# Table of Contents

<table>
<thead>
<tr>
<th>Chapter</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Highlights</td>
<td>1</td>
</tr>
<tr>
<td>1 Introduction and Methods</td>
<td>15</td>
</tr>
<tr>
<td>2. Quality of Health Care</td>
<td>31</td>
</tr>
<tr>
<td>Effectiveness</td>
<td>34</td>
</tr>
<tr>
<td>Cancer</td>
<td>34</td>
</tr>
<tr>
<td>Diabetes</td>
<td>40</td>
</tr>
<tr>
<td>End Stage Renal Disease (ESRD)</td>
<td>46</td>
</tr>
<tr>
<td>Heart Disease</td>
<td>48</td>
</tr>
<tr>
<td>HIV and AIDS</td>
<td>54</td>
</tr>
<tr>
<td>Mental Health and Substance Abuse</td>
<td>59</td>
</tr>
<tr>
<td>Respiratory Diseases</td>
<td>62</td>
</tr>
<tr>
<td>Nursing Home, Home Health, and Hospice Care.</td>
<td>67</td>
</tr>
<tr>
<td>Patient Safety</td>
<td>74</td>
</tr>
<tr>
<td>Timeliness</td>
<td>81</td>
</tr>
<tr>
<td>Patient Centeredness</td>
<td>85</td>
</tr>
<tr>
<td>Summary Tables</td>
<td>96</td>
</tr>
<tr>
<td>3. Access to Health Care</td>
<td>113</td>
</tr>
<tr>
<td>Facilitators and Barriers to Health Care</td>
<td>114</td>
</tr>
<tr>
<td>Health Care Utilization</td>
<td>126</td>
</tr>
<tr>
<td>Summary Tables</td>
<td>136</td>
</tr>
<tr>
<td>4. Priority Populations</td>
<td>143</td>
</tr>
<tr>
<td>Racial and Ethnic Minorities</td>
<td>147</td>
</tr>
<tr>
<td>Low Income Groups</td>
<td>181</td>
</tr>
<tr>
<td>Women</td>
<td>188</td>
</tr>
<tr>
<td>Children</td>
<td>196</td>
</tr>
<tr>
<td>Elderly</td>
<td>211</td>
</tr>
<tr>
<td>Residents of Rural Areas</td>
<td>218</td>
</tr>
<tr>
<td>Individuals With Disabilities and Special Health Care Needs</td>
<td>226</td>
</tr>
<tr>
<td>List of Core Measures</td>
<td>241</td>
</tr>
</tbody>
</table>

Appendixes:

A. Data Sources [www.ahrq.gov/qual/nhdr07/datasources/index.html]
B. Detailed Methods [www.ahrq.gov/qual/nhdr07/methods/index.html]
C. Measure Specifications [www.ahrq.gov/qual/nhdr07/measurespec/index.html]
D. Data Tables [www.ahrq.gov/qual/nhdr07/index.html]
Chapter 4. Priority Populations

To examine the issue of disparities in health care, Congress directed the Agency for Healthcare Research and Quality (AHRQ) to produce an annual report to track “prevailing disparities in health care delivery as it relates to racial factors and socioeconomic factors in priority populations.” Although the emphasis is on disparities related to race, ethnicity, and socioeconomic status, this directive includes a charge to examine disparities in “priority populations”—groups with unique health care needs or issues that require special attention.

This chapter addresses the congressional directive on priority populations. Chapters 2 and 3 of this report examine racial, ethnic, and socioeconomic differences in quality of health care and access to health care in the general U.S. population. This chapter focuses on differences within and across priority populations. For example, comparisons are made between Black and White women and between children from low and high income families. This year, the National Healthcare Disparities Report (NHDR) section on low income groups is focused on examining differences in quality of care and access to care by insurance status.

The approach taken in this chapter may help policymakers to understand the impact of racial, ethnic, and socioeconomic differences on specific populations and target quality improvement programs toward groups in greatest need. Appendix D includes detailed tables that allow examination of racial, ethnic, and socioeconomic disparities both in the general population and across priority populations for most measures.

AHRQ’s Priority Populations

AHRQ’s priority populations, specified by Congress in the Healthcare Research and Quality Act of 1999 (Public Law 106-129), are:

- Minority groups.
- Low income groups.
- Women.
- Children (age 0-17).
- Elderly (age 65 and over).
- Individuals with special health care needs, including individuals with disabilities and individuals who need chronic care or end-of-life health care.

In addition, this legislation directs AHRQ to examine health care delivery in rural areas. Hence, this chapter addresses each of these priority populations as well as residents of rural areas.

---

i The congressional mandate for the NHDR also identifies populations living in inner city areas as a priority population. However, currently no data are available to support findings for this population.

ii Racial categories include White, Black, Asian, Native Hawaiian or Other Pacific Islander (NHOPI), American Indian or Alaska Native (AI/AN), and more than one race. Ethnic categories are Hispanic or Latino, non-Hispanic White, and non-Hispanic Black.

iii In the NHDR, low income refers to poor people. Thresholds for income categories—poor, near poor, middle income, and high income—vary by family size and composition and are updated annually by the U.S. Bureau of the Census. For example, in 2005 the Federal poverty threshold for a family of two adults and two children was $19,806.

iv Individuals with special health care needs include children with special health care needs (CSHCN). CSHCN are defined as those who have or are at increased risk for a chronic physical, developmental, behavioral, or emotional condition and who also require health and related services of a type or amount beyond that required by children generally.
How This Chapter Is Organized

This chapter provides the most recent information available on racial, ethnic, and income differences in quality and access for priority populations. It is presented in the following order:

- Racial and ethnic minorities.
- Low income groups (focus on the uninsured).
- Women.
- Children.
- Elderly.
- Residents of rural areas.
- Individuals with special health care needs.

To avoid repetition of findings from previous chapters on race, ethnicity, and socioeconomic status, the first two sections summarize quality of and access to health care for racial and ethnic minorities and low income groups.

Subsequent sections focus on the remaining priority populations and examine disparities in care within each population group and changes in disparities over time. To present this greater detail, these sections highlight a small number of measures. Measures for each priority population were selected with the assistance of members of the Interagency Work Group and AHRQ experts for particular populations. For smaller priority populations, measure selection was often driven by available sample sizes. When possible, measures were selected to encompass multiple components of health care need, such as preventive services, treatment of acute illness, management of chronic disease, and access to health care. Results for all measures are found in the detailed appendix tables.

The measures discussed in this chapter follow.
### Section

<table>
<thead>
<tr>
<th>Blacks or African Americans</th>
<th>Measure</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Pediatric asthma admissions</td>
</tr>
<tr>
<td></td>
<td>Breast cancer screening</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Asians</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Breast cancer screening</td>
</tr>
<tr>
<td></td>
<td>Diabetes care</td>
</tr>
<tr>
<td></td>
<td>Uninsurance</td>
</tr>
<tr>
<td></td>
<td>Influenza vaccinations</td>
</tr>
<tr>
<td></td>
<td>Emergency department visits</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>American Indians and Alaska Natives</th>
<th>Measure</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Diabetes hospitalizations</td>
</tr>
<tr>
<td></td>
<td>Hospitalizations for perforated appendix</td>
</tr>
<tr>
<td></td>
<td>Hospitalizations for urinary tract infection</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Hispanics or Latinos</th>
<th>Measure</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Breast cancer screening</td>
</tr>
<tr>
<td></td>
<td>Diabetes care</td>
</tr>
<tr>
<td></td>
<td>Uninsurance</td>
</tr>
<tr>
<td></td>
<td>Emergency or urgent care for asthma</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Recent Immigrants and Limited-English-Proficient Populations</th>
<th>Measure</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Tuberculosis therapy</td>
</tr>
<tr>
<td></td>
<td>Poor communication with health providers</td>
</tr>
<tr>
<td></td>
<td>Uninsurance</td>
</tr>
<tr>
<td></td>
<td>Breast cancer screening</td>
</tr>
<tr>
<td></td>
<td>Diabetes care</td>
</tr>
<tr>
<td></td>
<td>Usual source of care</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Low Income Groups</th>
<th>Measure</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Breast cancer screening</td>
</tr>
<tr>
<td></td>
<td>Counseling to parents about children’s healthy eating</td>
</tr>
<tr>
<td></td>
<td>Counseling to obese adults about exercise</td>
</tr>
<tr>
<td></td>
<td>Dental care</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Women</th>
<th>Measure</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Prenatal care/maternal health</td>
</tr>
<tr>
<td></td>
<td>Recommended care for heart attack</td>
</tr>
<tr>
<td></td>
<td>New AIDS cases</td>
</tr>
<tr>
<td></td>
<td>HIV testing during prenatal care</td>
</tr>
<tr>
<td></td>
<td>Usual source of care</td>
</tr>
</tbody>
</table>

*(continued)*
<table>
<thead>
<tr>
<th>Section</th>
<th>Measure</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Children</strong></td>
<td>Vaccinations</td>
</tr>
<tr>
<td></td>
<td>Counseling about overweight</td>
</tr>
<tr>
<td></td>
<td>Counseling about healthy eating</td>
</tr>
<tr>
<td></td>
<td>Dental care</td>
</tr>
<tr>
<td></td>
<td>Hospital admissions for pediatric gastroenteritis</td>
</tr>
<tr>
<td></td>
<td>Hospital admissions for pediatric asthma</td>
</tr>
<tr>
<td></td>
<td>Care for illness or injury as soon as wanted</td>
</tr>
<tr>
<td></td>
<td>Poor communication with health providers</td>
</tr>
<tr>
<td></td>
<td>Health insurance</td>
</tr>
<tr>
<td></td>
<td>Mental health care</td>
</tr>
<tr>
<td><strong>Elderly</strong></td>
<td>Influenza vaccination, dental care</td>
</tr>
<tr>
<td></td>
<td>Delayed care due to cost</td>
</tr>
<tr>
<td><strong>Residents of Rural Areas</strong></td>
<td>Prenatal care/maternal health</td>
</tr>
<tr>
<td></td>
<td>Inpatient deaths from heart attack</td>
</tr>
<tr>
<td></td>
<td>Receipt of recommended services for diabetes</td>
</tr>
<tr>
<td></td>
<td>Care for illness or injury as soon as wanted</td>
</tr>
<tr>
<td></td>
<td>Health insurance</td>
</tr>
<tr>
<td><strong>Individuals With Special Health Care Needs</strong></td>
<td><strong>Adults</strong></td>
</tr>
<tr>
<td></td>
<td>Counseling obese adults about exercise</td>
</tr>
<tr>
<td></td>
<td>Inappropriate medication use by the elderly</td>
</tr>
<tr>
<td></td>
<td>Delayed care</td>
</tr>
<tr>
<td></td>
<td><strong>Children</strong></td>
</tr>
<tr>
<td></td>
<td>Care for illness or injury as soon as wanted</td>
</tr>
<tr>
<td></td>
<td>Communication with health providers</td>
</tr>
</tbody>
</table>

It should be noted that this chapter does not provide a comprehensive assessment of health care differences in each priority population. Most of the measures tracked in the NHDR were selected to be applicable across many population groups; only a few, such as immunizations among children and screening for breast cancer among women, were specific to particular groups. These general measures overlook some important health care problems specific to particular populations. For example, people with disabilities may face barriers in getting access to care and experience differences in quality of care that are not captured by data because of the limitations in the survey instruments. In addition, national data may not address key health issues for specific population groups, and it is not always possible to generate reliable estimates for many smaller groups such as Native Hawaiians or Other Pacific Islanders and American Indians and Alaska Natives. Instead, this chapter should be seen as a starting point, identifying some problem areas and indicating gaps in current data and understanding.
Racial and Ethnic Minorities

In 2000, about 33% of the U.S. population identified themselves as members of racial or ethnic minority groups. By 2050, it is projected that these groups will account for almost half of the U.S. population. For 2005, the U.S. Census Bureau estimated about 37.9 million Blacks or African Americans (12.8% of the U.S. population); over 42.7 million Hispanics or Latinos (14%); almost 12.7 million Asians (4.3%); 517,600 Native Hawaiians or Other Pacific Islanders (0.2%); and over 2.9 million American Indians and Alaska Natives (1.0%), of whom 38% reside on Federal trust lands. Racial and ethnic minorities are more likely than non-Hispanic Whites to be poor or near poor. In addition, Hispanics, Blacks, and some Asian subgroups are less likely than non-Hispanic Whites to have a high school education.

Racial and ethnic minority populations presented in the NHDR often include diverse subgroups. For example, the Asian and Pacific Islander classification represents individuals originating from more than 100 different countries and territories. According to the 2000 Census data, nearly 4% of Blacks were foreign born. Among foreign-born Blacks, about 84% were from two regions, the Caribbean and Africa, while 12% were from Central and South America. American Indian populations encompass numerous tribal nations. Hispanics include large numbers of recent immigrants as well as long-term residents from 20 Spanish-speaking countries across the Americas and Spain. Increases in Hispanic subpopulations together with the aging of the Hispanic population overall, which as a group is younger than the U.S. average, present a timely opportunity to focus on health care and health care disparities for Hispanics.

In previous chapters of the 2007 NHDR, health care differences by racial and ethnic categories as defined by the Office of Management and Budget and used by the U.S. Census Bureau are described. In this section, quality of and access to health care for each minority group are summarized to the extent that statistically reliable data are available for each group. Criteria for importance are that the difference is statistically significant at the alpha = 0.05 level, two-tailed test, and that the relative difference is at least 10% different from the reference group when framed positively as a favorable outcome or negatively as an adverse outcome. Access measures focus on facilitators and barriers to health care and exclude health care utilization measures.

