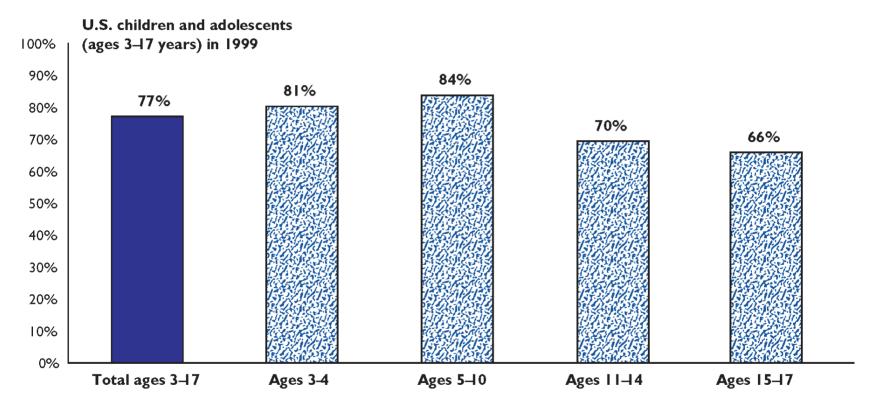
Receipt of Recommended Preventive Health Care Visits

Children who receive regular preventive care are less likely to have emergency visits and preventable hospitalizations. Three-quarters (77%) of U.S. children and adolescents received an

annual preventive health visit at recommended ages, according to parent report in 1999. Adolescents were less likely to have a preventive care visit than younger children.



Received annual well-child visit at recommended ages*

Source: Urban Institute/Child Trends, 1999 National Survey of America's Families (N=35,938), as reported by Yu et al. (2002). *Pediatric experts recommend an annual well-child visit at ages 3-6, 8, and 10-21 years; children ages 7 and 9 years were

considered compliant with the recommendations whether or not they received a well-child visit. Data were not sufficient to calculate compliance with recommendations for children ages 0-2 years.

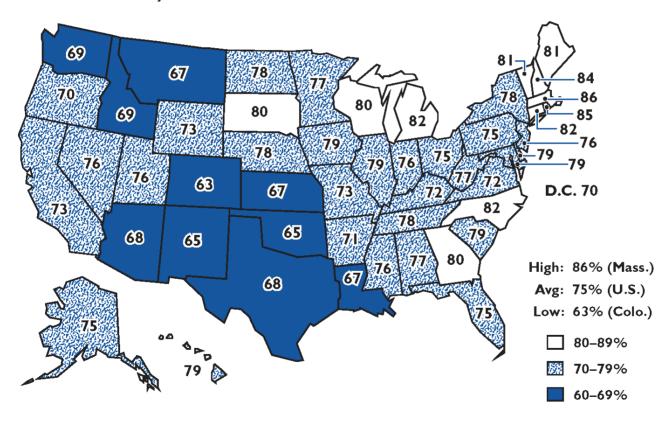


Immunizations for Young Children

Only three-quarters of young children in the U.S. were up to date on their immunizations in 2002. Just 11 states met the

national goal of at least 80 percent coverage for this combined measure.

Percentage of children (ages 19–35 months) who received all recommended doses of five key vaccines in 2002*



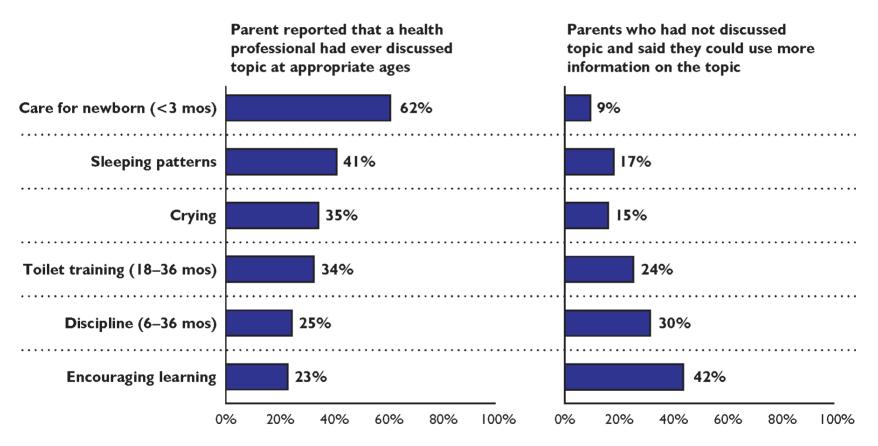
Source: National Center for Health Statistics, 2002 National Immunization Survey $(N=30,000+\ households)$, as reported by the CDC (2003b). *4:3:1:3:3 series = 4+doses of diphtheria and tetanus toxoids and pertussis vaccine or diphtheria and

tetanus toxoids only, 3+ doses of poliovirus vaccine, 1+ dose of a measlescontaining vaccine, 3+ doses of Haemophilus influenzae type b vaccine, and 3+ doses of hepatitis B vaccine.



