, NCPHI.
14-3b	Hepatitis B in adults 25–39 years (cases per 100,000)	National Notifiable Diseases Surveillance System (NNDSS), CDC, NCPHI.
14-3c	Hepatitis B in adults 40+ years (cases per 100,000)	National Notifiable Diseases Surveillance System (NNDSS), CDC, NCPHI.
14-3d	Hepatitis B in injection drug users (no. cases)	National Notifiable Diseases Surveillance System (NNDSS), CDC, NCPHI.
14-3e	Hepatitis B in heterosexually active persons (no. cases)	National Notifiable Diseases Surveillance System (NNDSS), CDC, NCPHI.
14-3f	Hepatitis B in men who have sex with men (no. cases)	National Notifiable Diseases Surveillance System (NNDSS), CDC, NCPHI.
14-3g	Hepatitis B in occupationally exposed workers (no. cases)	National Notifiable Diseases Surveillance System (NNDSS), CDC, NCPHI.
14-4	Bacterial meningitis in young children (new cases per 100,000 population, 1–23 months)	Active Bacterial Core Surveillance (ABCs), CDC, NCIRD.
14-5a	Invasive pneumococcal infections—Children (new cases per 100,000 population, <5 years)	Active Bacterial Core Surveillance (ABCs), CDC, NCIRD.
14-5b	Invasive pneumococcal infections—Adults (new cases per 100,000 population, 65+ years)	Active Bacterial Core Surveillance (ABCs), CDC, NCIRD.
14-5c	Penicillin-resistant invasive pneumococcal infections—Children (new cases per 100,000 population, <5 years)	Active Bacterial Core Surveillance (ABCs), CDC, NCIRD.
14-5d	Penicillin-resistant invasive pneumococcal infections—Adults (new cases per 100,000 population, 65+ years)	Active Bacterial Core Surveillance (ABCs), CDC, NCIRD.
14-6	Hepatitis A (new cases per 100,000 population)	National Notifiable Diseases Surveillance System (NNDSS), CDC, NCPHI.
14-7	Meningococcal disease (new cases per 100,000 population)	Active Bacterial Core Surveillance (ABCs), CDC, NCIRD; National Notifiable Diseases Surveillance System (NNDSS), CDC, NCPHI.

Comprehensive Summary of Objectives: Immunization and Infectious Diseases (continued)

Objective	Description	Data Source or Objective Status
14-8	Lyme disease in endemic States (new cases per 100,000 population)	National Notifiable Diseases Surveillance System (NNDSS), CDC, NCPHI.
14-9	Hepatitis C (new cases per 100,000 population)	Sentinel Counties Study of Viral Hepatitis, CDC, NCHHSTP.
14-10	States reporting chronic hepatitis C infection (no. States)	State health department databases of persons with HCV infection; National Health and Nutrition Examination Survey (NHANES), CDC, NCHS.
14-11	Tuberculosis (new cases per 100,000 population)	National TB Surveillance System, CDC, NCHHSTP.
14-12	Curative therapy for tuberculosis	National TB Surveillance System, CDC, NCHHSTP.
14-13	Treatment for high-risk persons with latent tuberculosis infection	Aggregate Reports for Tuberculosis Program Evaluation, CDC, NCHHSTP.
14-14	Timely laboratory confirmation of tuberculosis cases—Average number of days to report 75% of cases	Survey of State Public Health Laboratories, CDC, NCHSTP.
14-15	Prevention services for international travelers	Deleted at the Midcourse Review.
14-16	Invasive early onset group B streptococcal disease (per 1,000 live births)	National Notifiable Diseases Surveillance System (NNDSS), CDC, NCPHI; Active Bacterial Core Surveillance (ABCs), CDC, NCIRD.
14-17	Peptic ulcer hospitalizations (age adjusted, per 100,000 population)	National Hospital Discharge Survey (NHDS), CDC, NCHS.
14-18	Antibiotics prescribed for ear infections in children (courses prescribed per 100 population, <5 years)	National Ambulatory Medical Care Survey (NAMCS), CDC, NCHS; National Hospital Ambulatory Medical Care Survey (NHAMCS), CDC, NCHS.
14-19	Antibiotics prescribed for common cold (courses prescribed per 100,000 population)	National Ambulatory Medical Care Survey (NAMCS), CDC, NCHS; National Hospital Ambulatory Medical Care Survey (NHAMCS), CDC, NCHS.
14-20a	Hospital-acquired infections among adult intensive care patients—Catheter-associated urinary tract infection (per 1,000 days use)	Baseline data: National Nosocomial Infections Surveillance System (NNIS), CDC, NCPDCID. Final data: National Healthcare Safety Network (NHSN), CDC, NCPDCID.
14-20b	Hospital-acquired infections among adult intensive care patients—Central line-associated bloodstream infection (per 1,000 days use)	Baseline data: National Nosocomial Infections Surveillance System (NNIS), CDC, NCPDCID. Final data: National Healthcare Safety Network (NHSN), CDC, NCPDCID.
14-20c	Hospital-acquired infections among adult intensive care patients—Ventilator-associated pneumonia (per 1,000 days use)	Baseline data: National Nosocomial Infections Surveillance System (NNIS), CDC, NCPDCID. Final data: National Healthcare Safety Network (NHSN), CDC, NCPDCID.
14-20d	Hospital-acquired infections among infants in intensive care weighing ≤1,000 grams at birth—Central line-associated bloodstream infection (per 1,000 days use)	Baseline data: National Nosocomial Infections Surveillance System (NNIS), CDC, NCPDCID. Final data: National Healthcare Safety Network (NHSN), CDC, NCPDCID.
14-20e	Hospital-acquired infections among infants in intensive care weighing ≤1,000 grams at birth—Ventilator-associated pneumonia (per 1,000 days use)	Baseline data: National Nosocomial Infections Surveillance System (NNIS), CDC, NCPDCID. Final data: National Healthcare Safety Network (NHSN), CDC, NCPDCID.
14-21	Antimicrobial use in intensive care units (daily doses per 1,000 patient days)	National Nosocomial Infections Surveillance System (NNIS), CDC, NCPDCID.
14-22a	Vaccination of children 19–35 months—4 doses diphtheria-tetanus-acellular pertussis (DTaP) vaccine	National Immunization Survey (NIS): CDC, NCIRD; CDC, NCHS.
14-22b	Vaccination of children 19–35 months—3 doses <i>Haemophilus influenzae</i> type b (Hib) vaccine	National Immunization Survey (NIS): CDC, NCIRD; CDC, NCHS.
14-22c	Vaccination of children 19–35 months—3 doses hepatitis B (Hep B) vaccine	National Immunization Survey (NIS): CDC, NCIRD; CDC, NCHS.
14-22d	Vaccination of children 19–35 months—1 dose measles-mumps-rubella (MMR) vaccine	National Immunization Survey (NIS): CDC, NCIRD; CDC, NCHS.