In addition, changes in differences related to race and ethnicity over time are examined in this section. For each core report measure, racial, ethnic, and socioeconomic groups are compared with a designated comparison group at different points in time. Consistent with Healthy People 2010, disparities are measured in relative terms as the percent difference between each group and a comparison group; changes in disparity are measured by subtracting the percent difference from the comparison group at the baseline year from the percent difference from the comparison group at the most recent year. The change in each disparity is then divided by the number of years between the baseline and most recent estimate to calculate change in disparity per year. Core report measures (Table 1.2) for which the relative differences are changing less than 1% per year are identified as staying the same. Core report measures for which the relative differences are becoming smaller at a rate of more than 1% per year are identified as improving. Core report measures for which the

---

v Races include Black or African American, Asian, Native Hawaiian or Other Pacific Islander, American Indian or Alaska Native, White, and persons of multiple races.

vi Ethnicity differentiates Hispanics and non-Hispanics. Among non-Hispanics, this report identifies non-Hispanic Whites and non-Hispanic Blacks.

vii Data are presented for each minority group except for persons of multiple races due to unreliable estimates for this group.
relative differences are becoming larger at a rate of more than 1% per year are identified as worsening. Changes of greater than 5% per year are also differentiated from changes of between 1% and 5% per year in some figures.

As in previous NHDRs, this section includes information on programs and issues that may affect racial and ethnic disparities. The assessment of disparities faced by American Indians and Alaska Natives (AI/ANs) includes information on the approximately 45% of American Indians and Alaska Natives who obtain care from Indian Health Service (IHS) facilities and tribal facilities that receive IHS funding.

In interpreting findings for racial and ethnic minorities, readers should note that considerable gaps in information for some racial and ethnic minorities exist, which limit the NHDR’s ability to identify the current state of disparities for some groups. Gaps can relate to insufficient data to produce reliable estimates or, when estimates are possible, to inadequate power to detect large differences. For example, of core report measures of quality, it is rarely possible to provide estimates for Native Hawaiians or Other Pacific Islanders (NHOPIs) and persons of more than one race. For Asians, only about two-thirds of core report measures of quality support analyses; and for AI/ANs, only about half of these same measures support analyses. In addition, many data sources changed racial classifications for Asians and NHOPIs to adhere to new Federal standards in 2003. This change has further constrained the ability to perform trend analyses for these groups. Chapter 1, Introduction and Methods, and the summary section at the end of this report present more detailed descriptions of current data limitations and ways in which data are gradually improving.

Below is a summary of the percentage of measures that need improvement. This table includes only measures for which data are available for all racial and ethnic populations included in the report (except NHOPI due to data limitations from most sources). In showing differences in disparities between racial and ethnic groups, it points to the different health care issues that each group may face and, therefore, possible priority areas for each group.

Table 4.1. Percentage of core quality and access measures that need improvement for various racial/ethnic groups

<table>
<thead>
<tr>
<th>Group</th>
<th>Reference group</th>
<th>Percentage of core measures not improving (n = number of measures that could be tracked)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Quality of care</td>
</tr>
<tr>
<td>Black</td>
<td>White</td>
<td>68 (n = 38)</td>
</tr>
<tr>
<td>Asian</td>
<td>White</td>
<td>59 (n = 27)</td>
</tr>
<tr>
<td>AI/AN</td>
<td>White</td>
<td>65 (n = 17)</td>
</tr>
<tr>
<td>Hispanic</td>
<td>Non-Hispanic White</td>
<td>60 (n = 35)</td>
</tr>
</tbody>
</table>

Note: Need improvement is defined for quality measures as population received about the same or worse quality of care as Whites or non-Hispanic Whites; and for access measures as population had about the same or worse access to care as Whites or non-Hispanic Whites. Percentages are based on a subset of core measures that have data for these groups. Some measures include data for all ages and some are age-group specific. Refer to measure descriptions and appendix tables for more information. Baseline year and most recent year are not the same for all measures, depending on source of data.

AI/AN = American Indian or Alaska Native.
For each racial or ethnic group, Table 4.2 highlights the core measures with gaps that are increasing (i.e., getting worse) for the group compared with its reference group. Table 4.3 shows disparities in access to health care that are getting worse for selected groups.

Table 4.2. Core measures that are getting worse for group compared with reference group

<table>
<thead>
<tr>
<th>Group</th>
<th>Preventive services</th>
<th>Acute illness treatment</th>
<th>Chronic disease management</th>
<th>Timeliness</th>
<th>Patient centeredness</th>
</tr>
</thead>
<tbody>
<tr>
<td>Black vs. White</td>
<td></td>
<td></td>
<td>Hospital admissions for lower extremity amputations in patients with diabetes</td>
<td></td>
<td>Adults with provider communication problems</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Hospital admissions for pediatric asthma</td>
<td></td>
<td>Children whose parents report provider communication problems</td>
</tr>
<tr>
<td>Asian vs. White</td>
<td>Adults age 65 and over who ever received pneumococcal vaccination</td>
<td></td>
<td></td>
<td></td>
<td>Adults with provider communication problems</td>
</tr>
<tr>
<td>American Indian/Alaska Native vs. White</td>
<td></td>
<td>Tuberculosis patients who complete a curative course of treatment</td>
<td>Hemodialysis patients with appropriate urea reduction ratio</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Long-stay nursing home residents who were physically restrained</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Home health care patients who had to be admitted to the hospital</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(continued)
### Table 4.2. Core measures that are getting worse for group compared with reference group (continued)

<table>
<thead>
<tr>
<th>Group</th>
<th>Preventive services</th>
<th>Acute illness treatment</th>
<th>Chronic disease management</th>
<th>Timeliness</th>
<th>Patient centeredness</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hispanic vs. non-Hispanic White</td>
<td>Obese patients age 18 and over given advice about exercise and over who ever received pneumococcal vaccination</td>
<td>Hospital admissions for lower extremity amputations in patients with diabetes</td>
<td>Hospital admissions for pediatric asthma</td>
<td>Adults with provider communication problems</td>
<td>Children whose parents report provider communication problems</td>
</tr>
<tr>
<td>Poor vs. high income</td>
<td>Hospital admissions for pediatric gastroenteritis</td>
<td>Adults with diabetes who had 3 major exams in past year</td>
<td>Hospital admissions for lower extremity amputations in patients with diabetes</td>
<td>Illness/injury care as soon as wanted</td>
<td>Adults with provider communication problems</td>
</tr>
</tbody>
</table>

**Note:** "Asian" includes "Asian or Pacific Islander" when information is not collected separately for each group. The time period for this table is the most recent and oldest years of data used in the NHDR. Measures with the highest annual percentage change in the direction of "getting worse" are shown here. A blank cell indicates that no disparity in quality of care was getting worse for the group, which could reflect lack of data or small sample sizes for some populations.

### Table 4.3. Disparities in access to health care that are getting worse for selected groups

<table>
<thead>
<tr>
<th>Group</th>
<th>Access to health care</th>
</tr>
</thead>
<tbody>
<tr>
<td>Black vs. White</td>
<td>Persons who have a usual primary care provider</td>
</tr>
<tr>
<td>Asian vs. White</td>
<td></td>
</tr>
<tr>
<td>American Indian/Alaska Native vs. White</td>
<td>People under age 65 uninsured all year</td>
</tr>
<tr>
<td>Hispanic vs. non-Hispanic White</td>
<td>Persons who have a specific source of ongoing care</td>
</tr>
<tr>
<td>Poor vs. high income</td>
<td>People under age 65 uninsured all year</td>
</tr>
<tr>
<td></td>
<td>Persons who have a specific source of ongoing care</td>
</tr>
</tbody>
</table>

**Note:** "Asian" includes "Asian or Pacific Islander" when information is not collected separately for each group. The time period for this table is the most recent and oldest years of data used in the NHDR. A blank cell indicates that no disparity in access to care was getting worse for the group, which may reflect lack of data or small sample sizes for some populations.
Blacks or African Americans

Previous NHDRs showed that Blacks had poorer quality of care and worse access to care than Whites for many measures tracked in the reports. Findings based on core report measures (Table 1.2) of quality and access to health care are shown below.

**Figure 4.1. Blacks compared with Whites on measures of quality and access**

- For 18 of the 42 core report measures of quality, Blacks had poorer quality of care than Whites (Figure 4.1). Black-White differences ranged from Blacks being over 10 times as likely as Whites to be diagnosed with AIDS to Blacks being 15% less likely than Whites to be admitted to the hospital for pediatric gastroenteritis. The median difference over all 42 core report measures was 16%.
- For 4 of the 8 core report measures of access, Blacks had significantly worse access to care than Whites. Differences ranged from Blacks being 25% more likely than Whites to have communication problems with their providers to Blacks being 2% less likely than Whites to delay medical care due to financial reasons. The median difference over all 8 core report measures was 13%.

---

viii Although differences in developing AIDS do not necessarily translate into differences in quality of care, early and appropriate treatment of HIV infection can delay progression to AIDS.
Figure 4.2. Change in Black-White disparities over time

- Of core report measures of quality that could be tracked over time for Blacks and Whites, Black-White differences became smaller for 12 measures and larger for 12 measures (Figure 4.2). For 14 measures, Black-White differences did not change over time.
- Of core report measures of access that could be tracked over time for Blacks and Whites, Black-White differences became smaller for 2 measures and larger for 3 measures. For 1 measure, the Black-White difference did not change over time.

**Improving >5%** = Black-White difference becoming smaller at rate greater than 5% per year.

**Improving 1-5%** = Black-White difference becoming smaller at rate between 1% and 5% per year.

**Same** = Black-White difference not changing.

**Worsening 1-5%** = Black-White difference becoming larger at rate between 1% and 5% per year.

**Worsening >5%** = Black-White difference becoming larger at rate greater than 5% per year.

**CRM** = core report measures (Table 1.2).

**Note:** The time period for this figure is the most recent and oldest years of data used in the NHDR. Only 44 core report measures could be tracked over time for Blacks.
Focus on Blacks by Income and Insurance Status

Throughout the report, differences between Blacks and Whites for each measure are discussed. Additional differences stratified by insurance status are discussed here.

Figure 4.3. Pediatric asthma admissions per 100,000 population for Blacks, by median income of patient residence, 2001-2004

- From 2001 to 2004, the gap between Black children living in poor communities and Black children living in high income communities remained the same (Figure 4.3). In 2004, the difference between these two comparison groups was not statistically significant.
- In 2004, the proportion of pediatric hospital admissions for asthma was higher for Black children in communities with median household income of $35,000-$44,999 than Black children living in high income communities (357.1 per 100,000 compared with 297.4 per 100,000).

Source: Agency for Healthcare Research and Quality. Healthcare Cost and Utilization Project State Inpatient Databases (HCUP SID) disparities analysis file, 2001-2004. The HCUP SID disparities analysis file is designed to provide national estimates using weighted records from a sample of hospitals from 23 States that have 64% of U.S. resident population. Income categories are based on the median income of the ZIP Code of the patients’ residence.

Denominator: Children ages 2-17.
In 2005, the proportion of Black women age 40 and over who reported having a mammogram in the past 2 years was lower for publicly insured than privately insured women (58.6% compared with 76.3%; Figure 4.4).

Uninsured Black women were even less likely to have a mammogram in the past 2 years (44.2% compared with 76.3% for privately insured Black women).
Asians

Previous NHDRs showed that Asians had similar or better quality of care than Whites but worse access to care than Whites for many measures tracked in the reports. Findings based on core report measures of quality and access to health care that support estimates for either Asians or Asians and Pacific Islanders in aggregate are shown below.

**Figure 4.5. Asians compared with Whites on measures of quality and access**

- For 8 of the 30 core report measures of quality, Asians had significantly poorer quality of care than Whites, while for 11 measures, Asians had significantly better quality of care than Whites (Figure 4.5). The median difference over all 30 core report measures was -20%.

- For 1 of the 7 core report measures of access, Asians had significantly worse access to care than Whites. The median difference over all 7 core report measures was 16%.

**Better** = Asians receive better quality of care or have better access to care than Whites.

**Same** = Asians and Whites receive about the same quality of care or access to care.

**Worse** = Asians receive poorer quality of care or have worse access to care than Whites.

**CRM** = core report measures (Table 1.2).

**Note:** Data presented are the most recent available.
Of core report measures of quality that could be tracked over time for Asians and Whites, Asian-White differences became smaller for 11 measures but larger for 7 measures (Figure 4.6). For 9 measures, Asian-White differences did not change over time.

Of core report measures of access that could be tracked over time for Asians and Whites, Asian-White differences became smaller for 3 measures but larger for 1 measure. For 2 measures, the Asian-White difference did not change over time.
Focus on Asian Subpopulations

The Asian population in the United States is highly heterogeneous. The term “Asian” refers to people who identify their country of origin to be located in East Asia, Southeast Asia, or the Indian subcontinent (for example, Cambodia, China, India, Japan, Korea, Malaysia, Pakistan, the Philippine Islands, Thailand, and Vietnam).9 Asians are approximately 4.2% of the U.S. population, or 11.9 million people. According to Census 2000 data, approximately 23% of Asians identified themselves as Chinese, 20% Filipino, 16% Asian Indian, 10% Korean, and 9.7% Japanese.9

Research has shown that within-category variation (that is, variation across Asian subpopulations) is sometimes as large as the differences between Asians and Whites.10, 11 In order to show differences within racial groups, this year’s NHDR includes information from the California Health Interview Survey (CHIS) on Asian subpopulations in California. This is especially important for these relatively smaller groups, as most national data sources do not have sufficient data to report data for these groups. The geographic distribution of Asian subpopulations allows such comparisons in California using the CHIS data. About 4.2 million Asians, or 14.9% of the Asian population in the United States, live in California, which has the largest proportion of Asians of all States.9 The proportion of many Asian subpopulations residing in California is also greater than the proportion in the overall U.S. population. For example, the Vietnamese population is 1.3% of California’s population compared with only 0.4% of the U.S. population, and the Filipino population is 2.7% of California’s population compared with only 0.7% of the U.S. population.