Guidance on Childrearing for Parents of Young Children

Less than half of parents of young children reported that they had ever discussed five of six age-appropriate childrearing topics with a health professional (such as a doctor or nurse) during 1995–1996. Many parents had not discussed a topic and wanted more information about the topic, indicating unmet need.



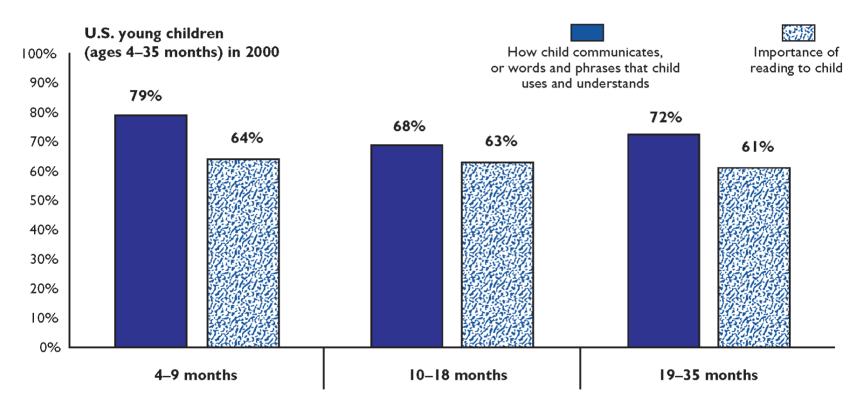
Parents of U.S. children (ages 0-36 months) in 1995-1996

Source: 1995-1996 Commonwealth Fund Survey of Parents with Young Children (N=2,017), as reported by Schuster et al. (2000).



Speech and Language Development: Assessment and Guidance

About two-thirds or more of parents of young children reported in 2000 that their child's doctor or other health professional had discussed speech and language development issues and the importance of reading aloud to their child to promote early literacy development.



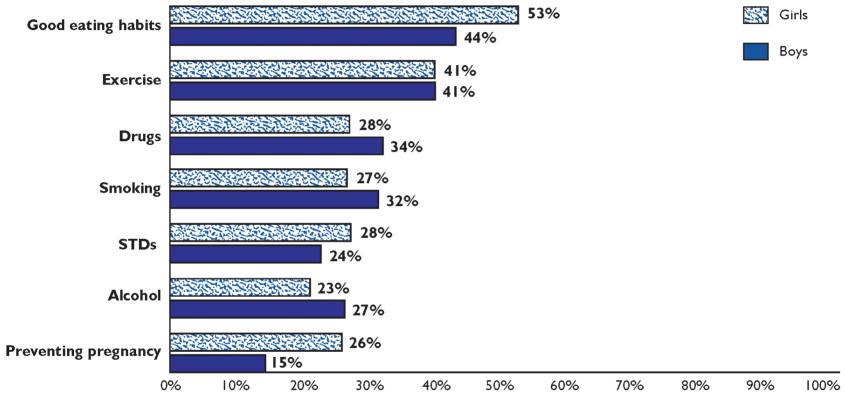
Parent reported that child's health professional had discussed topic

Source: National Center for Health Statistics, 2000 National Survey of Early Childhood Health (N=2,068), as reported by Halfon et al. (2002). See technical appendix for differences in survey wording by age group.



Counseling Adolescents on Healthy Behaviors

In 1997, less than one-half of adolescents reported that they had ever discussed most recommended health risk topics with their doctor or other health professional.



U.S. students (fifth through twelfth grade) in 1997

Source: 1997 Commonwealth Fund Survey of the Health of Adolescents (N=6,728), as reported by Ackard and Neumark-Sztainer (2001). Topics shown represent a subset of those included in the survey that matched the consensus of recommendations of

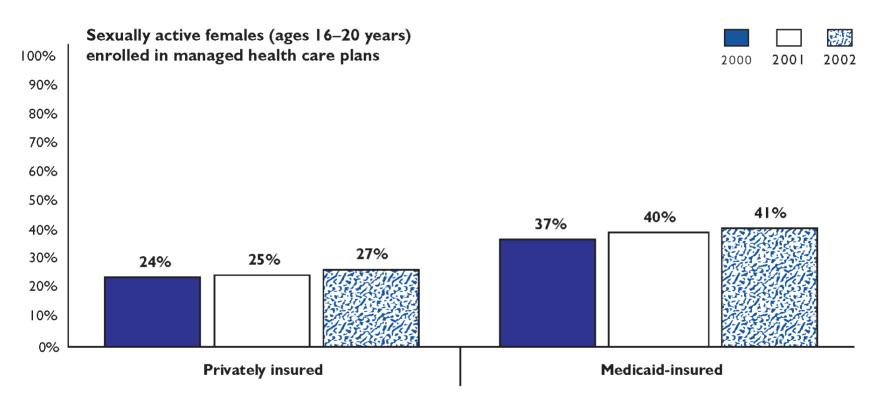
national organizations for screening and/or counseling adolescents at the time of the survey (Elster 1998). "Good eating habits" represents the highest rate achieved for any of the topics included in the survey.