Comprehensive Summary of Objectives: Immunization and Infectious Diseases (continued)

Objective	Description	Data Source or Objective Status
14-22e	Vaccination of children 19–35 months—3 doses polio vaccine	National Immunization Survey (NIS): CDC, NCIRD; CDC, NCHS.
14-22f	Vaccination of children 19–35 months—1 dose varicella vaccine	National Immunization Survey (NIS): CDC, NCIRD; CDC, NCHS.
14-22g	Vaccination of children 19–35 months—4 doses pneumococcal conjugate vaccine (PCV)	National Immunization Survey (NIS): CDC, NCIRD; CDC, NCHS.
14-22h	Vaccination of children 6–23 months—1 dose influenza vaccine	Developmental.
14-23a	Vaccine coverage of children in day care—Diphtheria-tetanus-acellular pertussis (DTaP) vaccine	Annual Immunization Assessment Reports, CDC, NCIRD.
14-23b	Vaccine coverage of children in day care—Measles-mumps-rubella (MMR) vaccine	Annual Immunization Assessment Reports, CDC, NCIRD.
14-23c	Vaccine coverage of children in day care—Polio vaccine	Annual Immunization Assessment Reports, CDC, NCIRD.
14-23d	Vaccine coverage of children in day care—Hepatitis B (Hep B) vaccine	Day Care and Head Start Assessment Reports, CDC, NCIRD.
14-23e	Vaccine coverage of children in day care—Varicella vaccine	Day Care and Head Start Assessment Reports, CDC, NCIRD.
14-23f	Vaccine coverage of children in kindergarten—Diphtheria-tetanus-acellular pertussis (DTaP) vaccine	School Immunization Assessment Survey, CDC, NCIRD.
14-23g	Vaccine coverage of children in kindergarten—Measles-mumps-rubella (MMR) vaccine	School Immunization Assessment Survey, CDC, NCIRD.
14-23h	Vaccine coverage of children in kindergarten—Polio vaccine	School Immunization Assessment Survey, CDC, NCIRD.
14-23i	Vaccine coverage of children in kindergarten—Hepatitis B (Hep B) vaccine	School Immunization Assessment Survey, CDC, NCIRD.
14-23j	Vaccine coverage of children in kindergarten—Varicella vaccine	School Immunization Assessment Survey, CDC, NCIRD.
14-23k	Vaccine coverage of children in daycare—Pneumococcal conjugate vaccine (PCV)	Day Care and Head Start Assessment Reports, CDC, NCIRD.
14-23l	Vaccine coverage of children in licensed daycare facilities— <i>Haemophilus influenzae</i> type b (Hib) vaccine	Day Care and Head Start Assessment Program, CDC, NCIRD.
14-24a	Fully immunized young children 19–35 months	National Immunization Survey (NIS): CDC, NCIRD; CDC, NCHS.
14-24b	Fully immunized young children and adolescents 13–15 years	Developmental.
14-25a	Providers who measure childhood vaccination coverage levels—Public health providers	Annual Immunization Assessment Reports, CDC, NCIRD.
14-25b	Providers who measure childhood vaccination coverage levels—Private providers	Annual Immunization Assessment Reports, CDC, NCIRD.
14-26	Children <6 years participating in population-based immunization registries	Annual Immunization Assessment Reports, CDC, NCIRD.
14-27a	Vaccination coverage among adolescents 13–15 years—3+ doses hepatitis B (Hep B) vaccine	Baseline data: National Health Interview Survey (NHIS), CDC, NCHS. Final data: National Immunization Survey—Teen (NIS–Teen): CDC, NCIRD; CDC, NCHS.
14-27b	Vaccination coverage among adolescents 13–15 years—2+ doses measles-mumps-rubella (MMR) vaccine	Baseline data: National Health Interview Survey (NHIS), CDC, NCHS. Final data: National Immunization Survey—Teen (NIS–Teen): CDC, NCIRD; CDC, NCHS.
14-27c	Vaccination coverage among adolescents 13–15 years—1+ doses tetanus-diphtheria (Td) booster	Baseline data: National Health Interview Survey (NHIS), CDC, NCHS. Final data: National Immunization Survey—Teen (NIS–Teen): CDC, NCIRD; CDC, NCHS.

Comprehensive Summary of Objectives: Immunization and Infectious Diseases (continued)

Objective	Description	Data Source or Objective Status
14-27d	Vaccination coverage among adolescents 13–15 years—1+ doses varicella (excluding adolescents who have had varicella)	Baseline data: National Health Interview Survey (NHIS), CDC, NCHS. Final data: National Immunization Survey—Teen (NIS–Teen): CDC, NCIRD; CDC, NCHS.
14-28a	Hepatitis B (Hep B) vaccination among high-risk groups—Long-term hemodialysis patients	Annual Survey of Chronic Hemodialysis Centers: CDC, NCHHSTP; CMS.
14-28b	Hepatitis B (Hep B) vaccination among high-risk groups—Men who have sex with men	Young Men's Survey, CDC, NCHHSTP.
14-28c	Hepatitis B (Hep B) vaccination among high-risk groups—Occupationally exposed workers	Periodic vaccine coverage surveys, CDC, NCPDCID.
14-29a	Vaccination of noninstitutionalized high-risk older adults—Influenza vaccine in past 12 months (age adjusted, 65+ years)	National Health Interview Survey (NHIS), CDC, NCHS.
14-29b	Vaccination of noninstitutionalized high-risk older adults—Pneumococcal vaccine ever received (age adjusted, 65+ years)	National Health Interview Survey (NHIS), CDC, NCHS.
14-29c	Vaccination of noninstitutionalized high-risk adults—Influenza vaccine in past 12 months (age adjusted, 18–64 years)	National Health Interview Survey (NHIS), CDC, NCHS.
14-29d	Vaccination of noninstitutionalized high-risk adults—Pneumococcal vaccine ever received (age adjusted, 18–64 years)	National Health Interview Survey (NHIS), CDC, NCHS.
14-29e	Vaccination of adults in long-term care or nursing homes—Influenza vaccine in past 12 months (age adjusted, 18+ years)	National Nursing Home Survey (NNHS), CDC, NCHS.
14-29f	Vaccination of adults in long-term care or nursing homes—Pneumococcal vaccine ever received (age adjusted, 18+ years)	National Nursing Home Survey (NNHS), CDC, NCHS.
14-29g	Vaccination of health care workers—Influenza vaccine in past 12 months (age adjusted, 18–64 years)	National Health Interview Survey (NHIS), CDC, NCHS.
14-30a	Adverse events from vaccinations—Associated paralytic polio (number of events)	National Notifiable Diseases Surveillance System (NNDS), CDC, NCPHI.
14-30b	Adverse events from vaccinations—Febrile seizures caused by pertussis vaccines (number of events)	Vaccine Adverse Event Reporting System (VAERS): CDC, OD; FDA. Vaccine Safety Datalink (VSD), CDC, OD.
14-31a	Active surveillance for vaccine safety via large linked databases (number in millions)	Vaccine Safety Datalink (VSD), CDC, OD.
14-31b	Vaccine adverse event reports (VAERS) submitted electronically	Vaccine Adverse Event Reporting System (VAERS): CDC, OD; FDA.

Figure 14-1. Progress Toward Target Attainment for Focus Area 14: Immunization and Infectious Diseases