Selected measures from the CHIS are presented here, including breast cancer screening, diabetes care, influenza vaccinations, uninsurance, and emergency room visits. These data show that disparities for Asians exist, not only in comparison with Whites but also within Asian subgroups (Chinese, Filipino, Japanese, Korean, Vietnamese, and South Asian) and across Asian subgroups by income and insurance status. Differences in English proficiency and place of birth are also significant. The following section shows only some of the significant disparities for these groups in California from CHIS data.
Overall, the proportion of women in California age 40 and over who reported they had a mammogram in the past 2 years was 78.4% (Figure 4.7).

The proportion was significantly lower for Asians than Whites (74.6% compared with 80.7%). Among Asian subpopulations, the proportion was lowest for Koreans (58.1%).

The proportion was significantly lower for uninsured compared with privately insured Asian women (56.7% compared with 78.8%).
There were no significant differences between Asians and Whites in the proportion of Californians with diabetes who had all three recommended diabetes services, but there were significant differences among Asians by level of English proficiency (Figure 4.8).

In 2005, the proportion of Asian adults in California with low English proficiency who received all three recommended services for diabetes was less than half that of Asian native English speakers (26.2% compared with 59.1%).

The percentage of adults in California who received all three recommended services for diabetes overall was 44.8%.
While the overall proportion of Californians uninsured all year decreased from 2001 to 2005 (from 12.4% to 11.1%), there were no significant changes for any Asian subgroup during this period (Figure 4.9).

In 2005, two times as many Asian as non-Hispanic White Californians were uninsured all year (11.6% of Asians compared with 5.8% of Whites).

The proportion uninsured was also significantly higher for all Asian subgroups than Whites, except for South Asians. The proportion was over five times higher for Koreans than for Whites (29.7% compared with 5.8%).
Among poor Californians, the proportion of adults age 65 and over who received a flu shot was significantly higher for Asians than Whites (75.7% compared with 57.9%).

Among near poor Californians, the proportion was also significantly higher for Asians than Whites (74.7% compared with 60.5%).

There were no significant differences among middle and high income groups (Figure 4.10).
The proportion of Californians with an emergency department visit in the past year increased overall, but there were no significant changes from 2001 to 2005 in the proportions for Asian subgroups (Figure 4.11).

In 2005, the proportion was lower for Asians than Whites overall (11.6% compared with 19.9%) and for all Asian subgroups. The proportion was less than half that of Whites for Koreans (6.9%) and Vietnamese (9.0%).

Source: University of California, Los Angeles, Center for Health Policy Research, California Health Interview Survey.
Reference population: Civilian noninstitutionalized population in California.
American Indians and Alaska Natives

Previous NHDRs showed that American Indians and Alaska Natives had poorer quality of care and worse access to care than Whites for many measures tracked in the reports. Findings based on core report measures (Table 1.2) of quality and measures of access that support estimates for AI/ANs are shown below.

Figure 4.12. AI/ANs compared with Whites on measures of quality and access

- Only about half of the core report measures supported estimates of quality for AI/ANs.
- For 5 of the 20 core report measures of quality, AI/ANs had significantly poorer quality of care than Whites (Figure 4.12). AI/AN-White differences ranged from AI/ANs being more than twice as likely as Whites to lack early prenatal care to AI/ANs being only about half as likely to die from breast cancer. The median difference over all 20 core report measures was 12%.
- For 2 of the 5 core report measures of access, AI/ANs had significantly worse access to care than Whites. Differences ranged from AI/ANs under age 65 being over twice as likely as Whites to lack health insurance to AI/ANs being 25% less likely than Whites to delay receiving medical care due to financial problems. The median difference over all 5 core report measures was 30%.
Figure 4.13. Change in AI/AN-White disparities over time

- Fewer than half of the core report measures supported estimates for changing disparities for AI/ANs.
- Of core report measures of quality that could be tracked over time for AI/ANs and Whites, AI/AN-White differences became smaller for six measures but larger for four measures (Figure 4.13). For seven measures, AI/AN-White differences did not change over time.
- Of core report measures of access that could be tracked over time for AI/ANs and Whites, AI/AN-White differences became smaller for two measures but larger for one measure. For one measure, the AI/AN-White difference did not change over time.
Focus on Indian Health Service Facilities

Many AI/ANs who are members of a federally recognized tribe nationwide rely on the Indian Health Service (IHS) to provide access to health care in the counties on or near reservations where they may obtain services. Due to low numbers and lack of data, information about AI/AN hospitalizations is difficult to obtain in most Federal and State hospital utilization data sources. The NHDR addresses this gap by examining utilization data from IHS and tribal direct and contract hospitals. Diabetes is one of the leading causes of morbidity and mortality among AI/AN populations, and its prevention and control are a major focus of the IHS Director’s Chronic Disease Initiative as well as the IHS Health Promotion/Disease Prevention Initiative. Addressing barriers of access to health care is a large part of the overall IHS goal, which strives to ensure that comprehensive, culturally acceptable personal and public health services are available and accessible to AI/ANs.

Figure 4.14. Hospitalizations for uncontrolled diabetes per 100,000 population 18 years and over in IHS and tribal direct and contract hospitals (left) and community hospitals (right), by race/ethnicity, 2003 and 2004


Key: API = Asian or Pacific Islander. White, Black, and API are non-Hispanic populations.

Note: The HCUP SID disparities analysis file is designed to provide national estimates using weighted records from a sample of hospitals from 23 States that have 64% of the U.S. resident population. Years of IHS data prior to 2003 use a denominator based on the 1990 Census. This source is not comparable with estimates following those years, which are based on 2000 Bridged Census Data. Therefore, for comparing IHS with national estimates, only 2003 and 2004 data from both data sources are presented.

- From 2003 to 2004, the proportion of hospitalizations for uncontrolled diabetes decreased for AI/ANs in IHS and tribal hospitals (from 37.8 per 100,000 to 31.4 per 100,000).
- There were no significant changes for other racial and ethnic groups in community hospitals during this period (Figure 4.14).

ix Of potentially eligible AI/ANs, 87% sought health care in 2001 at an IHS or tribally contracted facility, according to the most recent published IHS estimates developed by the Office of Public Health Support, Division of Program Statistics.
For the more than 538,000 AI/ANs living on reservations or other trust lands where the climate is inhospitable, the roads are often impassable, and transportation is scarce, health care facilities are far from accessible. These conditions contribute to high rates of perforated appendix and urinary tract infection hospitalizations, two problems that are receiving particular attention by IHS. Perforated appendix and urinary tract infection hospitalization rates, which decreased from 2003 to 2004, are illustrative of the efforts underway, as well as the work that needs to continue to achieve high quality, comprehensive care that is accessible to AI/ANs.

Figure 4.15. Hospitalizations for perforated appendix per 1,000 population 18 years and over with appendicitis in IHS and tribal direct and contract hospitals (left), and community hospitals (right), by race/ethnicity, 2003 and 2004


Key: API = Asian or Pacific Islander. White, Black, and API are non-Hispanic populations.

Note: The HCUP SID disparities analysis file is designed to provide national estimates using weighted records from a sample of hospitals from 23 States that have 64% of the U.S. resident population. Years of IHS data prior to 2003 use a denominator based on the 1990 Census. This source is not comparable with estimates following those years, which are based on 2000 Bridged Census Data. Therefore, for comparing IHS with national estimates, only 2003 and 2004 data from both data sources are presented.

- From 2003 to 2004, the proportion of appendicitis hospitalizations with perforated appendix decreased for AI/ANs in IHS and tribal hospitals (from 384.4 per 1,000 to 363.3 per 1,000; Figure 4.15).
- The proportion in community hospitals during this period also decreased overall (from 299.6 per 1,000 to 291.5 per 1,000), for Whites (from 294.6 per 1,000 to 287.8 per 1,000), and for Blacks (from 334.2 per 1,000 to 308.7 per 1,000).
From 2003 to 2004, the proportion of hospitalizations for urinary tract infection for AI/AN adults in IHS hospitals decreased from 212.1 per 100,000 to 205.2 per 100,000 (Figure 4.16).

In comparison, from 2003 to 2004, hospitalizations for urinary tract infection in community hospitals increased overall (from 165.3 per 100,000 to 175.7 per 100,000) and for Whites (from 150.4 per 100,000 to 159.5 per 100,000).
Hispanics or Latinos

Previous NHDRs showed that Hispanics had poorer quality of care and worse access to care than non-Hispanic Whites for many measures tracked in the reports. Findings based on core report measures of quality and access to health care that support estimates for Hispanics are shown below.

Figure 4.17. Hispanics compared with non-Hispanic Whites on measures of quality and access

- **Better** = Hispanics receive better quality of care or have better access to care than non-Hispanic Whites.
- **Same** = Hispanics and non-Hispanic Whites receive about the same quality of care or access to care.
- **Worse** = Hispanics receive poorer quality of care or have worse access to care than non-Hispanic Whites.
- **CRM** = core report measures (Table 1.2).

**Note:** Data presented are the most recent available.

- For 23 of the 38 core report measures of quality, Hispanics had poorer quality of care than non-Hispanic Whites (Figure 4.17). Differences ranged from Hispanics being over 2.5 times as likely to be diagnosed with AIDS to Hispanics being 13% less likely to have adequate urea reduction for hemodialysis. The median difference over all 38 core report measures was 22%.
- For 7 of the 8 core report measures of access, Hispanics had worse access to care than non-Hispanic Whites. Differences ranged from Hispanics under age 65 being 2.8 times as likely to lack health insurance to Hispanics being 21% less likely to report difficulties or delays getting care. The median difference over all 8 core report measures was 71%.
Figure 4.18. Change in Hispanic–non-Hispanic White disparities over time

- Of core report measures of quality that could be tracked over time for Hispanics and non-Hispanic Whites, Hispanic–non-Hispanic White differences became smaller for 14 measures but larger for 11 measures (Figure 4.18). For 10 measures, Hispanic–non-Hispanic White differences did not change over time.

- Of core report measures of access that could be tracked over time for Hispanics and non-Hispanic Whites, Hispanic–non-Hispanic White differences became smaller for 2 measures but larger for 3 measures. For 1 measure, Hispanic–non-Hispanic White differences did not change over time.

Improving >5% = Hispanic–non-Hispanic White difference becoming smaller at rate greater than 5% per year.

Improving 1-5% = Hispanic–non-Hispanic White difference becoming smaller at rate between 1% and 5% per year.

Same = Hispanic–non-Hispanic White difference not changing.

Worsening 1-5% = Hispanic–non-Hispanic White difference becoming larger at rate between 1% and 5% per year.

Worsening >5% = Hispanic–non-Hispanic White difference becoming larger at rate greater than 5% per year.

CRM = core report measures (Table 1.2).

Note: The time period for this figure is the most recent and oldest years of data used in the NHDR. Only 41 core report measures could be tracked over time for Hispanics and non-Hispanic Whites.
Focus on Hispanic Subpopulations

The Hispanic population in the United States is highly heterogeneous. Almost 60% are of Mexican origin, making it the largest Hispanic subpopulation in the country. People originating from Puerto Rico, Central America, and South America are the next largest subgroups.

The following section features selected measures from the California Health Interview Survey (CHIS). These include breast cancer screening, diabetes care, uninsurance, and emergency/urgent care visits for asthma. The CHIS is an example of a data source that can provide data for Hispanic subgroups. California’s Hispanic population is nearly twice the percentage in the United States overall (6.8% in California compared with 3.6% of the U.S. population). Almost 30% of the Hispanic population in the United States lives in California. These data show that disparities for Hispanics in California exist, not only in comparison with non-Hispanic Whites but also within Hispanic subgroups (Mexican, Puerto Rican, Central American, and South American) and across Hispanic subgroups by income and insurance status. The following section shows only some of the significant disparities for these groups in California from CHIS data.

Figure 4.19. Women age 40 and over who reported they had a mammogram in the past 2 years, by ethnicity and insurance status, California only, 2005

- The proportion of women age 40 and over in California who had a mammogram was lower for Hispanic than non-Hispanic White women overall (74.3% compared with 80.7%; Figure 4.19).
- The proportion who reported a mammogram in the past 2 years was significantly lower for Hispanic women who were publicly insured (65.8%) and uninsured (63.8%) than for those who were privately insured (77.8%).
The proportion of Hispanic adults age 40 and over with diabetes who received all three recommended services for diabetes varied significantly by insurance status (Figure 4.20). The proportion who received all three recommended services for diabetes was significantly lower for Hispanic adults who were publicly insured (28.2%) and uninsured (23.2%) compared with those who were privately insured (48.9%).

Overall, the proportion of Hispanic adults in California with diabetes who received all three recommended exams for diabetes care was not statistically different from the proportion for non-Hispanic Whites.
From 2001 to 2005 the proportion of people in California who were uninsured all year decreased for total Hispanics (from 22.0% to 17.8%) and for Mexicans (from 23.9% to 18.4%; Figure 4.21).

In 2005, all Hispanic subgroups had a higher proportion of people uninsured all year than non-Hispanic Whites (5.8%). The percentage for Mexicans was over three times higher (18.4%); for Central Americans, over four times higher (25.2%); and for South Americans, over two times higher (13.9%) than the proportion for non-Hispanic Whites.

