



## Findings on Children's Health Care Quality and Disparities

### Agency for Healthcare Research and Quality

AHRQ's mission is to improve the quality, safety, efficiency, and effectiveness of health care for all Americans. Information from AHRQ's research helps people make informed decisions and improve the quality of health care services.

### Introduction

In early 2009, Congress passed and the President signed the Children's Health Insurance Program Reauthorization Act (CHIPRA; Public Law 111-3). CHIPRA presents an unprecedented opportunity to improve health care quality measurement and health care quality and outcomes for the Nation's 75 million children, beginning with the 38 million enrolled in Medicaid and CHIP.

As a first step, a set of 24 initial recommended evidence-informed and feasible measures were posted for public comment. The Centers for Medicare & Medicaid Services (CMS) will work with State Medicaid and CHIP programs as the programs consider whether to voluntarily report these measures. The Agency for Healthcare Research and Quality has posted a funding announcement for work to improve the initial core set to measure the quality of both public and private children's health care services.

CHIPRA requires identification of a comprehensive set of measures across the spectrum of health care services, settings, and providers that work to improve children's health and health care. In addition, CHIPRA requires that the core measure set be able to identify differences in care by race, ethnicity, socioeconomic status, and special health care needs.

This fact sheet complements the CHIPRA work by providing information from the *2009 National Healthcare Quality Report* (NHQR) and *2009 National Healthcare Disparities Report* (NHDR) for selected measures related to children. Included in this fact sheet are data from measures relevant to childhood immunizations, obesity and overweight prevention, dental care, quality of care for asthma, and care for children with depression. Data on race, ethnicity, insurance, income, and special health care need status are reported, as available.<sup>1</sup> This information can help maintain

<sup>1</sup>The data included in this fact sheet do not always use the same data sources that are currently used to report on CHIPRA measures. In many cases, the NHQR and NHDR measures are relevant to the CHIPRA core measure topics but the measures themselves are different. The data in this fact sheet do not come from Medicaid and CHIP programs. They are nationally representative when possible. State-specific data are available for some measures.



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momentum for action to improve children's health care quality across the country.

Table 1 at the end of this fact sheet lists the initial recommended core set of CHIPRA measures as posted for public comment. Box 1 lists all the children's health care quality measures included in the NHQR and NHDR.

## Children's Clinical Preventive Services

Prevention of disease is a critical part of children's health care. Two ways to prevent disease are to ensure timely immunization and to monitor children's body mass index (relationship of height to weight) to avoid obesity-related illness.

### Childhood immunizations

Recommended vaccines for children by the age of 3 years include at least 4 doses of diphtheria-tetanus-acellular pertussis (DTaP) vaccine, at least 3 doses of polio vaccine, at least 1 dose of measles-mumps-rubella vaccine, at least 3 doses of *Haemophilus influenzae* B vaccine, and at least 3 doses of hepatitis B antigens.

- Although the gap between Blacks and Whites who received all recommended vaccines decreased, in 2007, Black children were less likely than White children to receive all recommended vaccines (77.5% compared with 80.9%).
- In 2007, the percentage of children who received all recommended vaccines was lower for children from poor (76.5%) and near-poor (77.8%)

families than for children from high-income families (84.1%).

- Nationally, several groups achieved the Healthy People 2010 objective of 80% of children receiving all recommended vaccines: White (80.9%), American Indian/Alaska Native (83.5%), non-Hispanic White (81%), middle income (81.8%), and high income (84.1%).

The Centers for Disease Control and Prevention's National Immunization Program survey is beginning to collect data on insurance status. To the extent that this information is shown to be valid, it might be used by CMS to gather information on immunization rates for publicly insured children by State.

### Prevention of obesity in children

Children enrolled in Medicaid are more likely to meet criteria for obesity than other children. The U.S. Preventive Services Task Force recently recommended screening for overweight in children. One of the CHIPRA core measures is a new HEDIS® (Healthcare Effectiveness Data and Information Set) measure of documentation of body mass index in children. A prerequisite to calculating body mass index is measurement of height and weight (Figure 1).