STD Screening for Adolescents: Chlamydia Infection

Chlamydia—a sexually transmitted genital infection—often goes undetected and can lead to infertility or problems in pregnancy if left untreated. Among sexually active adolescent females enrolled in managed care plans,

less than three of 10 in private plans and four of 10 in Medicaid plans had been screened for chlamydia infection in the past year.



Received a test for chlamydia infection in the past year

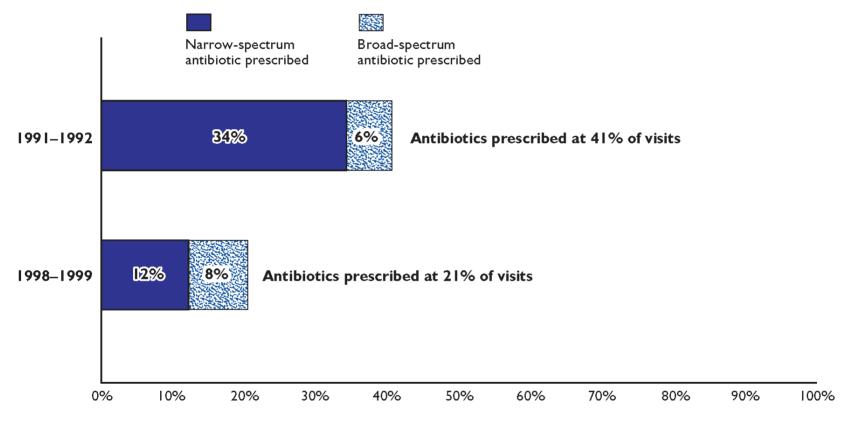
Source: National Committee for Quality Assurance, HEDIS (N=282 to 334 private plans and 85 to 100 Medicaid plans), as reported by the NCQA (2003a). Used and adapted with permission from the National Committee for Quality Assurance.



Inappropriate Antibiotic Treatment for the Common Cold

Antibiotics are never indicated for treating the common cold. From 1991 to 1999, clinicians reduced—by 50 percent—the prescribing of antibiotics for children and adolescents with the

common cold (from 41 to 21 percent of visits). Yet, they more often prescribed broad-spectrum antibiotics, which risks spreading antibiotic resistance to more bacteria.



Physician visits by children and adolescents (younger than 15 years) diagnosed with the common cold (and other unspecified upper respiratory tract infections likely to be caused by a virus)

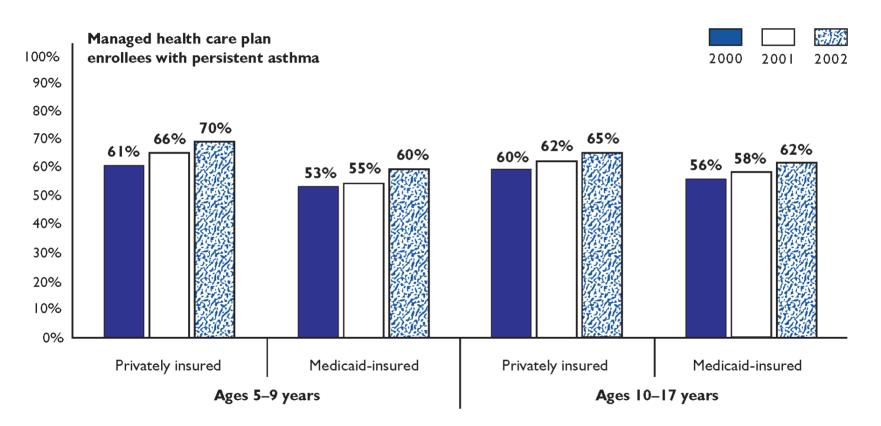
Source: National Center for Health Statistics, National Ambulatory Medical Care Survey (N=1,976 pediatric visits), as reported by Steinman et al. (2003) and personal communication with Michael A. Steinman (2003). Percentages do not add to 100

because of rounding. Adapted and republished from the Annals of Internal Medicine with permission of the American College of Physicians.



Prescription of Preventive Medication for Long-Term Asthma Control

Only about two-thirds of children and adolescents with persistent asthma enrolled in managed care plans receive a prescription for a recommended medication to control their asthma and prevent asthma attacks. Performance improved sequentially over the past three years.



Received a prescription for an appropriate preventive medication for long-term asthma control

Source: National Committee for Quality Assurance, HEDIS (N= 242 to 285 private plans and 53 to 90 Medicaid plans), as reported by the NCQA (2003a). Used and adapted with permission from the National Committee for Quality Assurance.

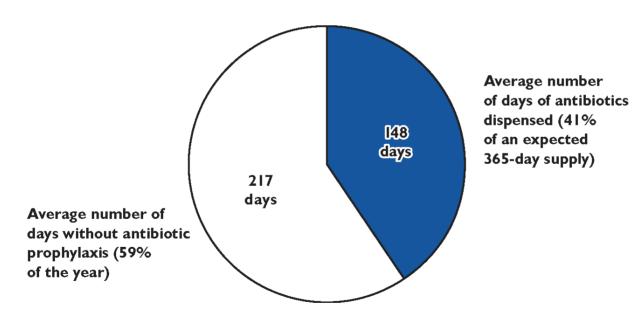


Prescription of Antibiotics to Prevent Infection among Medicaid-Insured Young Children with Sickle Cell Disease

During a one-year period, Medicaid-insured young children with sickle cell disease were dispensed an average of only 148 days (41%) of an expected 365-day supply of prophylactic

antibiotics to prevent potentially life-threatening pneumococcal infections.