Overall, 11.1% of Californians were uninsured all year in 2005.
In California, the proportion of Hispanics who had an emergency department or urgent care visit for asthma was more than twice that of non-Hispanic Whites (24.3% compared with 11%; Figure 4.22).

The proportion was significantly higher for poor (32.0%) and near poor (38.1%) Hispanics compared with high income Hispanics (14.2%).

The proportion was also significantly higher for Hispanics who were publicly insured (35.1%) compared with those who were privately insured (20.1%).

Source: University of California, Los Angeles, Center for Health Policy Research, California Health Interview Survey

Note: Thresholds for income categories—poor, near poor, middle income, and high income—vary by family size and composition and are updated annually by the U.S. Bureau of the Census. For example, in 2005, the Federal poverty threshold for a family of two adults and two children was $19,806.

Reference population: Civilian noninstitutionalized population in California with current asthma.
Recent Immigrants and Limited-English-Proficient Populations

Recent Immigrants and Language Barriers

Immigrants often encounter barriers to high quality health care. About 33.3 million persons living in the United States in 2003 were born outside the United States, up from 20 million in 1990.18 Asians and Hispanics are much more likely to be foreign born: about 70% of Asians and 40% of Hispanics in the United States are foreign born, compared with 6% of Whites and Blacks.19

Certain diseases are concentrated among Americans born in other countries. For example, 55% of tuberculosis cases in the Nation are among foreign-born individuals,20 and the case rate among foreign-born individuals is more than eight times higher than among individuals born in the United States.21 The percentage of cases of tuberculosis among U.S.-born individuals is decreasing while the percentage of cases among foreign-born individuals is increasing.22

Quality health care requires that patients and providers communicate effectively. Persons who speak a language other than English at home may have less access to resources, such as health insurance, that facilitate getting needed health care. The ability of providers and patients to communicate clearly with one another can be compromised if they do not speak the same language. Quality may suffer if patients with limited English proficiency are unable to express their care needs to providers who speak English only or who do not have an interpreter’s assistance. Communication problems between the patient and provider can lead to lower patient adherence to medications and decreased participation in medical decision-making, as well as exacerbate cultural differences that impair the delivery of quality health care.

Limited English proficiency is a barrier to quality health care for many Americans. About 52 million Americans, or 19.4% of the population, spoke a language other than English at home in 2000, up from 32 million in 1990. Of these individuals, 32 million (about 12% of the population) spoke Spanish, 10 million (about 4% of the population) spoke another Indo-European language, and 7.8 million (about 3% of the population) spoke an Asian or Pacific Islander language at home. Almost half of persons who spoke a foreign language at home reported not speaking English very well.23 A study of health plan members and use of interpreters showed that the use of interpreters reduced disparities for Hispanic and API members (28% and 21%, respectively).24

As in previous NHDRs, findings are presented below for several quality and access measures based on data from the National Tuberculosis Surveillance System and the Medical Expenditure Panel Survey; this year these sources are supplemented with data from the California Health Interview Survey. Information on disparities in health care quality and access for Americans born outside the United States and for Americans with limited English-speaking skills are presented for tuberculosis therapy, poor communication with health providers, uninsurance, breast cancer screening, and diabetes care.
From 1999 to 2003, the proportion of persons who completed therapy for tuberculosis within 12 months of being diagnosed improved for foreign-born Blacks (from 78.1% to 83.6%) and foreign-born APIs (from 79.0% to 81.6%; Figure 4.23).

In 2003, the proportion of persons who completed therapy for tuberculosis within 12 months of being diagnosed was significantly higher for foreign-born Blacks than for foreign-born Whites (83.6% compared with 80.5%).

In 2003, the proportion of persons who completed therapy for tuberculosis within 12 months of being diagnosed was significantly lower for foreign-born Hispanics than for foreign-born non-Hispanic Whites (79.8% compared with 84.8%).
The overall proportion of adults who had a doctor’s office or clinic visit in the last 12 months who reported poor communication with their health provider was significantly higher for individuals who speak a foreign language at home than for individuals who speak English at home (Figure 4.24).

The proportion of adults who reported poor communication with their health provider was significantly higher for Whites and Asians who speak some other language at home (11.2% and 19.1%, respectively) than for Whites and Asians who speak English at home (8.9% and 9.4%, respectively).
The overall proportion of adults under age 65 uninsured all year was significantly higher for individuals who speak a foreign language at home than for individuals who speak English at home (Figure 4.25).

The proportion of persons uninsured all year was significantly higher for Whites, Blacks, and Asians who speak some other language at home than for their counterparts who speak English at home (34.9% compared with 10.7% for Whites, 34.0% compared with 14.8% for Blacks, and 15.0% compared with 7.8% for Asians).

The proportion of persons uninsured all year was over twice as high for Hispanics who speak some other language at home than for Hispanics who speak English at home (38.2% compared with 16.5%).
The proportion of women age 40 and over who reported a mammogram in the past 2 years was significantly lower for California non-native-English speakers, both those with proficient English (77.3%) and those with low or no English proficiency (70.9%), than for native English speakers (80.3%; Figure 4.26).

The proportion of women age 40 and over who reported a mammogram in the past 2 years was lower for foreign-born Californians (74.6%) compared with U.S.-born Californians (80.0%).
The proportion of California adults age 40 and over with diabetes who received all three recommended services for diabetes was significantly lower for people with low or no English proficiency (27.1%) than for native English speakers (49.3%; Figure 4.27).

The proportion was also significantly lower for foreign-born Californians (38.1%) compared with U.S.-born Californians (48.1%).

Source: University of California, Los Angeles, Center for Health Policy Research, California Health Interview Survey.
Reference population: Civilian noninstitutionalized population in California age 40 and over.
Language Assistance

Clear communication is an important component of effective health care delivery. It is vital for providers to understand patients’ health care needs and for patients to understand providers’ diagnoses and treatment recommendations. Communication barriers can relate to language, culture, and health literacy.

For persons with limited English proficiency, having language assistance is of particular importance. Persons with limited English proficiency may choose a usual source of care in part based on language concordance; thus, not having a language-concordant provider may limit or discourage some patients from establishing a usual source of care.

The NHDR includes a supplemental measure of access: provision of language assistance by the usual source of care. Language assistance includes bilingual clinicians, trained medical interpreters, and bilingual receptionists and other informal interpreters.

Figure 4.28. Adults with limited English proficiency, by whether they had a usual source of care with or without language assistance, 2003 and 2004

- Approximately half (47%) of individuals with limited English proficiency did not have a usual source of care in 2004 (Figure 4.28).
- A similar proportion (46%) of individuals with limited English proficiency had a usual source of care that offered language assistance in 2004.
- Only 7% of individuals with limited English proficiency had a usual source of care that did not offer language assistance.

Key: USC = usual source of care.
Reference population: Civilian noninstitutionalized population age 18 and over.
Note: Language assistance includes bilingual clinicians, trained medical interpreters, and informal interpreters (e.g., bilingual receptionists).
Low Income Groups

In this report, the poor are defined as persons living in families whose household income falls below specific poverty thresholds. These thresholds vary by family size and composition and are updated annually by the U.S. Bureau of the Census.\textsuperscript{x, 25} After falling for nearly a decade (1990-2000), the number of poor persons in America rose from 31.6 million in 2000 to 37.0 million in 2005, and the rate of poverty increased from 11.3% to 12.6% over the same period.\textsuperscript{26}

Poverty varies by race and ethnicity. In 2005, 25% of Blacks, 22% of Hispanics, 11% of Asians, and 8% of Whites were poor.\textsuperscript{26} Persons with low incomes often experience worse health and are more likely to die prematurely.\textsuperscript{27} In general, poor populations have reduced access to high quality care. While people with low incomes are more likely to be uninsured, income-related differences in quality of care that are independent of health insurance coverage have also been demonstrated.\textsuperscript{28}

In previous chapters of this report, health care differences by income were described. In this section, disparities in quality of and access to health care for poor\textsuperscript{xii} compared with high income\textsuperscript{xii} individuals are summarized. For each core report measure, poorer persons can have health care that is worse than, about the same as, or better than health care received by high income persons. Only relative differences of at least 10% that are statistically significant with alpha = 0.05 are discussed in this report. Access measures focus on facilitators and barriers to health care and exclude health care utilization measures.

In addition, changes in differences related to income are examined over time. For each core report measure, racial, ethnic, and socioeconomic groups are compared with a designated comparison group at different points in time. Consistent with Healthy People 2010, disparities are measured in relative terms as the percentage difference between each group and a comparison group; changes in disparity are measured by subtracting the percentage difference from the comparison group at the baseline year from the percentage difference from the comparison group at the most recent year. The change in each disparity is then divided by the number of years between the baseline and most recent estimate to calculate change in disparity per year. Core report measures (Table 1.2) for which the relative differences are changing less than 1% per year are identified as staying the same. Core report measures for which the relative differences are becoming smaller at a rate of more than 1% per year are identified as improving. Core report measures for which the relative differences are becoming larger at a rate of more than 1% per year are identified as worsening. Changes of greater than 5% per year are also differentiated from changes of between 1% and 5% per year in some figures.

\textsuperscript{x} For example, in 2005 the Federal poverty threshold for a family of 2 adults and 2 children was $19,806.
\textsuperscript{xii} Household income less than Federal poverty thresholds.
\textsuperscript{xii} Household income 400% of Federal poverty thresholds and higher.
Figure 4.29. Poor compared with high income individuals on measures of quality and access

- Fewer than half of the core report measures supported estimates of quality for the poor.
- For 12 of the 19 core report measures of quality with income data, the poor had significantly poorer quality of care than high income individuals (Figure 4.29). Differences ranged from poor children being over three times as likely as high income children to be hospitalized for asthma to poor individuals being 25% less likely to receive recommended diabetes care. The poor did not have better quality than high income individuals for any of the 19 core report measures.
- For all 8 core report measures of access, the poor had significantly worse access to care than high income individuals. Differences ranged from the poor under age 65 being over three times as likely as high income individuals to lack health insurance to the poor being 50% more likely to lack a primary care provider. The median difference was over 1.5 (poor individuals were over 1.5 times as likely to have worse access as high income individuals).
Only about half of the core report measures for quality allow comparisons between poor and high income individuals over time.

Of core report measures of quality that could be tracked over time for poor and high income individuals, poor-high income differences became smaller for six measures but became larger for seven measures (Figure 4.30). For four measures, the poor-high income difference did not change over time.

Of core report measures of access that could be tracked over time for poor and high income individuals, poor-high income differences became smaller for three measures and larger for four measures.
Focus on Uninsurance

Because low-paying jobs are less likely to offer health insurance as a benefit and the cost of health insurance leaves poorer individuals less likely to be able to afford it, this year’s NHDR again focuses on uninsurance. Compared with insured persons, the uninsured report more problems getting care and are diagnosed at later disease stages. They report poorer health status, are sicker when hospitalized, and are more likely to die during their hospital stay. Uninsured persons often avoid non-urgent care such as preventive screenings, have difficulty obtaining care for illness or injury, and must bear the full cost of health care. In addition, prolonged periods of uninsurance can have a particularly serious influence on one’s health and stability.

Findings presented here highlight three quality measures related to prevention (breast cancer screening, counseling parents about healthy eating in children, and counseling obese adults about exercise) and one access measure (dental care) of special relevance to the uninsured. In addition, this section presents two bivariate analyses to show data by income and insurance status.

Quality of Health Care

Prevention: Screening for Breast Cancer (Mammography)

Screening for breast cancer with mammography is an effective way to reduce new cases of late stage disease and mortality caused by this cancer.

Figure 4.31. Women age 40 and over who reported they had a mammogram within the past 2 years, by income, stratified by insurance status, 2005

- Overall, the proportion of women age 40 and over who reported they had a mammogram within the past 2 years was significantly lower for uninsured women (38.3%) than for privately insured women (74.2%) or publicly insured women (57.9%; Figure 4.31).
• The proportion was significantly lower for poor (48.5%), near poor (55.1%), and middle income women (66.8%) than for high income women (75.3%).

• Among poor women, the proportion was significantly lower for uninsured than for privately insured women (32.3% compared with 52.6%).

• Among near poor women, the proportion was significantly lower for uninsured (34.9%) and publicly insured (54.7%) than for privately insured women (66.3%).

• Among middle income women, the proportion was significantly lower for uninsured (44.1%) and publicly insured women (54.7%) than for privately insured women (71.0%).

• Among high income women, the proportion was significantly lower for uninsured than privately insured women (41.7% compared with 78.1%).

Prevention: Counseling Parents About Healthy Eating in Children

Counseling about healthy eating can play an important role in helping children to lose excess weight and establish healthy lifestyle behaviors.

Figure 4.32. Children ages 2-17 with ambulatory visit who ever received advice about healthy eating, by insurance status, 2002-2004

Reference population: Civilian noninstitutionalized population ages 2-17.
Note: Estimates were for children whose parents or guardians reported ever receiving advice from a health provider for their children about healthy eating.

• From 2002 to 2004, the gap between uninsured children and privately insured children whose parents or guardians reported advice about healthy eating remained the same. In 2004, the proportion was significantly less for uninsured children than privately insured children (38.7% compared with 55.4%; Figure 4.32).

• During this period, there was no significant difference between publicly insured and privately insured children whose parents or guardians reported advice about healthy eating.
Prevention: Counseling Obese Adults About Exercise

Regular exercise aids in weight loss and blood pressure control, reducing the risk of heart disease, stroke, diabetes, and other diseases.