- Children with any private or public insurance, children from homes where the primary language is English, and children with special health care needs were more likely than their counterparts to have had

their height and weight measured.

- The NHDR also reports on the percentage of children who received counseling from a health provider on healthy eating and physical activity (refer to NHDR Figure 4.40 and Tables 6\_4\_5.1, 2, and 3).

## Access to Care

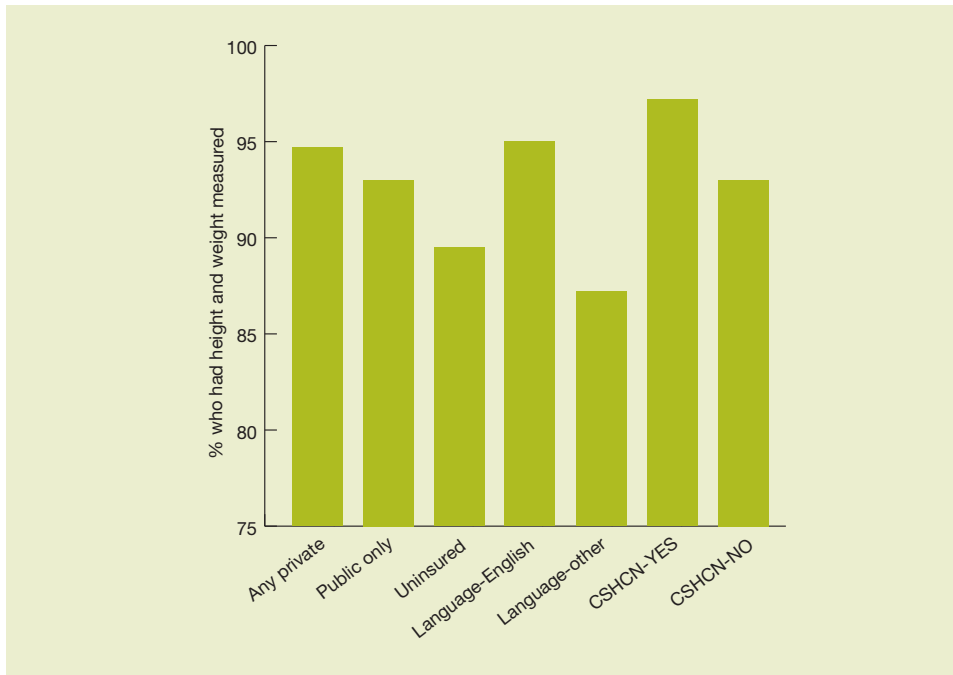
### Dental care

The CHIPRA initial core measures for dental care are from data collected by CMS's Early Periodic Screening, Diagnosis, and Treatment (EPSDT) Program. They include percentage of eligible Medicaid-enrolled children with a preventive care visit and number of children who received dental treatment services. Performance data are available nationally and by State at <http://www.cms.gov/MedicaidEarlyPeriodicScrn/>.

The NHQR and NHDR report on the percentage of children who had a dental visit in the calendar year, by family income, age group, gender, race, ethnicity, residence, language spoken at home, perceived health status, special health care needs status, and place of birth (United States or other). Selected data are shown in Figure 2.

- Overall, the rate of dental visits among children in the United States is low, by recommended standards. The Healthy People 2010 goal for dental visits was 56%.
- Younger children, uninsured children, and children in a