Children (younger than 4 years) with sickle cell disease* continuously enrolled in Medicaid in two states for a one-year period during 1995–1999



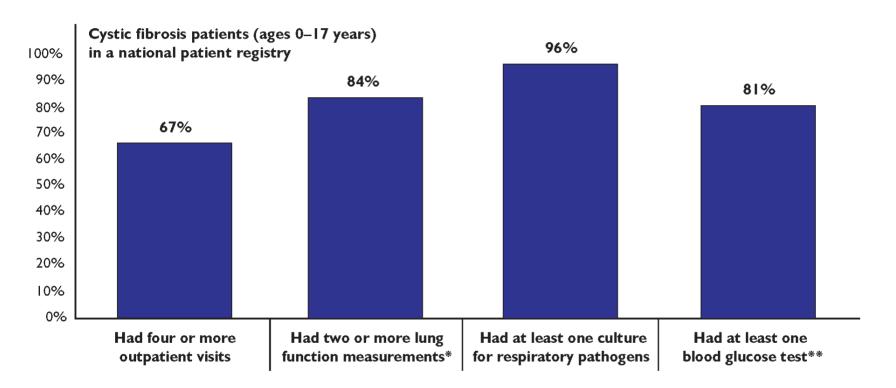
Source: Medicaid administrative claims and encounter data (N=261), as reported by Sox et al. (2003). *Diagnosis of sickle cell anemia (hemoglobin SS) or sickle-beta (S- β °) thalessemia.



Monitoring and Evaluation for Cystic Fibrosis

Only two of three children and adolescents with cystic fibrosis, a life-shortening genetic disease, received all recommended monitoring visits during 2002, and about four of five received

recommended tests that can help anticipate problems and direct treatment to maintain better lung function and reduce the impact of disease complications.



Received recommended monitoring and/or testing during 2002

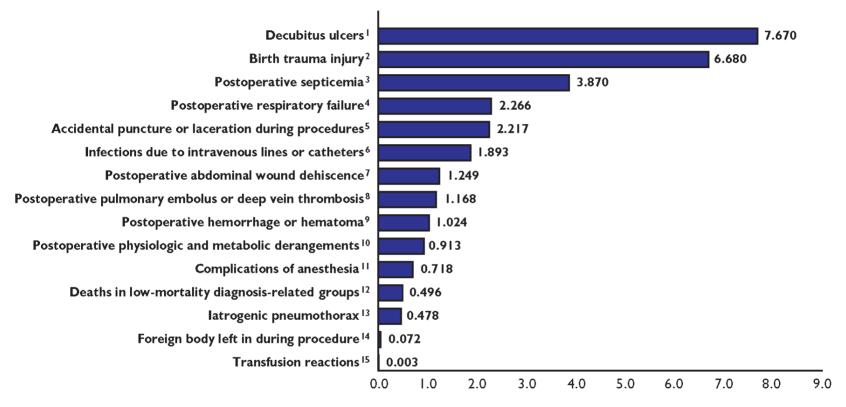
Source: CFF Patient Registry Annual Data Report (N=13,817) as reported by the Cystic Fibrosis Foundation (2003b). *Lung function was measured by spirometry primarily for patients ages 6 and older. **Blood glucose test to detect glucose

intolerance or potential cystic fibrosis-related diabetes was measured for patients ages 14 years and older.



Patient Safety Indicators: Potential Medical Mistakes in Hospitals

Infants, children, and adolescents hospitalized in 2000 experienced adverse events or complications that may be preventable with improved quality of care.



Adjusted rate of potentially preventable adverse events in 2000 per 1,000 U.S. hospital patients (ages 0-17 years) at risk*

Source: Agency for Healthcare Research and Quality, 2000 Healthcare Cost and Utilization Project, Nationwide Inpatient Sample, as reported by AHRQ (2003b). *See technical appendix for footnotes defining populations at risk and rate adjustments, which vary by indicator.

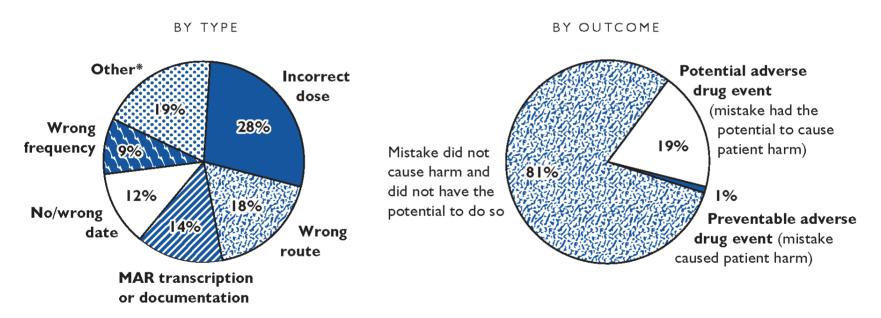


Pediatric Medication Mistakes in the Hospital

Medication mistakes occurred in six of every 100 medication orders during a study at two hospitals. One of every five medication mistakes either caused patient harm or had the

potential to cause harm. An incorrect medication dose was the most common type of pediatric medication mistake.