**Figure 4.33. Obese adults given advice about exercise by their doctor or other health provider, by insurance status, 2002-2004**

- From 2002 to 2004, the gap between uninsured and privately insured persons in the proportion of obese adults who were given advice about exercise did not change significantly (Figure 4.33).
- The gap between publicly insured persons and privately insured persons in the proportion of obese adults who were given advice about exercise decreased. In 2004, the disparity was eliminated.
- In 2004, the proportion of obese adults who were given advice about exercise was significantly lower for uninsured than for privately insured persons (36.0% compared with 61.3%).


Denominator: Civilian noninstitutionalized population age 18 and over.
Access to Health Care

Dental Care

Regular dental visits promote prevention, early diagnosis, and optimal treatment of oral diseases and conditions.

Figure 4.34. Persons with a dental visit in the past year, by income, stratified by insurance status, 2004

- Overall, the proportion of persons with a dental visit in the past year was significantly lower for publicly insured and uninsured persons than for privately insured persons (31% and 18.4%, respectively, compared with 51.3%; Figure 4.34).
- Among poor persons, the proportion did not differ significantly between publicly insured and privately insured persons (29.5% compared with 34.5%) but was significantly lower for uninsured persons than for privately insured persons (12.7% compared with 34.5%).
- Among near poor, middle income, and high income persons, uninsured persons were less than half as likely as privately insured persons to have had a dental visit in the past year.
- Only high income persons with private health insurance met the Healthy People 2010 target of 56% of persons with a dental visit in the past year (59.9%).

Reference population: Civilian noninstitutionalized population, all ages.
Women

The U.S. Census Bureau estimated 150.4 million females in the United States in 2005, 51% of the U.S. population, of whom 49 million are members of racial or ethnic minority groups. By 2050, it is projected that just under half of females in the United States will be members of racial or ethnic minority groups. The ratio of males to females is highest at birth, when male infants outnumber female infants, and gradually declines with age due to higher male mortality rates. Among Americans 85 and older, women outnumber men by more than 2 to 1. Poverty disproportionately affects women; in 2005 almost 14.1% of women lived in households with incomes below the Federal poverty level.

Women in the United States have a life expectancy 5.2 years longer than men and lower age-adjusted death rates than men for 12 of the 15 leading causes of death. However, women are more likely than men to report having arthritis, asthma, and serious mental illness. There is significant variation in health status and health-related behaviors for women of different races and ethnicities. In general, gender differences in quality of care are small.

Many measures of relevance to women are tracked in the NHDR. Findings presented here highlight four quality measures and one access measure of particular importance to women:

<table>
<thead>
<tr>
<th>Component of health care need</th>
<th>Measure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prevention</td>
<td>Prenatal care/maternal health</td>
</tr>
<tr>
<td>Treatment</td>
<td>Recommended care for heart attack</td>
</tr>
<tr>
<td>Management</td>
<td>New AIDS cases, HIV testing during prenatal care</td>
</tr>
<tr>
<td>Access to care</td>
<td>Usual source of care</td>
</tr>
</tbody>
</table>

Additionally, this year the section on cancer in Chapter 2 focuses on breast cancer prevention.
Quality of Health Care

Prevention: Prenatal Care/Maternal Health

Childbirth and reproductive care are the most common reasons for women of childbearing age to use health care; with more than 11,000 births each day in the United States, childbirth is the most common reason for hospital admission. Given that birth outcomes may have lifetime effects, good prenatal care has the potential to affect the future health and health care needs of the Nation. Prenatal care is expected to maintain and improve the health of both mother and newborn during pregnancy. It is recommended that women begin receiving prenatal care in the first trimester of pregnancy.

Figure 4.35. Pregnant women with prenatal care in the first trimester, by race (this page left), ethnicity (this page right), and education (next page), 1998-2004
From 1998 to 2004, the gap between Blacks and Whites in the proportion of women who initiated prenatal care in the first trimester remained the same (Figure 4.35). In 2004, the proportion was significantly lower for Blacks (76.4%) and AI/ANs (69.9%) compared with Whites (85.4%).

The gap between Hispanics and non-Hispanic Whites also remained the same during this time period. In 2004, the proportion was significantly lower for Hispanics than for non-Hispanic Whites (75.5% compared with 88.9%).

The gap in early prenatal care between women with less than a high school education and women with any college education remained the same. In 2004, the proportion was significantly lower for women with less than a high school education (73.0%) and high school graduates (82.4%) than for women with any college education (91.5%).

Only persons with any college education achieved the Healthy People 2010 target of 90% of pregnant women receiving prenatal care in the first trimester.
Racial and ethnic minorities are disproportionately of lower socioeconomic status than Whites. Since information about income is not typically collected on birth certificates, the source of some health data, education is commonly used as a proxy for socioeconomic status. To distinguish the effects of race, ethnicity, and education on quality of health care, this measure is stratified by level of education.

Figure 4.36. Pregnant women with prenatal care in the first trimester, by race (left) and ethnicity (right), stratified by education, 2004

Key: API = Asian or Pacific Islander; AI/AN = American Indian or Alaska Native.
Reference population: Women with live births.

- Education explains some but not all of the differences in prenatal care among women by race and ethnicity. Overall racial and ethnic differences in early prenatal care tended to persist among women with similar education (Figure 4.36).
- Only college-educated Whites (92.7%), APIs (90.2%), and non-Hispanic Whites (93.5%) achieved the Healthy People 2010 target of 90% of mothers receiving prenatal care in the first trimester.
Treatment: Recommended Hospital Care for Heart Attack

Each year, almost half a million women die of cardiovascular disease. Among these, 330,500 die of heart attacks. Although heart disease is the leading cause of death among both women and men, gender differences in cardiovascular care have been demonstrated and may relate to gender differences in disease presentation. Moreover, although major risk factors for cardiovascular disease can often be prevented or controlled through lifestyle changes, physicians are less likely to counsel women than men about diet, exercise, and substance abuse. After a first heart attack, women are less likely than men to receive cardiac rehabilitation and are more likely to die.

Figure 4.37. Recommended hospital care received by Medicare patients with heart attack, by gender, 2002-2005

- In 2005, there was no significant gender difference in receipt of recommended hospital care after a heart attack by Medicare beneficiaries (Figure 4.37).


Denominator: Medicare beneficiaries hospitalized for heart attack.

Note: Composite is calculated by averaging the percentage of the population that received each of six components of care. See Chapter 1, Introduction and Methods, for composite details. Discontinuity of the trend line between 2004 and 2005 reflects the modification of the ACE inhibitor measure in 2005 to include receipt of angiotensin receptor blockers as an acceptable alternative to ACE inhibitors and the data collection method change made in 2005 from the abstraction of randomly selected medical records for Medicare beneficiaries to the receipt of hospital self-reported data for all payer types.
Management: New AIDS Cases

Although differences in developing AIDS do not necessarily result from differences in quality of care, early and appropriate treatment of HIV infection can delay progression to AIDS. Improved management of chronic HIV disease has likely contributed to declines in new AIDS cases.

Figure 4.38. Number of new AIDS cases per 100,000 population age 13 and over, by race/ethnicity, stratified by gender, 2005

- For the overall U.S. population, the rate of new AIDS cases for males was nearly triple that for females (27.2 compared with 9.4 per 100,000 population; Figure 4.38).
- The rate was significantly higher for males than for females in all groups: Blacks (103.6 per 100,000 for males and 49.9 per 100,000 for females), APIs (8.2 per 100,000 for males and 1.8 per 100,000 for females), AI/ANs (15.9 per 100,000 for males and 4.4 per 100,000 for females), Hispanics (39.7 per 100,000 for males and 12.2 per 100,000 for females), and Whites (13.1 per 100,000 for males and 2.1 per 100,000 for females).
- No group has yet achieved the Healthy People 2010 target of 1.0 new AIDS case per 100,000 population.
Management: HIV Testing During Prenatal Care

Although blood donations are routinely screened for HIV, it is important to track HIV screening in a health care setting to determine the impact of preventive care on the population. HIV-infected patients have years of life to gain if treatment is initiated early, before symptoms develop. HIV testing is recommended for all pregnant women during prenatal care and for people with high-risk behaviors for developing HIV.

Figure 4.39. Women ages 15-44 who completed a pregnancy in the last 12 months and had an HIV test as part of prenatal care, by race/ethnicity and income, 2002

- In 2002, the proportion of pregnant women ages 15-44 who had an HIV test as part of prenatal care was higher for Hispanics than for non-Hispanic Whites (76.7% compared with 63.4%; Figure 4.39).
- In 2002, the proportion of pregnant women who had an HIV test as part of prenatal care was higher for poor (79.2%), near poor (66.5%), and middle income women (67.7%) than for high income women (49.7%).

Source: Centers for Disease Control and Prevention, National Center for Health Statistics, National Survey of Family Growth, 2002.

Reference population: Household population of women ages 15-44.
Access to Care

Usual Source of Care

Higher costs, poorer outcomes, and greater disparities are observed among individuals without a usual source of care.\textsuperscript{47}

\begin{figure}
\centering
\includegraphics[width=\textwidth]{figure4_40.png}
\caption{Persons with a specific source of ongoing care, by race, ethnicity, and income, stratified by gender, 2005}
\end{figure}

- Overall, the proportion of persons with a specific source of ongoing care was significantly higher for females than for males (90.3% compared with 83.3%).
- This proportion was also significantly higher for females than males for all racial and ethnic groups: Whites (90.5% for females compared with 83.6% for males), Blacks (89.3% for females compared with 81.5% for males), AI/ANs (91.2% for females compared with 74.3% for males), non-Hispanic Whites (92.4% for females compared with 86.4% for males), and Hispanics (82.2% for females compared with 72.0% for males; Figure 4.40).
- This proportion was significantly lower for the poor (78.1%), near poor (81.4%) and middle income (87.2%) groups than for high income groups (92.3%).

\textbf{Source:} Centers for Disease Control and Prevention, National Center for Health Statistics, National Health Interview Survey, 2005.

\textbf{Reference population:} Civilian noninstitutionalized population, all ages.

\textbf{Notes:} Measure is age adjusted to the 2000 standard population.
Children

Children made up 24.8% of the U.S. population, or 73.5 million people, in 2005. Almost 40% of all children were members of racial and ethnic minority groups, and 17.6% of children lived in families with incomes below the Federal poverty level.

In 2003, Black children and AI/AN children had death rates about 1.5 to 2 times higher than White children. Black infants were more than twice as likely as White infants to die during their first year. Life expectancy at birth was 78.3 years for White children and 73.1 years for Black children, a difference of about 5%.

Many measures relevant to children are tracked in the NHDR. Findings presented here highlight eight quality measures and two access measures of particular importance to children (for ages 2 months to 19 years, depending on the measure):

<table>
<thead>
<tr>
<th>Component of health care need</th>
<th>Measure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prevention</td>
<td>Vaccinations, counseling about overweight, counseling about healthy eating, dental care</td>
</tr>
<tr>
<td>Treatment</td>
<td>Hospital admissions for pediatric gastroenteritis</td>
</tr>
<tr>
<td>Management</td>
<td>Hospital admissions for pediatric asthma</td>
</tr>
<tr>
<td>Timeliness</td>
<td>Care for illness or injury as soon as wanted</td>
</tr>
<tr>
<td>Patient centeredness</td>
<td>Poor communication with health providers</td>
</tr>
<tr>
<td>Access to care</td>
<td>Health insurance, mental health care</td>
</tr>
</tbody>
</table>

In addition, the final section of this chapter, which discusses individuals with special health care needs, includes findings related to children with special health care needs.
Quality of Health Care

Prevention: Early Childhood Vaccinations

Childhood vaccinations protect recipients from illness and disability and protect others in the community. Vaccinations are important for reducing mortality and morbidity in populations.

Figure 4.41. Children ages 19-35 months who received all recommended vaccines, by race (top left), ethnicity (top right), and income (bottom left), 2000-2005

Key: AI/AN = American Indian or Alaska Native.


Reference population: Civilian noninstitutionalized population ages 19-35 months.

Note: Recommended vaccines for children 19-35 months are based on the Healthy People 2010 objective and do not include varicella vaccine or vaccines added to the recommended schedule after 1998 for children up to 35 months of age. Racial categories changed in 2000 and may not be comparable with those used for previous years. More information can be found in the Measure Specifications Appendix.
From 2000 to 2005, the gap between Blacks and Whites, Asians and Whites, and children of multiple races and Whites who received all recommended vaccines decreased (Figure 4.41). In 2005, significant differences by race were not observed on this measure.

The gap between Hispanics and non-Hispanic Whites in the proportion of children who received all recommended vaccines decreased during this time period. However, in 2005, the proportion of children who received all recommended vaccines was still lower for Hispanics than for non-Hispanic Whites (78.8% compared with 82.1%).

The gap between children from poor families and children from high income families remained the same. In 2005, the proportion of children who received all recommended vaccines was lower for children from poor (76.5%), near poor (78.2%), and middle income families (82.3%) than for children from high income families (86.5%).

Nationally, only vaccination coverage levels among White (81.3%), non-Hispanic White (82.1%), middle income (82.3%), and high income (86.5%) children achieved the Healthy People 2010 objective of 80% of children receiving all recommended vaccines.
**Prevention: Counseling About Overweight**

Childhood overweight poses a risk for health problems, including heart disease and Type 2 diabetes, and is associated with adult obesity. Lack of awareness is a key problem. Addressing childhood overweight begins with measuring the height and weight of all children and counseling those who are overweight.

*Figure 4.42. Overweight children ages 2-19 who were told by a doctor or health professional that they were overweight, by race, ethnicity, and income, 1999-2004*

- Overall, 38.8% of overweight children ages 2-19 or their parents or guardians were told by a health care provider that they were overweight (Figure 4.42).
- No statistically significant differences in overweight children being told by a health care provider that they were overweight were observed between any populations.
- In no group were even half of overweight children told they were overweight.