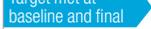
Objective	Percent of targeted change achieved ²	2010 Target	Baseline (Year)	Final (Year)	Baseline vs. Final		
					Difference ³	Statistically Significant ⁴	Percent Change ⁵
14-1. Vaccine-preventable diseases (no. cases)							
a. Congenital rubella syndrome (<1 year)		0	7 (1998)	0 (2008)	-7	Not tested	-100.0%
b. Diphtheria (<35 years)		0	1 (1998)	0 (2008)	-1	Not tested	-100.0%
c. <i>Haemophilus influenzae</i> type b and unknown (<5 years)		0	163 (1998)	193 (2008)	30	Not tested	18.4%
d. Hepatitis B (2–18 years)		7	708 (1997)	50 (2008)	-658	Not tested	-92.9%
e. Measles		0	74 (1998)	115 (2008)	41	Not tested	55.4%
f. Mumps		0	666 (1998)	421 (2008)	-245	Not tested	-36.8%
g. Pertussis (<7 years)		2,000	3,417 (1998)	4,166 (2008)	749	Not tested	21.9%
h. Polio (wild-type virus)		0	0 (1998)	0 (2008)	0	Not tested	*
i. Rubella		0	364 (1998)	10 (2008)	-354	Not tested	-97.3%
j. Tetanus (<35 years)		0	14 (1998)	6 (2008)	-8	Not tested	-57.1%
k. Varicella (chicken pox) (no. cases in thousands, <18 years)		223	2,229 (1999)	586 (2008)	-1,643	Yes	-73.7%
14-2. Perinatal hepatitis B infections in infants and young children (no. cases, 1–24 months)		400	1,682 (1995)	761 (2008)	-921	Not tested	-54.8%
14-3. Hepatitis B							
a. Adults 19–24 years (cases per 100,000)		1.8	18.5 (1997)	3.9 (2008)	-14.6	Not tested	-78.9%
b. Adults 25–39 years (cases per 100,000)		5.2	20.5 (1997)	7.1 (2008)	-13.4	Not tested	-65.4%
c. Adults 40+ years (cases per 100,000)		3.7	14.7 (1997)	6.9 (2008)	-7.8	Not tested	-53.1%
d. Injection drug users (no. cases)		1,784	7,135 (1997)	1,408 (2008)	-5,727	Not tested	-80.3%
e. Heterosexually active persons (no. cases)		1,223	15,021 (1997)	7,563 (2008)	-7,458	Not tested	-49.7%
f. Men who have sex with men (no. cases)		1,302	5,209 (1997)	1,439 (2008)	-3,770	Not tested	-72.4%
g. Occupationally exposed workers (no. cases)		60	239 (1997)	77 (2008)	-162	Not tested	-67.8%
14-4. Bacterial meningitis in young children (new cases per 100,000 population, 1–23 months)		8.6	13.0 (1998)	8.5 (2008)	-4.5	Not tested	-34.6%

Figure 14-1. Progress Toward Target Attainment for Focus Area 14: Immunization and Infectious Diseases (continued)

Objective	Percent of targeted change achieved ²	2010 Target	Baseline (Year)	Final (Year)	Baseline vs. Final			
					Difference ³	Statistically Significant ⁴	Percent Change ⁵	
14-5. Invasive pneumococcal infections (new cases per 100,000 population)								
a. Children (<5 years)	183.9%	46	77 (1997)	20 (2008)	-57	Not tested	-74.0%	
b. Adults (65+ years)	105.0%	42	62 (1997)	41 (2008)	-21	Not tested	-33.9%	
c. Penicillin-resistant—Children (<5 years)	90.0%	6	16 (1997)	7 (2008)	-9	Not tested	-56.3%	
d. Penicillin-resistant—Adults (65+ years)		7	8 (1997)	10 (2008)	2	Not tested	25.0%	
14-6. Hepatitis A (new cases per 100,000 population)	149.3%	4.3	11.2 (1997)	0.9 (2008)	-10.3	Not tested	-92.0%	
14-7. Meningococcal disease (new cases per 100,000 population)	300.0%	1.0	1.3 (1997)	0.4 (2008)	-0.9	Not tested	-69.2%	
14-8. Lyme disease in endemic States (new cases per 100,000 population)		9.7	17.4 (1992–96)	50.1 (2008)	32.7	Not tested	187.9%	
14-9. Hepatitis C (new cases per 100,000 population)	146.7%	1.0	2.5 (1997)	0.3 (2007)	-2.2	Not tested	-88.0%	
14-10. States reporting chronic hepatitis C infection (no. States)	61.9%	40	19 (2003)	32 (2008)	13	Not tested	68.4%	
14-11. Tuberculosis (new cases per 100,000 population)	42.9%	1.0	6.6 (1998)	4.2 (2008)	-2.4	Not tested	-36.4%	
14-12. Curative therapy for tuberculosis	56.3%	90%	74% (1996)	83% (2007)	9	Not tested	12.2%	
14-13. Treatment for high-risk persons with latent tuberculosis infection	191.7%	57%	45% (2000)	68% (2007)	23	Not tested	51.1%	
14-16. Invasive early onset group B streptococcal disease (per 1,000 live births)	140.0%	0.5	1.0 (1996)	0.3 (2008)	-0.7	Not tested	-70.0%	
14-17. Peptic ulcer hospitalizations (age adjusted, per 100,000 population)	112.0%	46	71 (1998)	43 (2007)	-28	Yes	-39.4%	
14-18. Antibiotics prescribed for ear infections in children (courses prescribed per 100 population, <5 years)	153.8%	56	69 (1996–97)	49 (2006–07)	-20	Yes	-29.0%	
14-19. Antibiotics prescribed for common cold (courses prescribed per 100,000 population)	85.0%	1,268	2,535 (1996–97)	1,458 (2006–07)	-1,077	Yes	-42.5%	
14-20. Hospital-acquired infections among adult intensive care patients (per 1,000 days use)								
a. Catheter-associated urinary tract infection	740.0%	5.0	5.5 (1995–98)	1.8 (2009)	-3.7	Not tested	-67.3%	
b. Central line-associated bloodstream infection	780.0%	5.0	5.5 (1995–98)	1.6 (2009)	-3.9	Not tested	-70.9%	
c. Ventilator-associated pneumonia	700.0%	5.3	5.9 (2002–03)	1.7 (2009)	-4.2	Not tested	-71.2%	

Figure 14-1. Progress Toward Target Attainment for Focus Area 14: Immunization and Infectious Diseases (continued)

Objective	Percent of targeted change achieved ²					2010 Target	Baseline (Year)	Final (Year)	Baseline vs. Final			
	0	25	50	75	100				Difference ³	Statistically Significant ⁴	Percent Change ⁵	
14-20. Hospital-acquired infections among infants in intensive care weighing ≤1,000 grams at birth												
d. Central line-associated bloodstream infection (per 1,000 days use)						11.0	12.2 (1995–98)	3.3 (2009)	-8.9	Not tested	-73.0%	
e. Ventilator-associated pneumonia (per 1,000 days use)						2.7	3.0 (2002–03)	1.6 (2009)	-1.4	Not tested	-46.7%	
14-21. Antimicrobial use in intensive care units (daily doses per 1,000 patient days)						85.1	106.4 (1996–2003)	108.3 (1996–2004)	1.9	Not tested	1.8%	
14-22. Vaccination of children 19–35 months												
a. 4 doses diphtheria-tetanus-acellular pertussis (DTaP) vaccine						90%	84% (1998)	85% (2008)	1	No	1.2%	
b. 3 doses <i>Haemophilus influenzae</i> type b (Hib) vaccine						90%	93% (1998)	91% (2008)	-2	Yes	-2.2%	
c. 3 doses hepatitis B (Hep B) vaccine						90%	87% (1998)	94% (2008)	7	Yes	8.0%	
d. 1 dose measles-mumps-rubella (MMR) vaccine						90%	92% (1998)	92% (2008)	0	No	0.0%	
e. 3 doses polio vaccine						90%	91% (1998)	94% (2008)	3	Yes	3.3%	
f. 1 dose varicella vaccine						90%	43% (1998)	91% (2008)	48	Yes	111.6%	
g. 4 doses pneumococcal conjugate vaccine (PCV)						90%	20% (2002)	80% (2008)	60	Not tested	300.0%	
14-23. Vaccine coverage of children in day care												
a. Diphtheria-tetanus-acellular pertussis (DTaP) vaccine						95%	96% (1997–98)	95% (2000)	-1	Not tested	-1.0%	
b. Measles-mumps-rubella (MMR) vaccine						95%	89% (1997–98)	96% (2000)	7	Not tested	7.9%	
c. Polio vaccine						95%	96% (1997–98)	95% (2000)	-1	Not tested	-1.0%	
Vaccine coverage of children in kindergarten												
f. Diphtheria-tetanus-acellular pertussis (DTaP) vaccine						95%	95% (2002–03)	93% (2008)	-2	Not tested	-2.1%	
g. Measles-mumps-rubella (MMR) vaccine						95%	96% (2002–03)	92% (2008)	-4	Not tested	-4.2%	
h. Polio vaccine						95%	96% (2002–03)	94% (2008)	-2	Not tested	-2.1%	
i. Hepatitis B (Hep B) vaccine						95%	96% (2002–03)	94% (2008)	-2	Not tested	-2.1%	
j. Varicella vaccine						95%	93% (2002–03)	91% (2008)	-2	Not tested	-2.2%	
Vaccine coverage of children in licensed daycare facilities												
l. <i>Haemophilus influenzae</i> type b (Hib) vaccine						90%	94% (2003–04)	N/A ⁶	N/A ⁶	N/A ⁶	N/A ⁶	