Pediatric Medication Mistakes Detected at Two Hospitals During Six Weeks in 1999



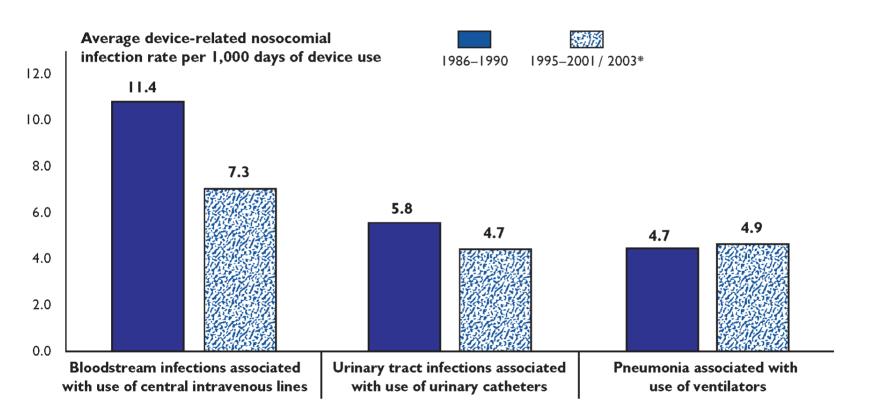
Source: medical records, medication orders, medication administration records (MAR), and clinician self-reports (N=616 errors), as reported by Kaushal et al. (2001). May not be representative of all U.S. hospitals or of all pediatric medication mistakes.

Percentages may not add to 100 because of rounding. *Other includes: missing or wrong weight (3.7%), illegible order (2.3%), wrong drug (1.3%), known allergy (1.3%), wrong patient (0.2%), and other (9.9%).



Hospital-Acquired Infections in Pediatric Intensive Care Units

Hospitals participating in a national surveillance system have reduced the rates of two types of infections acquired by patients in pediatric intensive care units.



Source: National Center for Infectious Diseases, National Nosocomial Infections Surveillance System (N=75 to 79 hospitals), as reported by NCHS (2001) and NCID (2001; 2003). May not be representative of all U.S. hospitals.

*January 1995 to June 2003, except ventilator-associated pneumonia rate is for January 1995 to June 2001 (see technical appendix).

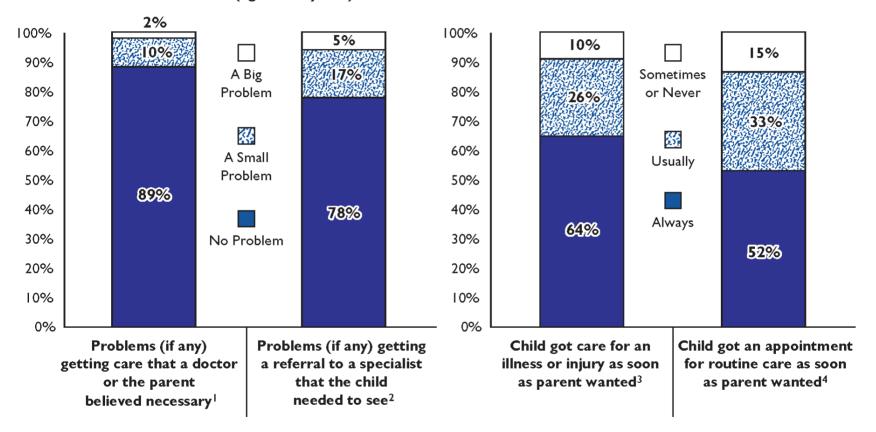


Parent Perceptions of Accessibility and Timeliness of Care

In 2000, parents reported that up to one of five children and adolescents (12% to 22%) had problems getting needed care

and up to half (36% to 48%) did not always get care as quickly as desired.

U.S. children and adolescents (ages 0-17 years) in 2000



Source: Agency for Healthcare Research and Quality, 2000 Medical Expenditure Panel Survey, Parent-Administered Questionnaire (N=6,577) as reported by AHRQ (2002b). Percentages may not add to 100 because of rounding.