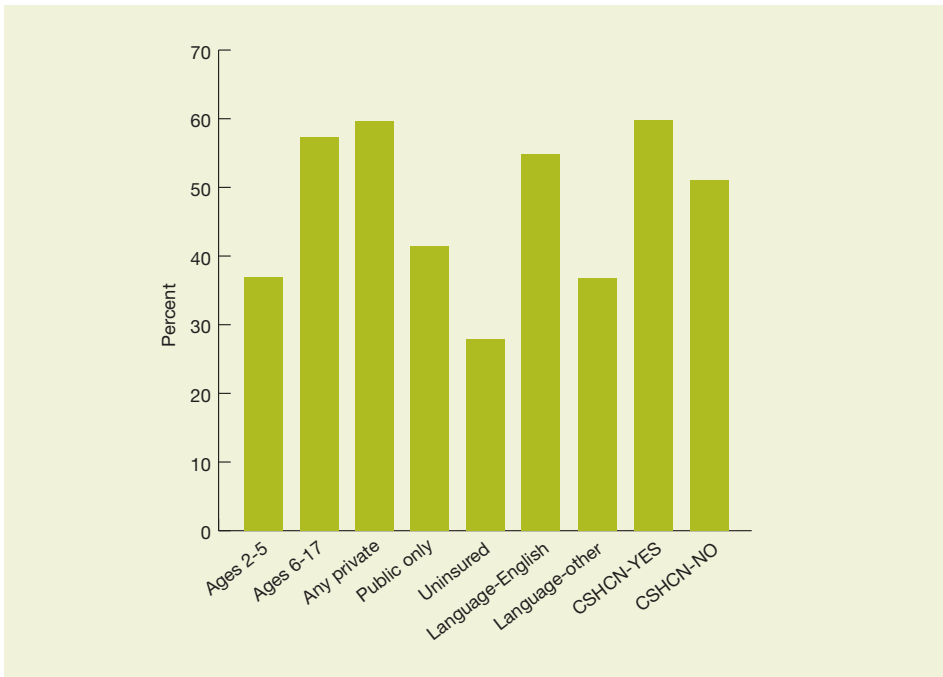
Figure 1. Children who had their height and weight measured by a health provider, by health insurance, language spoken most often at home, and special health care needs status, United States, 2006



**Key:** CSHCN = children with special health care needs.

**Source:** AHRQ, Medical Expenditure Panel Survey.

Figure 2. Children ages 2-17 who had a dental visit in the calendar year, by age, insurance, language spoken at home, and special health care needs status, United States, 2007



**Key:** CSHCN = children with special health care needs.

**Source:** AHRQ, Medical Expenditure Panel Survey.

household where English is not the primary language are less likely than their counterparts to have had a dental visit.

- Children with special health care needs are somewhat more likely to have had a dental visit than children without special health care needs.

### Usual primary care provider

Having a usual primary care provider improves patient trust and provider-patient communication, helping to increase the chances of receiving appropriate care. Among children ages 0-17, usual primary care provider varies by income. Data for 2006 show that children in high-income families (94.2%) are more likely than children at other income levels (poor, 86.5%; near poor, 85.6%; and middle income,

89.6%) to have a usual primary care provider.

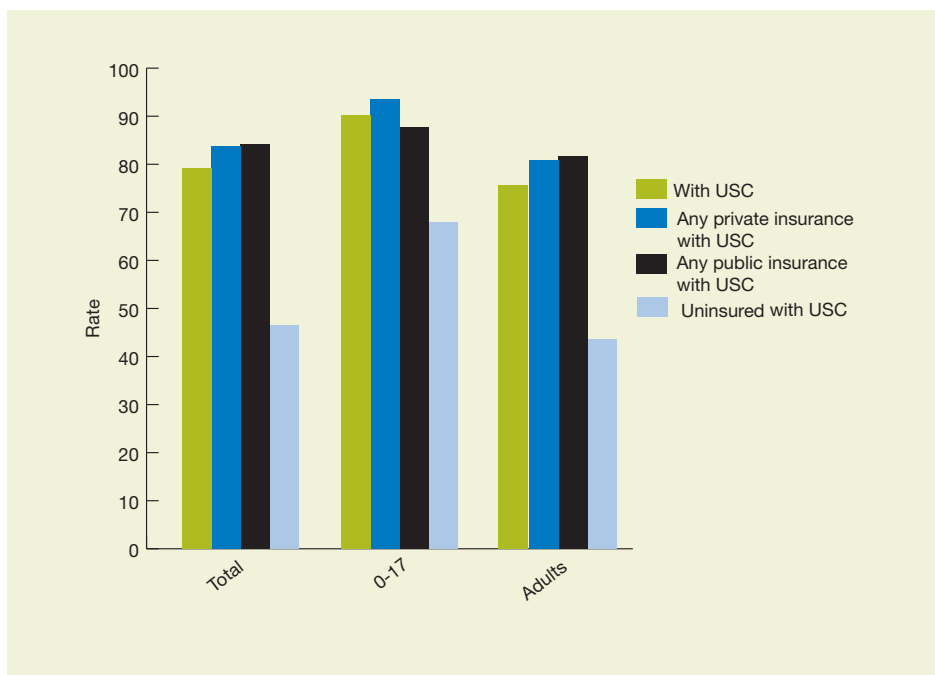
Children are more likely than adults to have a usual source of care (90.1% compared with 75.6%), but insurance is a factor (Figure 3). Children with private insurance are more likely to have a usual source of care than children with public insurance or children who are uninsured (93.5% compared with 87.8% and 67.9%, respectively). A usual source of care includes an urgent care or walk-in clinic, doctor's office, clinic, health center facility, hospital outpatient clinic, health maintenance organization or preferred provider organization, military health care, or some other place. A hospital emergency department (ED) is also included.