Figure 14-1. Progress Toward Target Attainment for Focus Area 14: Immunization and Infectious Diseases (continued)

Objective	Percent of targeted change achieved ²	2010 Target	Baseline (Year)	Final (Year)	Baseline vs. Final		
					Difference ³	Statistically Significant ⁴	Percent Change ⁵
14-24a. Fully immunized young children 19–35 months	71.4%	80%	73% (1998)	78% (2008)	5	Yes	6.8%
14-25. Providers who measure childhood vaccination coverage levels							
a. Public health providers	0.0%	55%	40% (1999)	40% (2009)	0	Not tested	0.0%
b. Private providers	50.0%	55%	11% (1999)	33% (2009)	22	Not tested	200.0%
14-26. Children <6 years participating in population-based immunization registries	131.7%	62%	21% (1999)	75% (2008)	54	Not tested	257.1%
14-27. Vaccination coverage among adolescents 13–15 years							
a. 3+ doses hepatitis B (Hep B) vaccine	104.8%	90%	48% (1997)	92% (2008)	44	Yes	91.7%
b. 2+ doses measles-mumps-rubella (MMR) vaccine	200.0%	90%	89% (1997)	91% (2008)	2	Yes	2.2%
c. 1+ doses tetanus-diphtheria (Td) booster	-23.7%	90%	93% (1997)	71% (2008)	-22	Yes	-23.7%
d. 1+ doses varicella (excluding adolescents who have had varicella)	91.1%	90%	45% (1997)	86% (2008)	41	Yes	91.1%
14-28. Hepatitis B (Hep B) vaccination among high-risk groups							
a. Long-term hemodialysis patients	45.5%	90%	35% (1995)	60% (2001)	25	Not tested	71.4%
b. Men who have sex with men	7.8%	60%	9% (1994–99)	13% (1998–2000)	4	Not tested	44.4%
c. Occupationally exposed workers	-4.5%	93%	67% (1995)	64% (2008)	-3	Not tested	-4.5%
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%
Vaccination of noninstitutionalized high-risk adults (age adjusted, 18–64 years)							
c. Influenza vaccine in past 12 months	17.6%	60%	26% (1998)	32% (2008)	6	Yes	23.1%
d. Pneumococcal vaccine ever received	14.9%	60%	13% (1998)	20% (2008)	7	Yes	53.8%
Vaccination of adults in long-term care or nursing homes (age adjusted, 18+ years)							
e. Influenza vaccine in past 12 months	-3.4%	90%	59% (1997)	57% (2004)	-2	Not tested	-3.4%
f. Pneumococcal vaccine ever received	20.0%	90%	25% (1997)	38% (2004)	13	Not tested	52.0%
Vaccination of health care workers (age adjusted, 18–64 years)							
g. Influenza vaccine in past 12 months	30.4%	60%	37% (2000)	44% (2008)	7	Not tested	18.9%

Figure 14-1. Progress Toward Target Attainment for Focus Area 14: Immunization and Infectious Diseases (continued)

Objective	Percent of targeted change achieved ²				2010 Target	Baseline (Year)	Final (Year)	Baseline vs. Final		
	0	25	50	75				100	Difference ³	Statistically Significant ⁴
14-30. Adverse events from vaccinations (number of events)										
a. Associated paralytic polio					0	5 (1997)	0 (2006)	-5	Not tested	-100.0%
b. Febrile seizures caused by pertussis vaccines					57	115 (1998)	73 (2006)	-42	Not tested	-36.5%
14-31a. Active surveillance for vaccine safety via large linked databases (number in millions)					13	6 (1999)	9 (2009)	3	Not tested	50.0%
14-31b. Vaccine adverse events reports (VAERS) submitted electronically					30%	16% (2003)	34% (2009)	18	Not tested	112.5%

NOTES

See the [Reader's Guide](#) for more information on how to read this figure. See DATA2010 at <http://wonder.cdc.gov/data2010> for all HealthyPeople 2010 tracking data. Tracking data are not available for objectives 14-14, 14-22h, 14-23d, 14-23e, 14-23k, and 14-24b. Objective 14-15 was deleted at the Midcourse Review.

FOOTNOTES

¹ Movement away from target is not quantified using the percent of targeted change achieved. See [Technical Appendix](#) for more information.

² Percent of targeted change achieved = $\frac{\text{Final value} - \text{Baseline value}}{\text{Healthy People 2010 target} - \text{Baseline value}} \times 100$.

³ Difference = Final value – Baseline value. Differences between percents (%) are measured in percentage points.

⁴ When estimates of variability are available, the statistical significance of the difference between the final value and the baseline value is assessed at the 0.05 level. See [Technical Appendix](#) for more information.

⁵ Percent change = $\frac{\text{Final value} - \text{Baseline value}}{\text{Baseline value}} \times 100$.

⁶ Data beyond the baseline are not available; difference, statistical significance, and percent change cannot be calculated. See [Technical Appendix](#) for more information.

* Percent change cannot be calculated. See [Technical Appendix](#) for more information.

DATA SOURCES

- 14-1a. National Congenital Rubella Syndrome Registry (NCRSR), CDC, NCIRD.
- 14-1b. National Notifiable Diseases Surveillance System (NNDSS), CDC, NCPHI.
- 14-1c. National Notifiable Diseases Surveillance System (NNDSS), CDC, NCPHI; Active Bacterial Core Surveillance (ABCs), CDC, NCIRD.
- 14-1d–j. National Notifiable Diseases Surveillance System (NNDSS), CDC, NCPHI.
- 14-1k. National Health Interview Survey (NHIS), CDC, NCHS.
- 14-2. Perinatal Hepatitis B Prevention Program, CDC, NCHHSTP; National Vital Statistics System—Nativity (NVSS-N), CDC, NCHS.
- 14-3a–g. National Notifiable Diseases Surveillance System (NNDSS), CDC, NCPHI.
- 14-4. Active Bacterial Core Surveillance (ABCs), CDC, NCIRD.
- 14-5a–d. Active Bacterial Core Surveillance (ABCs), CDC, NCIRD.
- 14-6. National Notifiable Diseases Surveillance System (NNDSS), CDC, NCPHI.
- 14-7. Active Bacterial Core Surveillance (ABCs), CDC, NCIRD; National Notifiable Diseases Surveillance System (NNDSS), CDC, NCPHI.
- 14-8. National Notifiable Diseases Surveillance System (NNDSS), CDC, NCPHI.
- 14-9. Sentinel Counties Study of Viral Hepatitis, CDC, NCHHSTP.
- 14-10. State health department databases of persons with HCV infection; National Health and Nutrition Examination Survey (NHANES), CDC, NCHS.
- 14-11–12. National TB Surveillance System, CDC, NCHHSTP.
- 14-13. Aggregate Reports for Tuberculosis Program Evaluation, CDC, NCHHSTP.
- 14-16. National Notifiable Diseases Surveillance System (NNDSS), CDC, NCPHI; Active Bacterial Core Surveillance (ABCs), CDC, NCIRD.
- 14-17. National Hospital Discharge Survey (NHDS), CDC, NCHS.
- 14-18–19. National Ambulatory Medical Care Survey (NAMCS), CDC, NCHS; National Hospital Ambulatory Medical Care Survey (NHAMCS), CDC, NCHS.