**Source:** Centers for Disease Control and Prevention, National Center for Health Statistics, National Health and Nutrition Examination Survey, 1999-2004.

**Reference population:** Overweight civilian noninstitutionalized population ages 2-19. Overweight is defined as persons ages 2-19 with a body mass index (BMI) greater than or equal to the 95th percentile on the BMI for age-sex-specific 2000 Centers for Disease Control and Prevention growth charts for the United States.

**Note:** Estimates were for children whose parents or guardians were told the child was overweight. “Mexican Americans” are shown in place of Hispanics because this is how data are collected by the data source.
Prevention: Counseling About Healthy Eating

Unhealthy eating and lack of physical activity contribute to overweight in children. Routine promotion of healthy eating among children is widely recommended and may help them develop eating habits that will last into adulthood, thereby influencing better long-term health.

Figure 4.43. Children ages 2-17 whose parents or guardians reported advice from a doctor or other health provider about healthy eating, by race (top left), ethnicity (top right), and income (bottom left), 2002-2004

Reference population: Civilian noninstitutionalized population ages 2-17.
- From 2002 to 2004, the gap between poor and high income families in the proportion of children whose parents or guardians reported advice from a health provider about healthy eating remained the same (Figure 4.43). In 2004, the proportion of children whose parents or guardians reported advice from a health provider about healthy eating was significantly lower for children from poor (50.3%), near poor (49%), and middle income (51.6%) families than for children from high income families (60.4%).

- Significant differences by race and ethnicity were not observed.

**Prevention: Dental Care**

Regular dental visits promote prevention, early diagnosis, and optimal treatment of craniofacial diseases and conditions, including prevention of dental caries. Healthy People 2010’s goals for reductions in childhood dental caries include decreases from 18% to 11% for children ages 2-4 and from 61% to 51% for 15-year-olds, and the goals for reduction in childhood untreated decays include decreases from 16% to 9% for ages 2-4 and from 20% to 15% for 15-year-olds.

*Figure 4.44. Children ages 2-5, 6-11, and 12-17 with untreated dental caries, by race/ethnicity (left) and income (right), 1999-2004*

- During the period 1999-2004, the proportion of children ages 2-5 with untreated dental caries was higher for Blacks (24.4%) and Mexican Americans (31.2%) than for Whites (17.0%); it also was higher for poor (30.8%), near poor (23.2%), and middle income children (18.2%) than for high income children (6.3%; Figure 4.44).
• For this time period, the proportion of children ages 6-11 with untreated dental caries was higher for Blacks (31.6%) and Mexican Americans (38.8%) than for Whites (23.7%), and it was higher for poor (37.3%), near poor (36.9%), and middle income children (21%) than for high income children (12.1%).

• The proportion of children ages 12-17 with untreated dental caries was higher for Blacks (23.1%) and Mexican Americans (26.2%) than for Whites (14.2%), and it was higher for poor (27.2%), near poor (25.4%), and middle income children (13.0%) than for high income children (7.2%).

To improve overall oral health, Healthy People 2010 also set a goal of increasing the percentage of persons age 2 and older using the oral health system annually from 44% to 56%.

**Figure 4.45. Children ages 2-17 with a dental visit in the past year, by race, ethnicity, and income, 2004**

- In 2004, the proportion of children with a dental visit in the past year was lower for Blacks than for Whites (39.3% compared with 53.9%) and for Hispanics than for non-Hispanic Whites (38.3% compared with 59.0%).

- The proportion of children with a dental visit in the past year was also lower for poor (36.3%), near poor (39.0%), and middle income (52.6%) children compared with high income children (69.6%; Figure 4.45).
**Treatment: Hospital Admissions for Pediatric Gastroenteritis**

Pediatric gastroenteritis can develop into a life-threatening condition due to dehydration, especially among infants. Proper outpatient treatment of gastroenteritis may prevent hospitalization, and lower hospitalization rates may reflect access to better quality care.

*Figure 4.46. Hospital admissions for pediatric gastroenteritis per 100,000 population ages 4 months to 17 years, by race/ethnicity, 2001-2004*

- From 2001 to 2004, the gap in the rate of pediatric gastroenteritis admissions between Blacks and Whites and between APIs and Whites decreased (Figure 4.46). In 2004, admissions for pediatric gastroenteritis were significantly lower for Black children (146.7 per 100,000) and API children (105.8 per 100,000) than for White children (173.1 per 100,000).
Management: Hospital Admissions for Pediatric Asthma

Children are more likely than adults to have asthma. The prevalence rate for children under age 18 is 83 per 1,000, while the prevalence rate for adults age 18 and older is 68 per 1,000.52 Emergency room visit rates for asthma are highest among children under age 5 (62 per 10,000 population). Proper outpatient treatment of asthma may prevent hospitalization, and lower hospitalization rates may reflect access to better quality care. Differences in rates may also vary across racial and ethnic groups due to differences in prevalence.

Figure 4.47. Pediatric asthma admissions per 100,000 population ages 2-17 years, by race/ethnicity, 2001-2004

- From 2001 to 2004, the gap between Whites and other racial/ethnic groups in the rate of pediatric asthma admissions remained the same (Figure 4.47).
- In 2004, the rate of pediatric asthma admissions was significantly higher for Black children (373.9 per 100,000) and Hispanic children (143.7 per 100,000) than for White children (97.8 per 100,000).
- In 2004, the rate was significantly lower for API children (72.7 per 100,000) than for White children (97.8 per 100,000).
- No population has yet achieved the Healthy People 2010 target of 17.3 pediatric asthma admissions per 100,000 population ages 2-17.
Timeliness: Care for Illness or Injury as Soon as Wanted

Children often need care for illness or injury. Timely receipt of health care can prevent disease complications, alleviate discomfort, and reduce child and parental anxiety.

Figure 4.48. Children under age 18 whose parents or guardians reported that their child sometimes or never got care for illness or injury as soon as wanted in the past year, by race, ethnicity, and income, 2004

- The proportion of children who sometimes or never got care for illness or injury as soon as wanted was significantly higher for children from poor families than for children from high income families (10.9% compared with 5.2%; Figure 4.48).
- There were no significant differences observed between Blacks and Whites and between Hispanics and non-Hispanic Whites.
**Patient Centeredness: Communication With Health Providers**

Communication in children’s health care can pose a particular challenge, as children are often less able to express their health care needs and preferences, and a third party (i.e., a parent or guardian) is involved in communication and decision-making. Optimal communication in children’s health care can therefore have a significant impact on receipt of high quality care and subsequent health status. This is especially true for children with special health care needs (CSHCN).

Figure 4.49. Composite measure: Ambulatory patients (children under age 18) whose parents or guardians reported poor communication with health providers, by race (this page left), ethnicity (this page right), and family income (next page), 2002-2004
In 2004, there were no significant differences between Blacks, Asians, and Whites in the proportion of children whose parents or guardians reported poor communication with their health providers.

From 2002 to 2004, the gap between Hispanics and non-Hispanic Whites in the proportion of children whose parents or guardians reported poor communication with their health providers decreased (Figure 4.49). In 2004, the proportion was significantly higher for Hispanics than non-Hispanic Whites (7.9% compared with 4.8%).

The gap between poor people and high income people in the proportion with poor communication remained the same. In 2004, the proportion was significantly higher for poor (9.1%), near poor (7.5%), and middle income (5.4%) persons than for high income persons (3.0%).

**Composite measure includes the following measures:** Children under 18 years of age whose parents or guardians reported that their child's health providers sometimes or never listened carefully, explained things clearly, respected what they had to say, or spent enough time with them.

**Denominator:** Civilian noninstitutionalized population under age 18.

**Note:** Average percentage of children who had a doctor's office or clinic visit in the last 12 months and were reported to have had poor communication with health providers (i.e., that their health providers sometimes or never listened carefully, explained things clearly, showed respect for what they had to say, or spent enough time with them).
Access to Health Care

Health Insurance

Insurance coverage is among the most important factors in access to health care. Special efforts have been made to provide insurance coverage to children.53

Figure 4.50. Children under age 18 with health insurance, by race (top left), ethnicity (top right), and family income (bottom), 1999-2005

Key: AI/AN = American Indian or Alaska Native.
Source: Centers for Disease Control and Prevention, National Center for Health Statistics, National Health Interview Survey, 1999-2005.
Reference population: Civilian noninstitutionalized population under age 18.
Note: Insurance status is determined at the time of interview. Children are considered uninsured if they lack private health insurance, public assistance (including the State Children’s Health Insurance Program), Medicare, Medicaid, a State-sponsored health plan, other government-sponsored programs, or a military health plan, or if their only coverage is through the Indian Health Service. This measure reflects the percentage of children who were covered by health insurance at the time of the interview.
- From 1999 to 2005, the gap between AI/ANs and Whites, between Hispanics and non-Hispanic Whites, and between poor and high income people in the proportion of children with health insurance decreased (Figure 4.50).

- In 2005, the proportion of children with health insurance was significantly lower for AI/AN children than for White children (79.5% compared with 90.8%).

- In 2005, the proportion of children with health insurance was significantly lower for Hispanic children than for non-Hispanic White children (82.5% compared with 93.5%).

- In 2005, the proportion of children with health insurance was significantly lower for poor (85.7%) and near poor children (85.0%) than for high income children (96.8%).
Mental Health Care

The prevalence of mental disorders for racial and ethnic minorities in the United States is similar to that for Whites, but previous research has shown evidence that minorities have less access to mental health care and are less likely to receive needed services. These differences may reflect, in part, socioeconomic status and variation in preferences and cultural attitudes toward mental health and mental health care. Among children and adolescents, the most frequently diagnosed mood disorders are major depressive disorder, dysthyMIC disorder, and bipolar disorder. Because mood disorders such as depression substantially increase the risk of suicide, suicidal behavior is a matter of serious concern for clinicians who deal with the mental health problems of children and adolescents.

Figure 4.51. Children ages 12-17 with a major depressive episode in the past year who received treatment in the past year, by race, ethnicity, and family income, 2005

- There were no statistically significant differences on the basis of race, ethnicity, or family income in the proportion of children ages 12-17 with a major depressive episode who received treatment for depression in the past year (Figure 4.51).
- In 2005, in no group did even half of children ages 12-17 with a major depressive episode receive treatment for depression in the past year.
Elderly

In 2005, 36.8 million persons age 65 and over lived in the United States. Further, the proportion of the population over age 65 is swiftly increasing: people 65 and over represented 12.4% of the population in 2005 but are expected to grow to about 20% of the population by 2030. The past century has seen significant increases in life expectancy, and 65-year-olds today can expect to live an additional 18.5 years. Nonetheless, the elderly face greater health care concerns than younger populations. In 2006, 38.9% of noninstitutionalized older persons assessed their health as excellent or very good, compared with 65.1% of persons ages 18-64, and the majority of older persons have at least one chronic condition.

Older women outnumber older men by over one-third. Members of minority groups are projected to represent over 25% of the elderly in 2030, up from about 16% in 2000. About 3.6 million elderly lived below the poverty level in 2004, corresponding to a poverty rate of 9.8%. Another 2.3 million, or more than 6.7% of the elderly, were classified as near poor, with incomes between 100% and 125% of the Federal poverty level.

The Medicare program provides core health insurance to nearly all elderly Americans and reduces many financial barriers to acute and post-acute care services. The Medicare Prescription Drug Improvement and Modernization Act of 2003 has added new prescription drug and preventive benefits to Medicare and provides extra financial help to persons with low incomes. Consequently, differences in access to and quality of health care tend to be smaller among Medicare beneficiaries than among younger populations.

Surveys of the general population often do not include enough elderly to examine racial, ethnic, or socioeconomic differences in health care. Consequently, the NHDR relies upon data from the Medicare Current Beneficiary Survey to examine disparities in access to and quality of care. Findings presented here highlight two quality measures and one access measure of particular importance to the elderly:

<table>
<thead>
<tr>
<th>Component of health care need</th>
<th>Measure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prevention</td>
<td>Influenza vaccination, dental care</td>
</tr>
<tr>
<td>Access to care</td>
<td>Delayed care due to cost</td>
</tr>
</tbody>
</table>
Quality of Health Care

Prevention: Influenza Vaccination

Influenza is responsible for significant morbidity and decreased productivity during outbreaks. Elderly persons are at increased risk for complications from influenza infections. Vaccination is an effective strategy to reduce illness and deaths due to influenza, and annual influenza vaccination of all elderly individuals is recommended by the U.S. Preventive Services Task Force and the Centers for Disease Control and Prevention.

Figure 4.52. Elderly Medicare beneficiaries with influenza vaccination in the past year by race (this page left), ethnicity (this page right), and income (next page), 1998, 2000, 2002, and 2003
From 1998 to 2003, there were no significant changes in the proportion of elderly Medicare beneficiaries with an influenza vaccination in the past year (data not shown).

In 2003, the proportion was significantly lower for Blacks than for Whites (56.5% compared with 72.4%; Figure 4.52).

In 2003, the proportion was also significantly lower for Hispanics than for non-Hispanic Whites (56.3% compared with 73.5%).

In 2003, the proportion was significantly lower for poor (61.4%), near poor (66.8%), and middle income (73.4%) beneficiaries than for high income beneficiaries (78.0%).

In 2003, the Healthy People 2010 target of 90% of elderly Americans with influenza vaccination was not yet achieved by any population group.
Prevention: Dental Care

Regular dental visits improve prevention, early diagnosis, and optimal treatment of craniofacial diseases and conditions. Missed dental care can result in delayed diagnosis, overall compromised health, and, occasionally, even death. Because dental conditions often develop across a lifetime, it is especially important for the elderly to receive regular dental care to ensure optimal treatment.