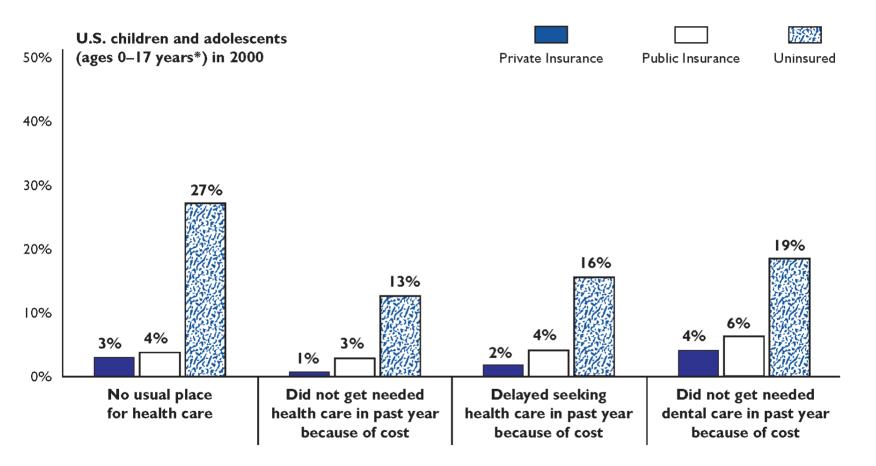
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- I. among those who had a doctor or clinic visit in the past year
- 2. among those whose doctor or parent thought they needed to see a specialist in the past year
- 3. among those who had an illness or injury that needed care right away in the past year
- 4. among those who had an appointment for routine care in the past year.



Regular Source and Unmet Needs for Care

In 2000, children without insurance were much more likely than those with private or public insurance to lack a regular source of health care and to have unmet needs for health and dental care, as perceived by parents.

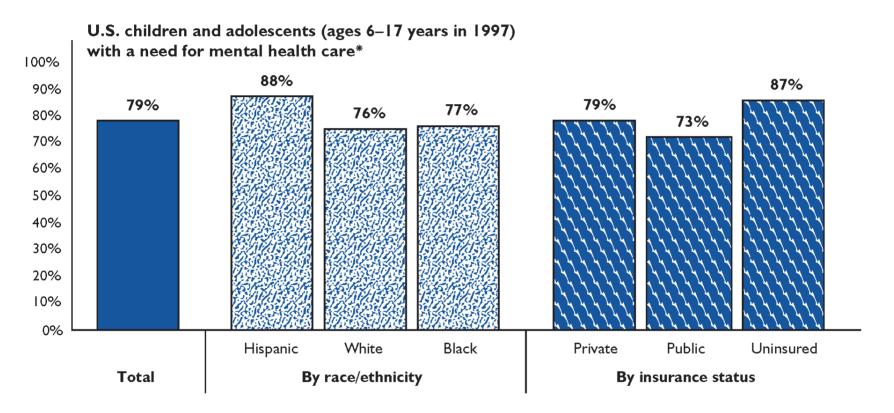


Source: National Center for Health Statistics, 2000 National Health Interview Survey (N=13,376), as reported by Blackwell et al. (2003). *Ages 2–17 years for dental care. "Other insurance" category omitted for clarity.



Unmet Need for Mental Health Care

Among children and adolescents with mental health problems severe enough to indicate a clinical need for mental health evaluation, four of five had not received any mental health services during the past year, according to parent report in 1997. Children of Hispanic ethnicity and those without insurance were more likely to have an unmet need for care.



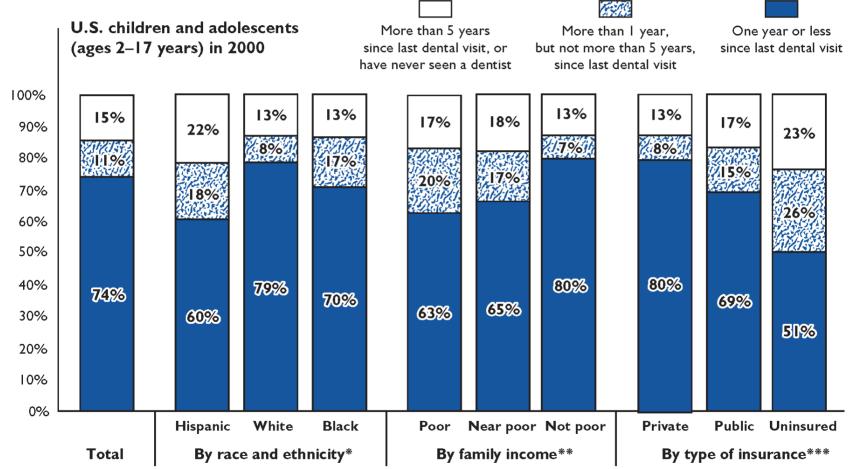
Did not receive any mental health care services in the past year

Source: Urban Institute/Child Trends, 1997 National Survey of America's Families (N=21,824), as reported by Kataoka et al. (2002). *Need for mental health care was defined by researchers based on parent-reported child behavior (see technical appendix for methodology).



Time Since Last Dental Visit

One of four children and adolescents (26%) did not receive dental care in the past year, and one of seven (15%) did not receive any in the past five years, according to parents in 2000. Minority children, children in families with lower income, and children with public insurance or without insurance are less likely to receive regular dental care.



Source: National Center for Health Statistics, 2000 National Health Interview Survey (N=13,376), as reported by Blackwell et al. (2003). Percentages may not add to 100 because of rounding. *White and black race are non-Hispanic ethnicity. **For family income, poor

means below the federal poverty level, near poor means 100 percent to less than 200 percent of the poverty level, and not poor means 200 percent of the poverty level or greater.