### Behavioral Health

Several initial core measures for CHIPRA cover behavioral health services (Table 1). For children with a mental illness, the only measure recommended was followup after hospitalization, a HEDIS® measure for which data are not currently available by child age groups. The NHQR and NHDR report data on a different measure than that recommended for the CHIPRA core set. The measure is children ages 12-17 treated for depression.

- In 2007, overall, less than 40% of children ages 12-17 with a major depressive episode received treatment.
- Younger adolescents (41.4%), Whites (39.9%), non-Hispanics (41.0%), and adolescents living

Figure 3. People with a usual source of care (USC), by insurance, 2006



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

in nonmetropolitan areas (41.9%) were more likely to have received care.

- Among income groups, near-poor children were the least likely to get care (36.9% compared with poor, 39.4%; middle income, 39.2%, and high income, 40.0%).

Data are needed on the quality of the content of mental health care for children, by insurance status.

### Management of Chronic Conditions

One of the initial recommended core CHIPRA measures in this category is ED visits for asthma. Some unknown number of ED visits for asthma is believed to be avoidable with high-quality ambulatory care. The NHQR measures pediatric hospital

admissions for asthma, which are similarly believed to be avoidable to a large extent. An ED visit is often a precursor to a hospital admission for asthma.

- Within each racial and ethnic group, children in the lowest income quartile are most likely to be admitted to the hospital for asthma (Figure 4).
- Regardless of income, Black children are most likely of all racial and ethnic groups to be admitted to the hospital for asthma.

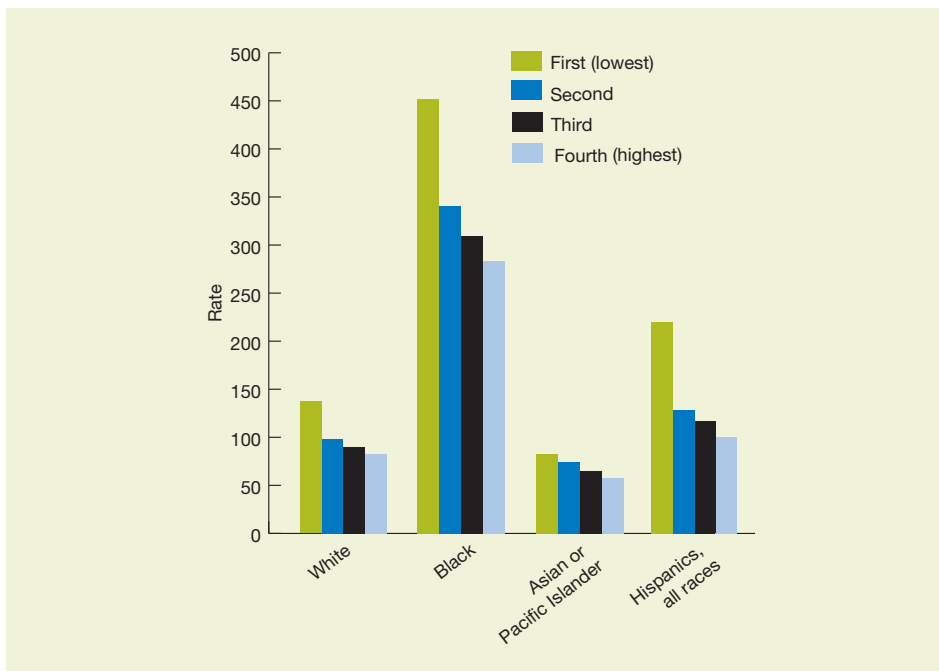
Data are needed on underlying child population with asthma by State and by race/ethnicity for all States; and about the quality of ambulatory care for children with asthma.