Figure 4.53. Elderly Medicare beneficiaries receiving dental care by race (top left), ethnicity (top right), and income (bottom left), 1998-2003

Key: AI/AN=American Indian or Alaska Native; API = Asian or Pacific Islander.


Reference population: Medicare beneficiaries age 65 and over living in the community.

Note: Although these data were collected via the Medicare Current Beneficiary Survey, much of the dental care reported here is likely not connected to the Medicare program, as Medicare generally does not cover dental services.
From 1998 to 2003, the gap between Black and White elderly Medicare beneficiaries who had a dental visit remained the same. In 2003, Blacks were significantly less likely than Whites to have a dental visit (23% compared with 48.4%; Figure 4.53).

The gap between Hispanic and non-Hispanic White elderly Medicare beneficiaries increased. In 2003, Hispanics were significantly less likely than non-Hispanic Whites to have a dental visit (30.5% compared with 49.6%).

The gap between poor elderly Medicare beneficiaries and high income elderly Medicare beneficiaries decreased. However, in 2003, poor individuals were still less likely than high income individuals to have a dental visit (23.4% compared with 68.9%).
Access to Care

Delayed Care Due to Cost

Timely delivery of appropriate care has been shown to improve health care outcomes and reduce health care costs. Timely receipt of care is especially important for the elderly due to the often increased medical needs of this population. Delayed health care can lead to diagnosis at a more advanced disease stage and reduce opportunities for optimal treatment.\textsuperscript{xiii}

Figure 4.54. Elderly Medicare beneficiaries who delayed health care due to cost by race (this page left), ethnicity (this page right), and income (next page), 1998, 2000, 2002, and 2003

\textsuperscript{xiii} In this measure, delayed care due to cost is self-reported by patients.
There were no significant differences by race or ethnicity in the proportion of elderly Medicare beneficiaries who delayed health care due to cost.

From 1998 to 2003, there were no significant changes in the gap between poor and high income people in the proportion of elderly Medicare beneficiaries who delayed care due to cost (Figure 4.54). In 2003, the percentage delaying care was significantly higher for poor (6.7%) and near poor (6.8%) beneficiaries than for high income beneficiaries (2.0%).


Reference population: Medicare beneficiaries age 65 and over living in the community.
Residents of Rural Areas

About 1 in 5 Americans lives in a nonmetropolitan area.\textsuperscript{61} Compared with their urban counterparts, rural residents are more likely to be elderly, poor,\textsuperscript{62} and in fair or poor health, and to have chronic conditions.\textsuperscript{61} Rural residents are less likely to receive recommended preventive services and report, on average, fewer visits to health care providers.\textsuperscript{63}

Although 20% of Americans live in rural areas,\textsuperscript{xiv} only 9% of physicians in America practice in those settings.\textsuperscript{64} Nurse practitioners, nurse midwives, and physician assistants also help to deliver care. Multiple programs and services help to deliver needed services in rural areas, such as the National Health Service Corps Scholarship Program, Indian Health Service, State offices of rural health, rural health clinics, and community health centers. Cost-based Medicare reimbursement incentives are also available for rural health clinics, critical access hospitals, sole community hospitals, and Medicare-dependent hospitals in Health Professional Shortage areas.

Many rural residents depend on small rural hospitals for their care. There are approximately 2,000 rural hospitals throughout the country,\textsuperscript{65} 1,500 of which have 50 or fewer beds. Most of these hospitals are critical access hospitals that have fewer than 25 beds. Rural hospitals largely provide primary care and chronic disease management. They face unique challenges due to their size and case-mix. During the 1980s, many were forced to close because of financial losses;\textsuperscript{66} however, during the past few years, finances of small rural hospitals have improved.

Transportation needs are pronounced among rural residents, who face longer distances to reach health care delivery sites. Of the nearly 1,000 “frontier counties”\textsuperscript{xv} in the Nation, most have limited health care services and many do not have any.\textsuperscript{67}

Many measures of relevance to residents of rural areas are tracked in the NHDR. Findings presented here highlight four quality measures and one access measure of particular importance to residents of rural areas:

<table>
<thead>
<tr>
<th>Component of health care need</th>
<th>Measure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prevention</td>
<td>Prenatal care/maternity health</td>
</tr>
<tr>
<td>Treatment</td>
<td>Inpatient deaths from heart attack</td>
</tr>
<tr>
<td>Management</td>
<td>Receipt of recommended services for diabetes</td>
</tr>
<tr>
<td>Timeliness</td>
<td>Care for illness or injury as soon as wanted</td>
</tr>
<tr>
<td>Access to care</td>
<td>Health insurance</td>
</tr>
</tbody>
</table>

In previous NHDRs, detailed geographic typologies were applied to two AHRQ databases—the Medical Expenditure Panel Survey (MEPS) and the Healthcare Cost and Utilization Project (HCUP)—to define variations in health care quality and access for a range of rural and urban locations. This year, in addition to

\textsuperscript{xiv} Many terms are used to refer to the continuum of geographic areas. For Census 2000, the Census Bureau’s classification of “rural” consists of all territory, population, and housing units located outside of urban areas and urban clusters. The Census Bureau classified as “urban” all territory population, and housing units located within (a) core census block groups or blocks that have a population density of at least 1,000 people per square mile and (b) surrounding census blocks that have an overall density of at least 500 people per square mile.

\textsuperscript{xv} “Frontier counties” have a population density of less than 7 persons per square mile; residents travel long distances for care.
presenting data from MEPS and HCUP, the NHDR presents a measure from the National Vital Statistics System—Natality (NVSS-Natality). Federal definitions of micropolitan and noncore statistical areas (not metropolitan or micropolitan areas) published in June 2003 are used. In addition, Urban Influence Codes are used to subdivide metropolitan areas into large and small metropolitan areas. Thus, categories used in this section of the NHDR may be defined as follows:

- Large metropolitan statistical area—Metropolitan area of 1 million or more inhabitants.
- Small metropolitan statistical area—Metropolitan area of fewer than 1 million inhabitants.
- Micropolitan statistical area—Urban area of at least 10,000 but fewer than 50,000 inhabitants.
- Noncore statistical area—Not metropolitan or micropolitan.

Urban-rural contrasts for measures from MEPS and HCUP compare residents of rural statistical areas (including both micropolitan and noncore statistical areas) with residents of urban statistical areas (including both large and small metropolitan statistical areas). For the measure from the NVSS-Natality, residents of rural statistical areas (including both micropolitan and noncore statistical areas) are compared with residents from more specific urban statistical areas (including large central metropolitan, large fringe metropolitan, medium metropolitan, and small metropolitan). Sample sizes are often too small to provide reliable estimates for noncore statistical areas, limiting the ability to assess disparities among residents of these areas.
Quality of Health Care

**Prevention: Prenatal Care/Maternal Health**

Childbirth and reproductive care are the most common reasons for women of childbearing age to use health care, and childbirth is the most common reason for hospital admission. It is recommended that women begin receiving prenatal care in the first trimester of pregnancy.

**Figure 4.55.** Pregnant women with prenatal care in the first trimester, by geographic location, 2004

- In 2004, there were no significant differences observed in the proportion of women who initiated prenatal care in the first trimester (Figure 4.55).
- No metropolitan statistical area, regardless of size, achieved the Healthy People 2010 target of 90% of pregnant women receiving prenatal care in the first trimester.

**Source:** Centers for Disease Control and Prevention, National Center for Health Statistics, National Vital Statistics System - Natality, 2004.

**Reference population:** Women with live births.

**Note:** Sample sizes were too small to provide estimates by race, ethnicity, income, or education. Large central metropolitan = >1 million and meets one of the following criteria: (1) contains entire population of largest principal city in the metropolitan statistical area, (2) entire population resides in the largest principal city in the metropolitan statistical area, or (3) contains at least 250,000 of the population of any principal city in the metropolitan statistical area; large fringe metropolitan = >1 million but does not qualify as large central; medium metropolitan = counties in a metropolitan statistical area of 250,000-999,999 population; small metropolitan = counties in a metropolitan statistical area of 50,000-249,999 population; micropolitan = urban area >10,000 and <50,000 inhabitants; noncore = not metropolitan or micropolitan.
Treatment: Inpatient Deaths From Heart Attack

Heart disease is the leading cause of death for both men and women in the United States, responsible for over 654,486 deaths in 2004. About 1.2 million heart attacks occur each year. Data on inpatient hospital deaths for patients who are admitted for a heart attack (acute myocardial infarction, or AMI) are presented. To distinguish the effects of race/ethnicity on the AMI inhospital mortality rate within urban and rural areas, racial/ethnic data are stratified by urban and rural location of patient residence.

Figure 4.56. Deaths per 1,000 adult admissions with heart attack as principal diagnosis, by race/ethnicity and geographic location, 2004

Key: API = Asian or Pacific Islander.

Source: Agency for Healthcare Research and Quality, Healthcare Cost and Utilization Project State Inpatient Databases (HCUP SID) disparities analysis file, 2004. The HCUP SID disparities analysis file is designed to provide national estimates using weighted records from a sample of hospitals from 23 States that have 64% of the U.S. resident population.

Denominator: Adults age 18 and older hospitalized for heart attack in community hospitals.

Note: White, Black, and API are non-Hispanic groups. Large metropolitan = metropolitan area >1 million inhabitants; small metropolitan = metropolitan area <1 million inhabitants; micropolitan = urban area >10,000 and <50,000 inhabitants; noncore = not metropolitan or micropolitan.

- The overall AMI mortality rate was significantly higher for persons admitted to hospitals in noncore areas (94.1 per 1,000 admissions) than for persons living in large or small metropolitan areas (78.1 per 1,000 and 83.9 per 1,000 admissions, respectively; Figure 4.56).
- The overall rate was also significantly higher for persons admitted to hospitals in micropolitan areas than for persons living in large metropolitan areas (91.5 per 1,000 compared with 78.1 per 1,000 admissions).
- In large metropolitan areas, the AMI mortality rate was lower for Blacks than for Whites (71.5 per 1,000 compared with 79.0 per 1,000).
- In small metropolitan areas, the rate was lower for Blacks (74.4 per 1,000) but higher for APIs (97.4 per 1,000) and Hispanics (90.1 per 1,000) compared with Whites (83.7 per 1,000).
- In micropolitan areas, the rate was lower for APIs (79.4 per 1,000) and for Hispanics (74.5 per 1,000) than for Whites (92.5 per 1,000).
- In noncore areas, the rate was significantly higher for APIs than for Whites (169.9 per 1,000 compared with 93.5 per 1,000).
Management: Receipt of Recommended Services for Diabetes

The NHDR presents a composite measure that tracks receipt of three recommended services for effective management of diabetes: HbA1c testing, eye examination, and foot examination in the past year.

Figure 4.57. Adults age 40 and over with diagnosed diabetes who had three recommended services for diabetes in the past year, by geographic location, 2004


Reference population: Civilian noninstitutionalized population of adults age 40 and over.

Note: Recommended services for diabetes are (1) HbA1c testing, (2) retinal eye examination, and (3) foot examination in past year. Sample sizes were too small to provide estimates by race, ethnicity, income, or education. Large metropolitan = metropolitan area >1 million inhabitants; small metropolitan = metropolitan area <1 million inhabitants; micropolitan = urban area >10,000 and <50,000 inhabitants; noncore = not metropolitan or micropolitan.

- Significant differences for persons from large and small metropolitan, micropolitan, and noncore areas were not observed in the proportion of adults age 40 and over with diabetes who received three recommended services (Figure 4.57).
**Timeliness: Care for Illness or Injury as Soon as Wanted**

Timely delivery of appropriate care has been shown to improve health care outcomes and reduce health care costs. Furthermore, when patients need or want care, having access to that care improves their health care experience, which may further promote health.

**Figure 4.58.** Adults who sometimes or never get care for illness or injury as soon as wanted, by income (left) and education (right), stratified by geographic location, 2004

![Timeliness: Care for Illness or Injury as Soon as Wanted](image)

**Source:** Agency for Healthcare Research and Quality, Medical Expenditure Panel Survey, 2004.

**Reference population:** Civilian noninstitutionalized population age 18 and over.

**Note:** Large metropolitan = metropolitan areas >1 million inhabitants; small metropolitan = metropolitan areas <1 million inhabitants; micropolitan = urban area >10,000 and <50,000 inhabitants; noncore = <10,000. Data are not available for income groups in noncore areas.

- There were no significant differences observed in the overall rate of adults who sometimes or never get care for illness or injury as soon as wanted (Figure 4.58).
Access to Health Care

Health Insurance

Access to health care is a prerequisite to receipt of care, yet many Americans still face barriers to care. Data for prolonged periods of unemployment (no insurance coverage for a full year) are presented.

Figure 4.59. Adults under age 65 uninsured all year, by race (top left), ethnicity (top right), income (bottom left), and education (bottom right), stratified by geographic location, 2004

Notes on next page
There were no significant differences between persons from large metropolitan areas and persons from micropolitan or noncore-adjacent (rural) areas in the overall proportion of adults under age 65 uninsured all year (data not shown; Figure 4.59).

The overall proportion of adults under age 65 uninsured all year was significantly higher among persons from noncore-adjacent statistical areas (15.4%) compared with persons from small metropolitan areas (12.4%; data not shown). There was no significant difference between persons from micropolitan areas compared with small metropolitan areas.

In large metropolitan areas, the proportion uninsured was significantly higher for Hispanics compared with non-Hispanic Whites (29.5% compared with 9.6%); for poor (26.7%), near poor (25.2%), and middle income persons (14.6%) compared with high income persons (6.5%); and for persons with less than a high school education compared with persons with some college (33.1% compared with 10.6%; Figure 4.59).