Figure 14-1. Progress Toward Target Attainment for Focus Area 14: Immunization and Infectious Diseases (continued)

14-20a-e.	Baseline data: National Nosocomial Infections Surveillance System (NNIS), CDC, NCPDCID. Final data: National Healthcare Safety Network (NHSN), CDC, NCPDCID.
14-21.	National Nosocomial Infections Surveillance System (NNIS), CDC, NCPDCID.
14-22a-g.	National Immunization Survey (NIS): CDC, NCIRD; CDC, NCHS.
14-23a-c.	Annual Immunization Assessment Reports, CDC, NCIRD.
14-23f-j.	School Immunization Assessment Survey, CDC, NCIRD.
14-23l.	Day Care and Head Start Assessment Program, CDC, NCIRD.
14-24a.	National Immunization Survey (NIS): CDC, NCIRD; CDC, NCHS.
14-25a-b.	Annual Immunization Assessment Reports, CDC, NCIRD.
14-26.	Annual Immunization Assessment Reports, CDC, NCIRD.
14-27a-d.	Baseline data: National Health Interview Survey (NHIS), CDC, NCHS. Final data: National Immunization Survey—Teen (NIS-Teen): CDC, NCIRD; CDC, NCHS.
14-28a.	Annual Survey of Chronic Hemodialysis Centers: CDC, NCHHSTP; CMS.
14-28b.	Young Men's Survey, CDC, NCHHSTP.
14-28c.	Periodic vaccine coverage surveys, CDC, NCPDCID.
14-29a-d.	National Health Interview Survey (NHIS), CDC, NCHS.
14-29e-g.	National Nursing Home Survey (NNHS), CDC, NCHS.
14-30a.	National Notifiable Diseases Surveillance System (NNDSS), CDC, NCPHI.
14-30b.	Vaccine Adverse Event Reporting System (VAERS): CDC, OD; FDA. Vaccine Safety Datalink (VSD), CDC, OD.
14-31a.	Vaccine Safety Datalink (VSD), CDC, OD.
14-31b.	Vaccine Adverse Event Reporting System (VAERS): CDC, OD; FDA.

Figure 14-2. Health Disparities Table for Focus Area 14: Immunization and Infectious Diseases

Disparities from the best group rate for each characteristic at the most recent data point and changes in disparity from the baseline to the most recent data point.

Population-based objective	Race and Ethnicity							Summary index	Sex		Education				Income			Location		Disability		
	American Indian or Alaska Native	Asian	Native Hawaiian or Other Pacific Islander	Two or more races	Hispanic or Latino	Black, not Hispanic	White, not Hispanic		Female	Male	Less than high school	High school graduate	At least some college	Summary index	Poor	Near poor	Middle/high income	Summary index	Urban or metropolitan	Rural or nonmetropolitan	Persons with disabilities	Persons without disabilities
14-3a. Hepatitis B in adults 19–24 years [cases per 100,000 population (pop.)] (1997, 2008) [†]	↑↑	↓			B ⁱ	↓		B ⁱ														
b. Hepatitis B in adults 25–39 years (cases per 100,000 pop.) (1997, 2008) [†]	↑↑	B ^{i,ii}				↑		B														
c. Hepatitis B in adults 40+ years (cases per 100,000 pop.) (1997, 2008) [†]	↑↑	B ^{i,ii}			↓	↓		B	↓													
14-4. Bacterial meningitis in young children (new cases per 100,000 pop., 1–23 months) (1998, 2008) [†]						↓	B ⁱⁱⁱ	B	↑													
14-5a. Invasive pneumococcal infections in children (new cases per 100,000 pop., <5 years) (1997, 2008) [†]		ii				↓	B ⁱⁱⁱ	B														
b. Invasive pneumococcal infections in adults (new cases per 100,000 pop., 65+ years) (1997, 2008) [†]						↓	B ⁱⁱⁱ	B														
c. Penicillin-resistant invasive pneumococcal infections in children (new cases per 100,000 pop., <5 years) (1997, 2008) ^{1†}						↓	B ⁱⁱⁱ	B														
d. Penicillin-resistant invasive pneumococcal infections in adults (new cases per 100,000 pop., 65+ years) (1997, 2008) ^{1†}							B ⁱⁱⁱ	B ⁱ														
14-6. Hepatitis A (new cases per 100,000 pop.) (1997, 2008) [†]	↓↓	ii			↓	B ⁱ	↓	B	↓													
14-7. Meningococcal disease (new cases per 100,000 pop.) (1997, 2008) [†]						↓	B ⁱⁱⁱ	B	B													
14-8. Lyme disease in endemic States (5-year average, new cases per 100,000 pop.) (1992–96, 2008) [†]								B	↑													
14-9. Hepatitis C (new cases per 100,000 pop.) (1997, 2007) ^{2†}						iii	iii		B ⁱ													
14-11. Tuberculosis (new cases per 100,000 pop.) (1998, 2008) [†]					↑↑	↑	B	B														
14-12. Curative therapy for tuberculosis (1996, 2007) [†]					↓	B ⁱ	↓	B														
14-16. Invasive early onset group B streptococcal disease (per 1,000 live births) (1996, 2008) [†]						↑	B ⁱⁱⁱ															
14-17. Peptic ulcer hospitalizations (age adjusted, per 100,000 pop.) (1998, 2007) [*]						iii	B ⁱⁱⁱ	B														

Figure 14-2. Health Disparities Table for Focus Area 14: Immunization and Infectious Diseases (continued)