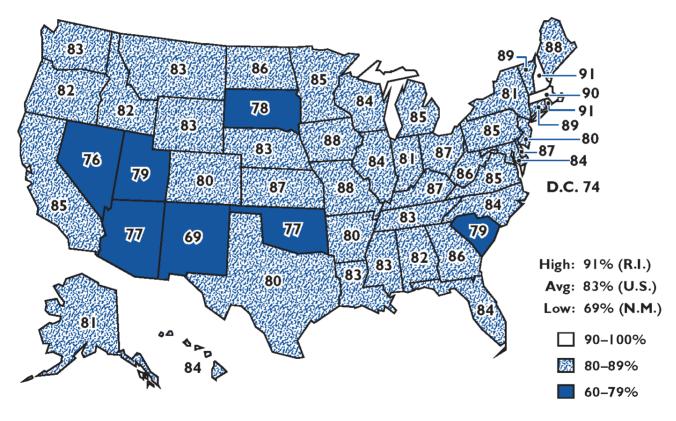
***Other insurance category omitted for clarity.



Timely Initiation of Prenatal Care

Five of six mothers (83%) began prenatal care in their first three months of pregnancy in 2001, up from three-quarters (76%) in 1990. Rates varied among the states, and only three states met the national goal of 90 percent in 2001.

Percentage of infants born live in 2001 whose mother began prenatal care in the first trimester of pregnancy



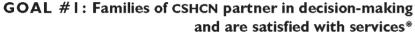
Source: National Center for Health Statistics, 2001 U.S. birth certificate data, as reported by Martin et al. (2002).



ACCESS AND TIMELINESS / PATIENT AND FAMILY CENTEREDNESS — LIVING WITH ILLNESS — EARLY CHILDHOOD TO ADOLESCENCE — CHARTS 3:6 AND 3:7

Progress Toward Implementing National Goals for Community-Based Systems of Services for Children with Special Health Care Needs

Among six goals identified by the Maternal and Child Health Bureau to promote the health and well-being of children with special health care needs (CSHCN), four were achieved by one-half to three-quarters of CSHCN, according to parent report in 2001. Very few teens received all the services needed to help them make a successful transition to adulthood.



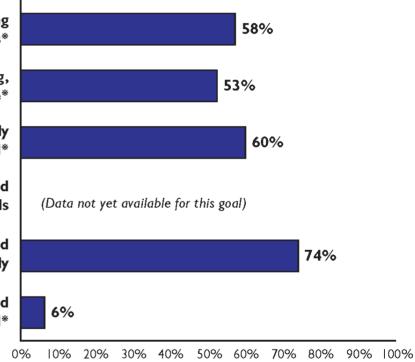
GOAL #2: CSHCN receive coordinated, ongoing, comprehensive care in a medical home*

GOAL #3: CSHCN are adequately insured for services they need*

GOAL #4: All children are screened early and continuously for special health care needs

GOAL #5: Services for CSHCN are organized so families can use them easily

GOAL #6: Teenage CSHCN receive services needed to support transition to adulthood*



U.S. children with special health care needs in 2001**

Source: National Center for Health Statistics, 2001 National Survey of Children with Special Health Care Needs (N=38,866 households), as reported by the CDC (2003d).

*See Chart 3:7 for components of these goals. **Ages 0-17 years for Goals #1-5 and ages 13-17 years for Goal #6.

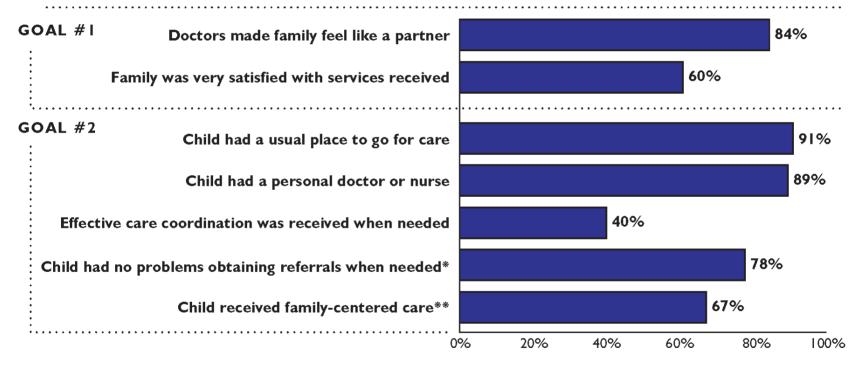


ACCESS AND TIMELINESS / PATIENT AND FAMILY CENTEREDNESS — LIVING WITH ILLNESS — EARLY CHILDHOOD TO ADOLESCENCE — CHART 3:7A

Elements of Goals for Children with Special Health Care Needs

The Maternal and Child Health Bureau has identified six goals for community-based systems of services for children with special health care needs (CSHCN) nationally and at

the state level (see Chart 3:6). These charts show more detailed performance on the specific components of certain goals, based on a parent survey in 2001.