In small metropolitan areas, the proportion was significantly higher for Hispanics compared with non-Hispanic Whites (26.3% compared with 10.0%); for poor (22.2%), near poor (20.8%), and middle income persons (13.1%) compared with high income persons (4.6%); and for persons with less than a high school education compared with persons with some college (29.7% compared with 8.4%).

In micropolitan areas, the rate was higher for Blacks compared with Whites (23.6% compared with 13.6%), for Hispanics compared with non-Hispanic Whites (27.1% compared with 12.3%), for poor (23.5%) and near poor persons (25.6%) compared with high income persons (7.9%), and for persons with less than a high school education compared with persons with some college (31.3% compared with 12%).

In noncore-adjacent areas, the proportion was significantly higher for Hispanics compared with non-Hispanic Whites (36% compared with 13.3%) and for persons with less than a high school education compared with persons with some college (32.4% compared with 13.2%).
Individuals With Disabilities and Special Health Care Needs

Individuals with disabilities and special health care needs include persons with disabilities; persons who utilize nursing home care, home health care, or end-of-life health care; and children with special health care needs (CSHCN). Many measures of relevance to individuals with special health care needs are tracked in the NHDR.

In this year’s report, data on quality and access are presented for adults with disabilities and for CSHCN. The section on adults with disabilities uses data from the Medical Expenditure Panel Survey (MEPS) and is new for this year’s report; the goal for future NHDRs is to include even more information about individuals with disabilities using MEPS and other data sources such as the National Health Interview Survey and Medicare Current Beneficiary Survey, as well as data for children with disabilities. As in previous reports, data on quality and access are presented for CSHCN.

### Adults With Disabilities

**Component of health care need**
- Prevention
- Safety
- Access to care

**Measure**
- Counseling obese adults about exercise
- Inappropriate medication use by the elderly
- Delayed care\(^{xvi}\)

### Children With Special Health Care Needs

**Component of health care need**
- Timeliness
- Patient centeredness

**Measure**
- Care for illness or injury as soon as wanted
- Poor communication with health providers

Additionally, findings for persons who utilize nursing home care are presented in the section on nursing home, home health, and hospice care in Chapter 2, Quality of Health Care.

---

\(^{xvi}\) This is a supplemental measure of the NHDR measure set.
Adults With Disabilities

This year, the NHDR aims to include more information about individuals with disabilities than in previous iterations of the report. In reaching this goal, AHRQ convened a disabilities subgroup of the NHQR/NHDR Interagency Work Group, with the assistance of the Interagency Subcommittee on Disability Statistics (ISDS) of the Interagency Committee on Disability Research. The charge to this group was to advise AHRQ on measures of disabilities from existing data that could track disparities in quality and access to care for individuals with disabilities for the NHDR and that would be comparable across national surveys. For this initial effort, the subgroup focused on measures for the adult population, the population for whom there were the most existing survey data.

Several ways of defining and measuring disability exist. Among the more common approaches are to identify individuals who have problems performing everyday functions such as vision, hearing, communication, self-care, mobility, learning, and behavior; have difficulty with complex activities such as working; or meet the eligibility criteria for important income maintenance or training programs (e.g., SSDI [Social Security Disability Income] or vocational rehabilitation). However, a particular challenge in reporting on racial, ethnic, and socioeconomic differences related to disability is that many data collections do not capture disability and, when collected, do not collect it in the same way.

The International Classification of Functioning, Disability and Health (ICF)72 was adopted by the disabilities subgroup as a model to guide the deliberations. Questions and response categories for three national surveys—the National Health Interview Survey, the Medical Expenditure Panel Survey, and the Medicare Current Beneficiary Survey—were carefully reviewed by the subgroup for consistencies and discrepancies in measurement of the major domains of disabilities in the ICF.

For the 2007 NHDR, AHRQ is using a broad, inclusive measure of disability that is intended to be consistent with statutory definitions of disability, such as the first criterion of the 1990 Americans with Disabilities Act (i.e., having a physical or mental impairment that substantially limits one or more major life activities73, 74) and other Federal program definitions of disability. For the purpose of the NHDR, people with disabilities are those with physical, sensory, and/or mental health conditions that can be associated with a decrease in functioning in such day-to-day activities as bathing, walking, doing everyday chores, and/or engaging in work or social activities.

In displaying the data on disability, paired measures are shown to preserve the qualitative aspects of the data:

- Limitations in basic activities represent problems with mobility and other basic functioning at the person level.
- Limitations in complex activities represent limitations encountered when the person, in interaction with the environment, attempts to participate in community life.

The use of the subgroup’s recommendation of these paired measures of basic and complex activity limitations is conceptually similar to the way others have divided disability5, 75 and is consistent with the ICF separation of activities and participation domains.1 These two categories are not mutually exclusive; persons may have limitations both in basic activities and in complex activities. For the purpose of comparisons, data on adults with and without disabilities are presented.
Prevention: Counseling Obese Adults About Exercise

Counseling obese adults about exercise is an important component of effective weight management, particularly for adults with disabilities, because adults with disabilities are more likely to be obese or overweight than other adults. An estimated 37.7% of adults with basic activity limitations and 39.7% of adults with complex activity limitations are obese, compared with 23.8% of adults with neither basic nor complex activity limitations. This finding is consistent with other studies.

Figure 4.60. Obese adults who were ever given advice by a doctor or other health professional about exercise, by race/ethnicity, income, education, and activity limitation, 2004

Key: Basic = basic activity limitation (i.e., limitation in mobility or other basic person-level functioning); complex = complex activity limitation (i.e., limitation in ability to participate in community life); neither = neither basic nor complex activity limitations.


Reference population: Adults age 18 and over living in the community.

Note: Whites and Blacks are non-Hispanic groups.

- For the total adult population, obese persons with basic and complex activity limitations were significantly more likely than obese persons with neither limitation to receive advice about exercise. Of obese adults, approximately 73.6% of those with basic activity limitations and 72.8% of those with complex activity limitations received advice about exercise, compared with 55.0% of those with neither limitations (Figure 4.60).

- For each racial, ethnic, income, and education group, obese adults with basic and complex activity limitations were significantly more likely than obese adults with neither limitation to receive advice about exercise.

- Differences between obese adults with basic activity limitations and those with complex activity limitations in the proportion receiving advice about exercise were not significant, regardless of racial/ethnic, income, or education group.

- Among obese persons with neither basic nor complex activity limitation, receiving advice about exercise was significantly less likely for Blacks and Hispanics than Whites; poor, near poor, and middle income persons than high income persons; and persons with a high school education or less than persons with some college.
- Among obese adults with basic activity limitations, poor and near poor persons were significantly less likely than high income persons, and persons with less than a high school education were significantly less likely than those with some college, to receive advice about exercise.
- Among obese persons with complex activity limitations, poor persons were significantly less likely than high income persons, and persons with less than a high school education were significantly less likely than those with some college, to receive advice about exercise.

**Safety: Inappropriate Medication Use by the Elderly**

Appropriate use of medications is particularly important for the elderly, since the elderly have higher use of medications than others. The NHDR tracks the percentage of adults age 65 and over who had at least 1 prescription from a list of 33 medications considered usually inappropriate for this age group.

**Figure 4.61. Adults age 65 and over with inappropriate medication use, by race, ethnicity, education, and activity limitation, 2004**

For all adults age 65 and over, persons with basic and complex activity limitations were significantly more likely than persons with neither limitation to have used 1 of 33 inappropriate medications (Figure 4.61).

- Among adults age 65 and over, approximately 23.3% of those with basic activity limitations and 26.8% of those with complex activity limitations have used 1 of 33 inappropriate medications, compared with 12.9% of those with neither.
- For both Whites and Blacks, for non-Hispanic Whites and Hispanics, and for each education group, adults age 65 and over with basic and complex activity limitations were significantly more likely than persons with neither limitation to have used 1 of the 33 inappropriate medications.
- Among adults age 65 and over with neither basic nor complex activity limitations, non-Hispanic Whites were significantly more likely than Hispanics to have used 1 of the 33 inappropriate medications.
- Significant differences in inappropriate medication use were not observed for any of the other racial, ethnic, or education comparisons by specific activity limitation group (neither, basic, complex).
Access to Health Care: Delayed Care

Timely delivery of appropriate care has been shown to improve health care outcomes and reduce health care costs. Delayed health care can lead to diagnosis at a more advanced disease stage and reduce opportunities for optimal treatment.

Figure 4.62. Adults who were unable to receive or delayed in receiving needed medical care, dental care, or prescription medications, by race, ethnicity, income, education, and activity limitation, 2004

- For the total population, adults with basic and complex activity limitations were significantly more likely than persons with neither limitation to be unable to receive care or to delay receiving care. Of adults, 25.7% of those with basic activity limitations and 31.0% of those with complex activity limitations were unable to receive or delayed in receiving needed medical care, dental care, or prescription medicines, compared with 10.5% of those with neither limitation (Figure 4.62).

- For each racial, ethnic, income, and education group, adults with basic and complex activity limitations were significantly more likely than adults with neither limitation to be unable to receive or to delay receiving needed care.

- For Whites, adults with less than a high school education, and adults with some college, those with complex activity limitations were significantly more likely than their counterparts with basic activity limitations to not receive or to delay receiving care.

- Among adults with neither basic nor complex activity limitations, not receiving or delaying receiving care was significantly more likely for Blacks than Whites; poor, near poor, and middle income persons than high income persons; and persons with less than a high school education than those with some college.

- Among adults with basic activity limitations, poor, near poor, and middle income persons were significantly more likely than high income persons to be unable to receive or to delay receiving needed care.

- Among adults with complex activity limitations, Whites were significantly more likely than Blacks to be unable to receive or to delay receiving needed care; and poor, near poor, and middle income persons were more likely than high income persons to be unable to receive or to delay receiving needed care.
Children With Special Health Care Needs

Addressing questions on access to and quality of care for children with chronic conditions is difficult due to the low prevalence of most conditions in children. According to the Medical Expenditure Panel Survey, in 2004, approximately 13.8 million children were identified as having a special health care need—i.e., a specific chronic condition with a functional limitation or other consequence. Among the most highly prevalent chronic conditions of childhood in 2005 were asthma (13% of children under age 18), upper respiratory allergies (12% of children under 18), learning disabilities (7% of children ages 3-17), and attention-deficit hyperactivity disorder (7% of children ages 3-17). Other conditions that may affect children with special health care needs include depression, spina bifida, hemophilia, HIV infection, cystic fibrosis, and metabolic disorders.

By definition, children with special health care needs (CSHCN) are children who require more medical care because they are less healthy. As a result of requiring more medical care, CSHCN have higher medical expenses, on average, than other children. For more than 1 in 5 CSHCN, costs of care caused financial problems for their families. In addition to financial burdens, families of CSHCN spend considerable time caring for them. An estimated 13.5% of CSHCN had families who spent 11 or more hours per week providing or coordinating care in 2001.

Having higher health care needs makes CSHCN susceptible to access, cost, quality, and coverage weaknesses in the health care system. Children with chronic conditions are reported by their parents to be less likely than other children to receive the full range of needed health services.
Timeliness: Care for Illness or Injury as Soon as Wanted

Timely delivery of appropriate care has been shown to improve health care outcomes and reduce health care costs, which may be particularly important for CSHCN.

Figure 4.63. Among children with special health care needs, those who can always get care for illness or injury as soon as wanted, by race (top left), ethnicity (top right), and family income (bottom left), 2002-2004

Reference population: Civilian noninstitutionalized population under age 18.
Note: Data were insufficient for this analysis for Asians, Native Hawaiians or Other Pacific Islanders, and American Indians and Alaska Natives.
• There were no statistical differences by race or ethnicity from 2002 to 2004 (Figure 4.63).
• From 2002 to 2004, the gap between poor children and high income children in the proportion of children with special health care needs who could always get care for illness or injury as soon as wanted remained the same.
• In 2004, the proportion was significantly lower for children from poor families than for children from high income families (72.2% compared with 82.4%).
• From 2002 to 2004, the gap between near poor children and high income children decreased. In 2004, there was no significant difference between near poor children and high income children (79.4% compared with 82.4%).
Patient Centeredness: Communication With Health Providers

Patient centered health care requires good communication to ensure that a patient’s needs and preferences are best met. For CSHCN, good communication with the child’s parent or guardian is especially important to ensure that their more complex and greater health care needs are optimally addressed.

Figure 4.64. Ambulatory patients (children with special health care needs) whose parents or guardians reported poor communication with health providers, by race (top left), ethnicity (top right), and family income (bottom left), 2002-2004


Denominator: Civilian noninstitutionalized population under age 18.

Note: Average percentage of children under age 18 with special health care needs who had a doctor’s office or clinic visit in the last 12 months and poor communication with health providers was reported (i.e., their health providers sometimes or never listened carefully, explained things clearly, showed respect for what they had to say, or spent enough time with them). Data were insufficient for this analysis for Asians, Native Hawaiians or Other Pacific Islanders, and American Indians and Alaska Natives.
From 2002 to 2004, the gap between children with special health care needs and children without special health care needs in the percentage of parents or guardians who reported poor communication with their health providers remained the same (data not shown; Figure 4.64). In 2004, the proportion of parents or guardians who reported poor communication with their health providers was significantly higher for CSHCN than for children without special health care needs (7.2% compared with 5.2%; data not shown).

- In 2004, the proportion of parents or guardians of CSHCN who reported poor communication with their health providers was significantly higher for Blacks than for Whites (11.7% compared with 6.7%).

- In 2004, the percentage of parents who reported communication problems was significantly higher for CSHCN in poor (13.6%) and near poor (7.9%) families than in high income (4.1%) families.