Population-based objective	Race and Ethnicity							Summary index	Sex		Education				Income			Location		Disability		
	American Indian or Alaska Native	Asian	Native Hawaiian or Other Pacific Islander	Two or more races	Hispanic or Latino	Black, not Hispanic	White, not Hispanic		Female	Male	Less than high school	High school graduate	At least some college	Summary index	Poor	Near poor	Middle/high income	Summary index	Urban or metropolitan	Rural or nonmetropolitan	Persons with disabilities	Persons without disabilities
14-18. Antibiotics prescribed for ear infections in children (courses prescribed per 100 pop., <5 years) (1996–97, 2006–07)*						iii	iii		B													
14-19. Antibiotics prescribed for common cold (courses prescribed per 100,000 pop.) (1996–97, 2006–07) ^{3‡}						↓iii	B ⁱⁱⁱ															
14-22a. Vaccination of children 19–35 months—4 doses diphtheria-tetanus-acellular pertussis (DTaP) vaccine (1998, 2008) ^{4,5‡}	b	b		b	B ⁱ	↓	B			B						B						
b. Vaccination of children 19–35 months—3 doses <i>Haemophilus influenzae</i> type b (Hib) vaccine (1998, 2008) ^{4,5‡}	b	b		b	b	↓	B		B	B ⁱ						B						
c. Vaccination of children 19–35 months—3 doses hepatitis B (Hep B) vaccine (1998, 2008) ^{4,5‡}	b	b		b	b	↓	B ⁱ		B	B												
d. Vaccination of children 19–35 months—1 dose measles-mumps-rubella (MMR) vaccine (1998, 2008) ^{4,5‡}									B						B							
e. Vaccination of children 19–35 months—3 doses polio vaccine (1998, 2008) ^{4,5‡}		b		b	b	↓	B ⁱ		B	B ⁱ												
f. Vaccination of children 19–35 months—1 dose varicella vaccine (1998, 2008) ^{4,5‡}	b	b		B ⁱ		↓			B	B					B	B ⁱ						
g. Vaccination of children 19–35 months—4 doses pneumococcal conjugate vaccine (PCV) (2002, 2008) ^{6*}		b		b		↑	B ⁱ		v	B						B						
14-24a. Fully immunized young children 19–35 months (1998, 2008) ^{4,5*}	b	b		B ⁱ					B ⁱ	B						B						
14-27a. Vaccination coverage among adolescents 13–15 years—3+ doses of hepatitis B (Hep B) vaccine (1997, 2008) ^{7,8*}										B ⁱ									B			B
b. Vaccination coverage among adolescents 13–15 years—2+ doses of measles, mumps, rubella (MMR) vaccine (1997, 2008) ^{7,8*}				b	v	v	B		v	B						B ⁱ	b		B			
c. Vaccination coverage among adolescents 13–15 years—1+ doses of tetanus-diphtheria (Td) booster (1997, 2008) ^{7,8*}	b	b		b	b	v	B		B	v					v	v	B	iv	B	v		
d. Vaccination coverage among adolescents 13–15 years—1+ doses of varicella vaccine (exclud. those with varicella) (1997, 2008) ^{7,8*}					b	↑↑	B			B						B ⁱ	b		B	↑↑		
14-29a. Vaccination of noninstitutionalized high-risk older adults—Influenza vaccine in past 12 months (age adjusted, 65+ years) (1998, 2008) ^{7*}							B	iv	B ⁱ				B								B	
b. Vaccination of noninstitutionalized high-risk older adults—Pneumococcal vaccine ever received (age adjusted, 65+ years) (1998, 2008) ^{7*}					↑		B	↑	B ⁱ				B								B	

Figure 14-2. Health Disparities Table for Focus Area 14: Immunization and Infectious Diseases (continued)

Population-based objective	Race and Ethnicity							Summary index	Sex		Education				Income				Location			Disability	
	American Indian or Alaska Native	Asian	Native Hawaiian or Other Pacific Islander	Two or more races	Hispanic or Latino	Black, not Hispanic	White, not Hispanic		Female	Male	Less than high school	High school graduate	At least some college	Summary index	Poor	Near poor	Middle/high income	Summary index	Urban or metropolitan	Rural or nonmetropolitan	Persons with disabilities	Persons without disabilities	
c. Vaccination of noninstitutionalized high-risk adults—Influenza vaccine in past 12 months (age adjusted, 18–64 years) (1998, 2008) ^{7*}	b	B ⁱ		B				B													B		
d. Vaccination of noninstitutionalized high-risk older adults—Pneumococcal vaccine ever re-ceived (age adjusted, 18–64 years) (1998, 2008) ^{7*}				b			B ⁱ	B	B		B	B									B		
e. Vaccination of adults in long-term care or nursing homes—Influenza vaccine in past 12 months (age adjusted, 18+ years) (1997, 2004) ^{9*}	b						B															vi	B ^{vi}
f. Vaccination of adults in long-term care or nursing homes—Pneumococcal vaccine ever received (age adjusted, 18+ years) (1997, 2004) ^{9*}	b				↑	↑	B	B	v												vi	B ^{vi}	
g. Vaccination of health care workers—Influenza vaccine in past 12 months (age adjusted, 18–64 years) (2000, 2008) [*]		b					B	B ⁱ		↑	↑	B	↑								B	v	

NOTES

See DATA2010 at <http://wonder.cdc.gov/data2010> for all Healthy People 2010 tracking data. Disparity data are either unavailable or not applicable for objectives 14-1a through k, 14-2, 14-3d through g, 14-10, 14-13, 14-14, 14-20a through e, 14-21, 14-22h, 14-23a through l, 14-24b, 14-25a and b, 14-26, 14-28a through c, 14-30a and b, and 14-31a and b. Objective 14-15 was deleted at Midcourse Review.

Years in parentheses represent the baseline and most recent data years (if available).

Disparity from the best group rate is defined as the percent difference between the best group rate and each of the other group rates for a characteristic (e.g., race and ethnicity). The summary index is the average of these percent differences for a characteristic. Change in disparity is estimated by subtracting the disparity at baseline from the disparity at the most recent data point. Change in the summary index is estimated by subtracting the summary index at baseline from the summary index at the most recent data point. See [Technical Appendix](#) for more information.

LEGEND

The “best” group rate at the most recent data point.

- B** The group with the best rate for specified characteristic.
- b** Most favorable group rate for specified characteristic, but reliability criterion not met.
- Reliability criterion for best group rate not met, or data available for only one group.

Percent difference from the best group rate

Disparity from the best group rate at the most recent data point.

- Less than 10%, or difference not statistically significant (when estimates of variability are available).
- 10%–49%
- 50%–99%
- 100% or more

Changes in disparity over time are shown when:

- (a) disparities data are available at both baseline and most recent time points; (b) data are not for the group(s) indicated by “B” or “b” at either time point; and (c) the change is greater than or equal to 10 percentage points and statistically significant, or when the change is greater than or equal to 10 percentage points and estimates of variability were not available. See [Technical Appendix](#).

Increase in disparity (percentage points)

- ↑** 10–49 points
- ↑↑** 50–99 points
- ↑↑↑** 100 points or more

Decrease in disparity (percentage points)

- ↓** 10–49 points
- ↓↓** 50–99 points
- ↓↓↓** 100 points or more

Availability of Data

- Data not available.
- Characteristic not selected for this objective.

Figure 14-2. Health Disparities Table for Focus Area 14: Immunization and Infectious Diseases (continued)