### Family Experiences of Care

Communication in children’s health care can be challenging because children often cannot express their needs. They rely on other people, such as their parents. Health provider communication can have a major effect on health care quality.

- From 2002 to 2006, the percentage of parents reporting poor communication decreased overall (from 6.7% to 4.8%). The percentage also decreased for parents of children with any private or public insurance (Figure 5).
- In all data years, parents of children with public insurance were more likely to report poor communication with their health providers compared with those with private insurance.

Figure 4. Pediatric asthma admissions per 100,000 population, ages 2-17, by race/ethnicity, stratified by income



**Source:** AHRQ, Healthcare Cost and Utilization Project, State Inpatient Databases, disparities analysis file, 2006, and AHRQ Quality Indicators, version 3.1. The disparities analysis file is designed to provide national estimates on disparities using weighted records from a sample of hospitals from the following 25 States: AR, AZ, CA, CO, CT, FL, GA, HI, KS, MA, MD, MI, MO, NH, NJ, NY, OK, RI, SC, TN, TX, UT, VA, VT, and WI.

**Note:** White, Black, and Asian or Pacific Islander are non-Hispanic.



## Most Integrated Health Care Settings

Work to identify the initial core set of CHIPRA measures did not yield a comprehensive measure of the most integrated health care setting. As directed by CHIPRA, work to develop such a measure will continue. Care coordination, which is covered in the NHQR and NHDR, is an important element of integrated health care.

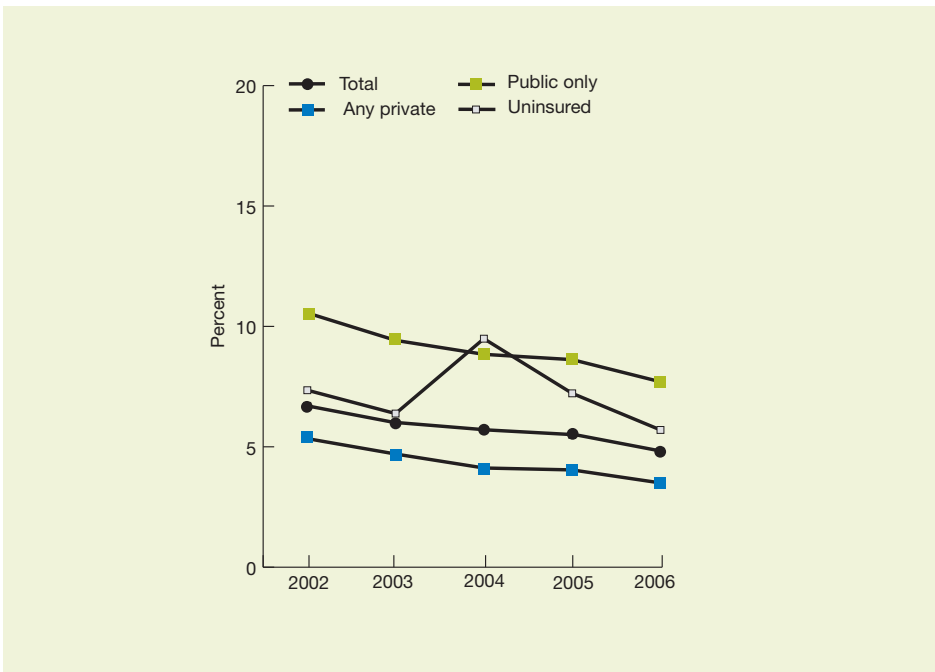
The NHQR and NHDR report on aspects of care coordination for children as measured by the 2007 Patient Experience Survey conducted by Massachusetts Health Quality

Partners. Among parents of pediatric patients who were sent for a test, 69% reported that someone from the doctor's office always followed up to give the test results. Sixty-one percent of parents reported that their child's doctor always seemed informed and up to date about the care the child received from specialists. Among parents of pediatric patients who saw other doctors or nurses in the practice, 59% reported that the other providers always had all the information they needed.

The NHQR also notes variation among States in care coordination based on the National Survey of Children With Special Health Care

Needs. Overall, among children with special health care needs who required help with care coordination, 46.0% received the help they needed. Among States, the percentage receiving coordination ranged from 38.3% to 53.2%. The 13 States in the best quartile (highest rates of coordinated care) in 2005-2006 had a combined average rate of 50.5%. These States are primarily located in New England and the Midwest. Eleven States and the District of Columbia were in the worst quartile (lowest rates of coordinated care) in 2005-2006, with a combined average rate of 41.5%. These States are primarily located in the western United States.

**Figure 5. Children who had a doctor's office or clinic visit in the last 12 months whose parents reported poor communication with health providers: Overall composite, by insurance, 2002-2006**



**Source:** Agency for Healthcare Research and Quality, Medical Expenditure Panel Survey, 2002-2006.

**Note:** Parents who report that their child's health providers sometimes or never listened carefully, explained things clearly, showed respect for what they had to say, or spent enough time with them are considered to have poor communication.

**Table 1. Measures recommended for initial core set of children's health care quality for voluntary reporting by Medicaid and CHIP programs, measure labels by legislative category**

Legislative Measure Topic/subtopic	Measure number	Current measure label
<b>Prevention and Health Promotion</b>		
Prenatal/Perinatal Care	1	Frequency of ongoing prenatal care
	2	Timeliness of prenatal care—percentage of deliveries that received a prenatal care visit as a member of the organization in the first trimester or within 42 days of enrollment in the organization
	3	Percentage of live births weighing less than 2,500 grams
	4	Cesarean rate for low-risk first birth women (National Quality Forum [NQF] 0471)
Immunizations	5	Childhood immunization status (NQF 0038)
	6	Immunizations for adolescents
Screening	7	Body mass index documentation for 2- to 18-year-olds (NQF 0024)
	8	Screening using standardized screening tools for potential delays in social and emotional development—Assuring Better Child Health and Development (ABCD) Initiative measures
	9	Chlamydia screening for women (NQF 0033)
Well-Child Visits (WCVs)	10	WCVs in the first 15 months of life
	11	WCVs in the third, fourth, fifth, and sixth years of life
	12	WCVs for children 12-21 years of age—with primary care physician or obstetrician/gynecologist
Dental Care	13	Total eligibles receiving preventive dental services (EPSDT measure line 12B)
<b>Management of Acute Conditions</b>		
Appropriate Use of Antibiotics	14	Appropriate testing for children with pharyngitis (NQF 0002)
	15	Otitis media with effusion—avoidance of inappropriate use of systemic antimicrobials in children ages 2-12
Dental Care	16	Total EPSDT eligibles who received dental treatment services (EPSDT CMS Form 416, Line 12C)
Emergency Care	17	ED utilization—average number of ED visits per member per reporting period
Inpatient Safety	18	Pediatric catheter-associated bloodstream infection rates (pediatric intensive care unit and neonatal intensive care unit (NQF 0139)
<b>Management of Chronic Conditions</b>		
Asthma	19	Annual number of asthma patients (≥1 year old) with one or more asthma-related ED visits (S/AL Medicaid Program)
Attention Deficit Hyperactivity Disorder	20	Followup care for children prescribed attention deficit hyperactivity disorder medication (continuation and maintenance phase) (NQF 108)
Mental Health	21	Followup after hospitalization for mental illness
Diabetes	22	Annual hemoglobin A1c testing (all children and adolescents diagnosed with diabetes)
<b>Family Experiences of Care</b>		
	23	CAHPS® Health Plan Survey 4.0, Child Version, including Medicaid and Children With Chronic Conditions supplemental items
<b>Availability</b>		
	24	Children's and adolescents' access to primary care practitioners, by total and age