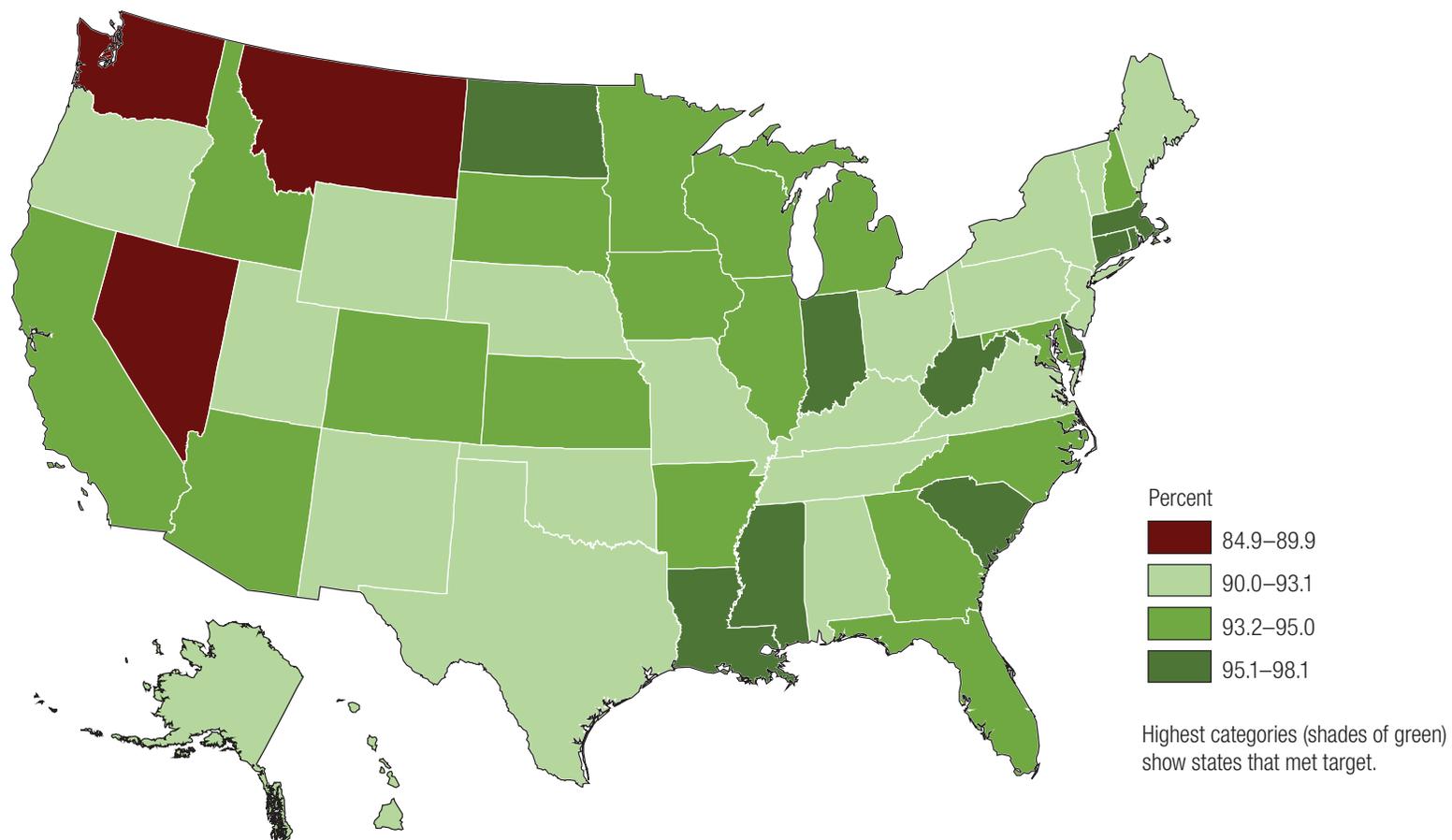
FOOTNOTES

- * Measures of variability were available. Thus, the variability of best group rates was assessed, and statistical significance was tested. Disparities of 10% or more are displayed when the differences from the best group rate are statistically significant at the 0.05 level. Changes in disparities over time are indicated by arrows when the changes are greater than or equal to 10 percentage points and are statistically significant at the 0.05 level. See [Technical Appendix](#).
- † Measures of variability were not available. Thus, the variability of best group rates was not assessed, and statistical significance could not be tested. Nonetheless, disparities and changes in disparities over time are displayed according to their magnitude. See [Technical Appendix](#).
- ‡ Measures of variability were available only for the most recent data. Thus, the variability of best group rates was assessed only for the most recent data, and statistical significance was tested only for the most recent data. Disparities of 10% or more are displayed when the differences from the best group rate are statistically significant at the 0.05 level. Changes in disparities over time are displayed according to their magnitude, since measures of variability were not available at baseline and therefore statistical significance of changes in disparity could not be tested. See [Technical Appendix](#).
- ¹ Most recent data by race and ethnicity are for 2002.
- ² Most recent data by sex and race and ethnicity are for 2003.
- ³ Baseline data by race and ethnicity are for 1998–99. Measures of variability by sex were available at both data points, see footnote * above.
- ⁴ Baseline data by race and ethnicity are for 2000. Measures of variability by sex and income were available at both data points, see footnote * above.
- ⁵ Baseline data by income exclude "middle/high income" for comparability with most recent data year.
- ⁶ Baseline data by income are for 2004.
- ⁷ Baseline data by race and ethnicity are for 1999.
- ⁸ Most recent data by disability status are for 2003.
- ⁹ Baseline data by disability status are for 2004.
- ⁱ The group with the best rate at the most recent data point is different from the group with the best rate at baseline. Both rates met the reliability criterion. See [Technical Appendix](#).
- ⁱⁱ Data are for Asian or Pacific Islander.
- ⁱⁱⁱ Data include persons of Hispanic origin.
- ^{iv} Change in the summary index cannot be assessed. See [Technical Appendix](#).
- ^v Reliability criterion for best group rate not met, or data available for only one group, at baseline. Change in disparity cannot be assessed. See [Technical Appendix](#).
- ^{vi} For this objective, only severe disabilities are considered as disabilities.

DATA SOURCES

- 14-3a–c. National Notifiable Diseases Surveillance System (NNDSS), CDC, NCPHI.
- 14-4. Active Bacterial Core Surveillance (ABCs), CDC, NCIRD.
- 14-5a–d. Active Bacterial Core Surveillance (ABCs), CDC, NCIRD.
- 14-6. National Notifiable Diseases Surveillance System (NNDSS), CDC, NCPHI.
- 14-7. Active Bacterial Core Surveillance (ABCs), CDC, NCIRD; National Notifiable Diseases Surveillance System (NNDSS), CDC, NCPHI.
- 14-8. National Notifiable Diseases Surveillance System (NNDSS), CDC, NCPHI.
- 14-9. Sentinel Counties Study of Viral Hepatitis, CDC, NCHHSTP.
- 14-11–14-12. National TB Surveillance System, CDC, NCHHSTP.
- 14-16. National Notifiable Diseases Surveillance System (NNDSS), CDC, NCPHI; Active Bacterial Core Surveillance (ABCs), CDC, NCIRD.
- 14-17. National Hospital Discharge Survey (NHDS), CDC, NCHS.
- 14-18–14-19. National Ambulatory Medical Care Survey (NAMCS), CDC, NCHS; National Hospital Ambulatory Medical Care Survey (NHAMCS), CDC, NCHS.
- 14-22a–g. National Immunization Survey (NIS): CDC, NCIRD; CDC, NCHS.
- 14-24a. National Immunization Survey (NIS): CDC, NCIRD; CDC, NCHS.
- 14-27a–d. Baseline data: National Health Interview Survey (NHIS), CDC, NCHS.
Final data: National Immunization Survey—Teen (NIS-Teen): CDC, NCIRD; CDC, NCHS.
- 14-29a–d. National Health Interview Survey (NHIS), CDC, NCHS.
- 14-29e–f. National Nursing Home Survey (NNHS), CDC, NCHS.
- 14-29g. National Health Interview Survey (NHIS), CDC, NCHS.

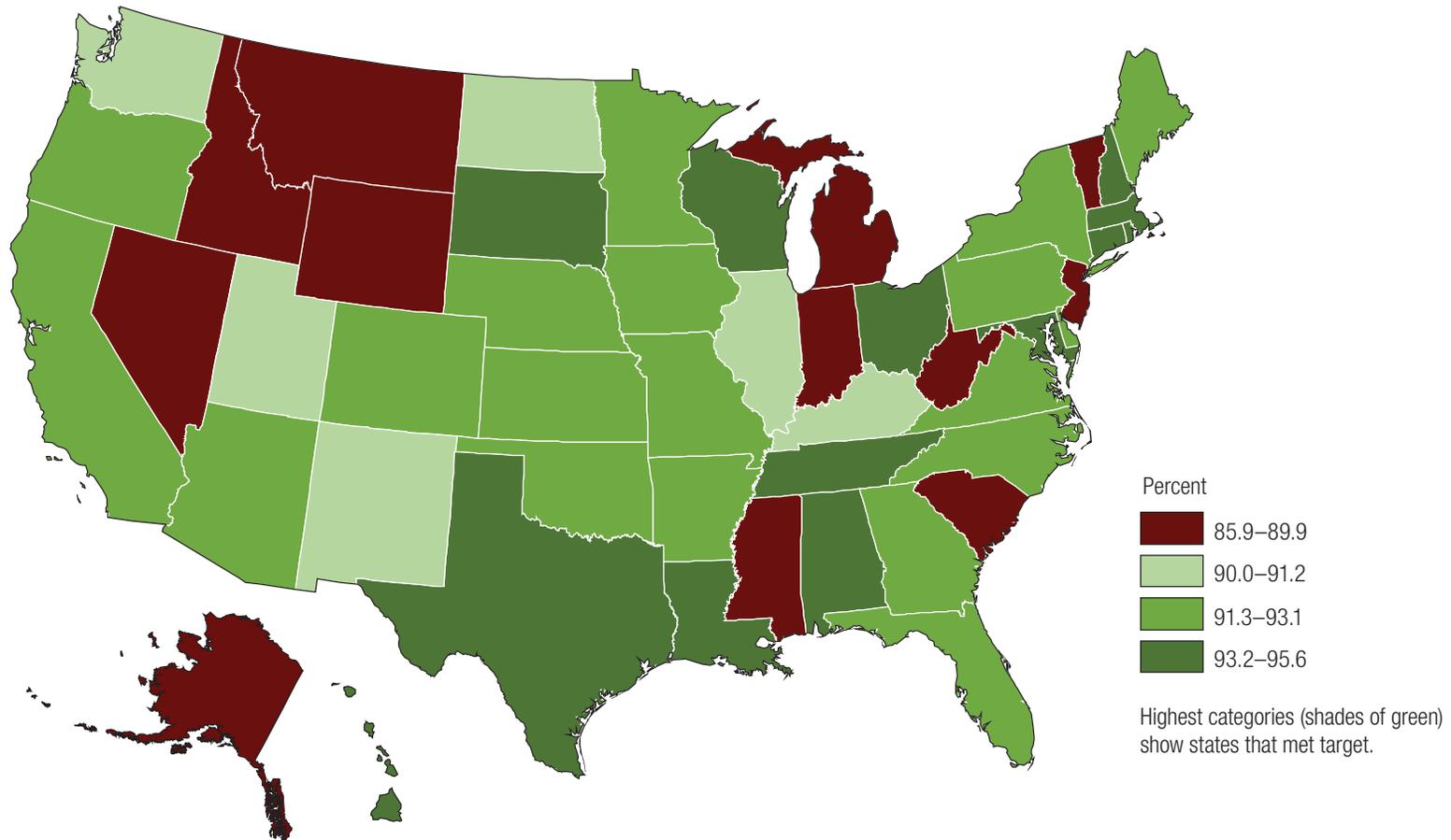
Figure 14-3. Vaccination of Children 19–35 Months—3 Doses Hepatitis B (HepB) Vaccine, 2008
Healthy People 2010 objective 14-22c • Target = 90 percent



NOTE: Rates are displayed by a modified Jenks classification for U.S. states.

SOURCE: National Immunization Survey (NIS); CDC, NCIRD; CDC, NCHS

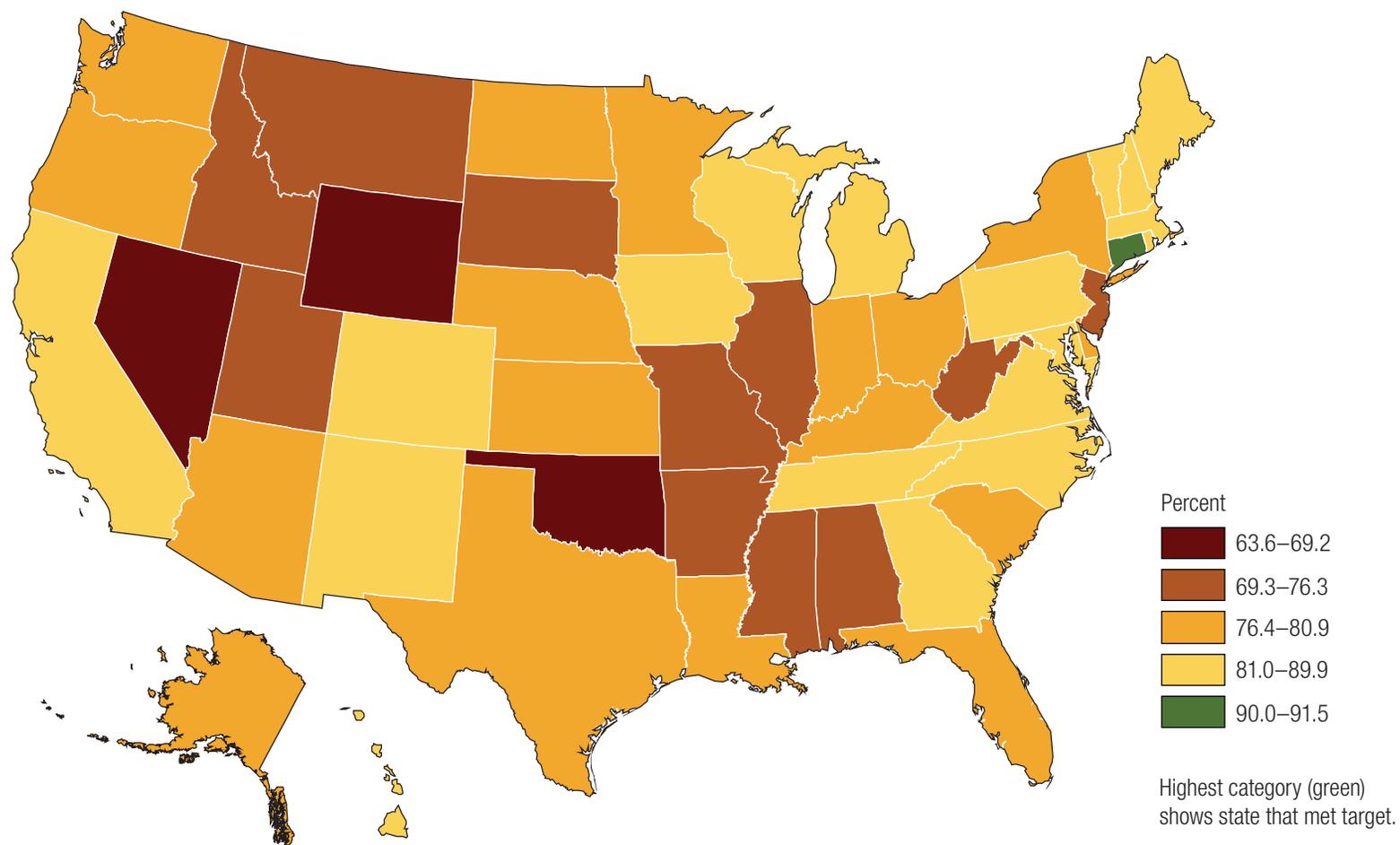
Figure 14-4. Vaccination of Children 19–35 Months—1 Dose Measles-Mumps-Rubella (MMR) Vaccine, 2008
Healthy People 2010 objective 14-22d • Target = 90 percent



NOTE: Rates are displayed by a modified Jenks classification for U.S. states.

SOURCE: National Immunization Survey (NIS): CDC, NCIRD; CDC, NCHS.

Figure 14-5. Vaccination of Children 19–35 Months—4 Doses Pneumococcal Conjugate Vaccine (PCV), 2008
Healthy People 2010 objective 14-22g • Target = 90 percent



NOTE: Rates are displayed by a modified Jenks classification for U.S. states.

SOURCE: National Immunization Survey (NIS); CDC, NCIRD; CDC, NCHS.