**Key:** CAHPS = Consumer Assessment of Healthcare Providers and Systems.

#### Birth-Related Issues

Women who completed a pregnancy in the last 12 months who received prenatal care in the first trimester  
Live-born infants with low birth weight (<2,500 g, <1,500 g)  
Infant deaths per 1,000 live births (total, <1,500 g, 1,500-2,499 g, ≥2,500 g)

#### Childhood Immunization

Composite measure: Children ages 19-35 months who received all recommended vaccines (also includes individual measures for diphtheria-tetanus-pertussis, polio, measles-mumps-rubella, *Haemophilus influenzae* type B, and hepatitis B vaccines)  
Children ages 19-35 months who received 1 dose of varicella vaccine

#### Other Childhood Preventive Care

Children who ever had their height and weight measured by a health provider  
Children ages 2-17 who had a dental visit in the calendar year  
Children ages 2-17 with untreated dental caries  
People ages 2-19 who were overweight who were told by a health provider they were overweight  
Children ages 2-17 for whom a health provider ever gave advice about the amount and kind of exercise, sports, or physically active hobbies they should have  
Children ages 2-17 for whom a health provider ever gave advice about healthy eating  
Children ages 3-6 who ever had their vision checked by a health provider  
Children for whom a health provider ever gave advice about how smoking in the house can be bad for a child  
Children 0-40 lb for whom a health provider ever gave advice about using child safety seats when riding in a car  
Children 41-80 lb for whom a health provider ever gave advice about using booster seats when riding in a car  
Children over 80 lb for whom a health provider ever gave advice about using lap or shoulder belts when riding in a car  
Children ages 2-17 for whom a health provider ever gave advice about using a helmet when riding a bicycle or motorcycle

#### Hospitalizations for Diabetes

Hospital admissions for short-term complications of diabetes per 100,000 population, ages 6-17 and 18+

#### Mental Health and Substance Abuse

Children ages 12-17 with a major depressive episode in the last 12 months who received treatment for depression in the last 12 months

#### Management of Asthma

Hospital admissions for asthma per 100,000 population ages 2-17 and 18-64

#### Timeliness

Children who had an appointment for routine health care in the last 12 months who got appointments for routine care as soon as wanted  
Children who needed care right away for an illness, injury, or condition in the last 12 months who got care as soon as wanted

#### Patient Centeredness

Composite measure: Children who had a doctor's office or clinic visit in the last 12 months whose health providers listened carefully, explained things clearly, respected what they or their parents had to say, and spent enough time with them (also includes individual measures for each component)  
Rating of health care for children who had a doctor's office or clinic visit in the last 12 months  
Parents who reported that they always received test results for their child, that their child's personal doctor always seemed informed and up to date about care received from specialist doctors, and that other providers at their child's doctor's office always had all the information they needed  
Children with special health care needs who received coordinated care

#### Patient Safety

Accidental puncture or laceration during procedure per 1,000 discharges, children under 18  
Birth trauma - injury to neonate per 1,000 selected live births

#### Avoidable Hospitalizations

Perforated appendixes per 1,000 admissions with appendicitis, ages 1-17

#### Access to Care

Children who did not have problems seeing a specialist they needed to see in the last 12 months  
People under age 65 with health insurance

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