U.S. children with special health care needs in 2001***

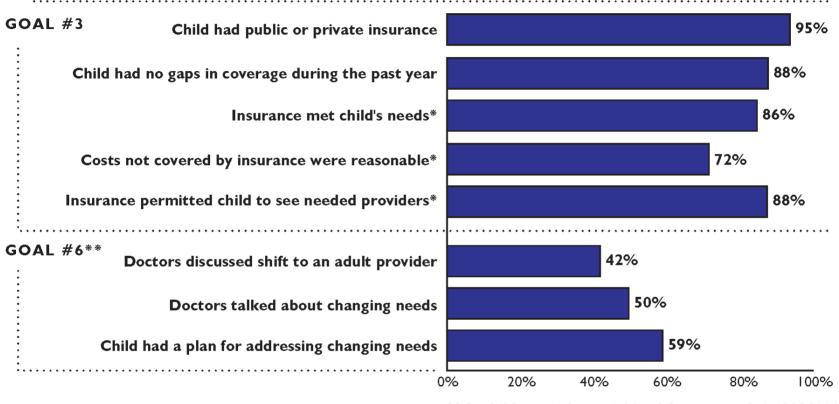
Source: National Center for Health Statistics, 2001 National Survey of Children with Special Health Care Needs (N=38,866), as reported by the CDC (2003d). *Among those who needed specialty care and a referral. **Family-centered care means that the

doctor usually or always spent enough time, listened carefully, was sensitive to values and customs, provided needed information, and made the family feel like a partner.

***Ages 0-17 years for these goals.



Elements of Goals for Children with Special Health Care Needs



U.S. children with special health care needs in 200 I***

Source: National Center for Health Statistics, 2001 National Survey of Children with Special Health Care Needs (N=38,866), as reported by the CDC (2003d). Goal #4 and Goal #5 do not have data components other than shown on Chart 3:6. *Among those with insurance who answered "usually or always." **Goal #6 includes a

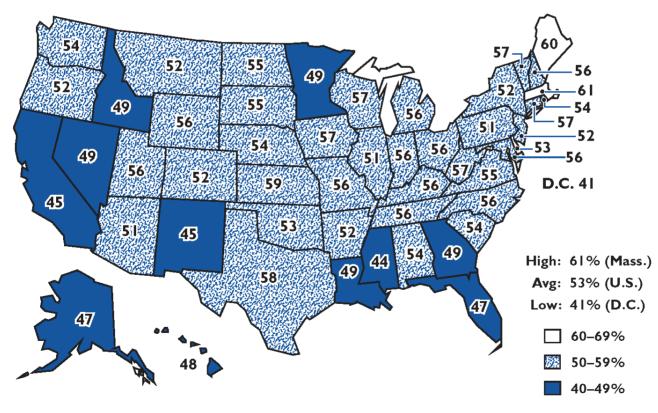
measure of whether teens received vocational or career training, which is included in the overall performance shown on Chart 3:6 but is not shown here because performance is not under the control of the health care system. ***Ages 0-17 years for Goal #3 and ages 13-17 years for Goal #6.



Medical Home for Children with Special Health Care Needs

Among children who have a chronic physical, developmental, behavioral, or emotional condition and who require health and related services beyond what is usual for children generally, only one-half (53%) receive coordinated, ongoing, comprehensive, family-centered care from a health professional or team.

Percentage of CSHCN (ages 0–17 years) who had an effective medical home, according to parent report in 2001



Source: National Center for Health Statistics, 2001 National Survey of Children with Special Health Care Needs (N=38,866) as reported by the CDC (2003d). Components of this measure include: child had a usual source of care, child had a personal doctor

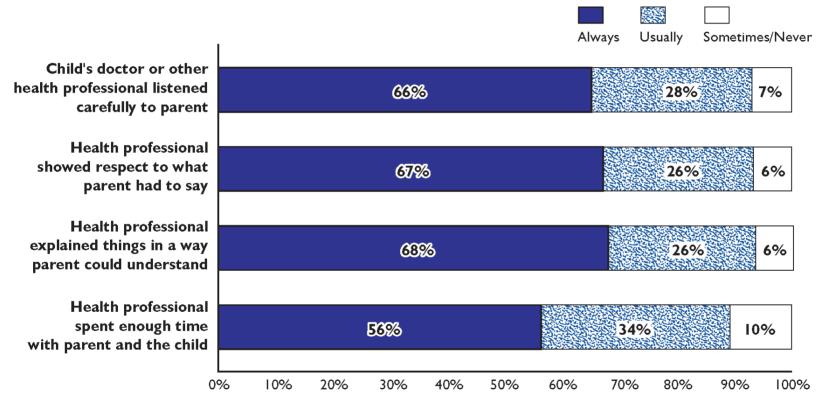
or nurse, effective care coordination was received when needed, child had no problems obtaining referrals when specialty care was needed, and child received family-centered care.



Parent Perceptions of Interpersonal Quality of Care

In 2000, just two-thirds of parents reported that their child's doctor or other health professional always communicated well

and little more than half reported that the doctor or health professional always spent enough time during the child's visit.



U.S. children and adolescents (ages 0-17 years in 2000) who received care in the past year

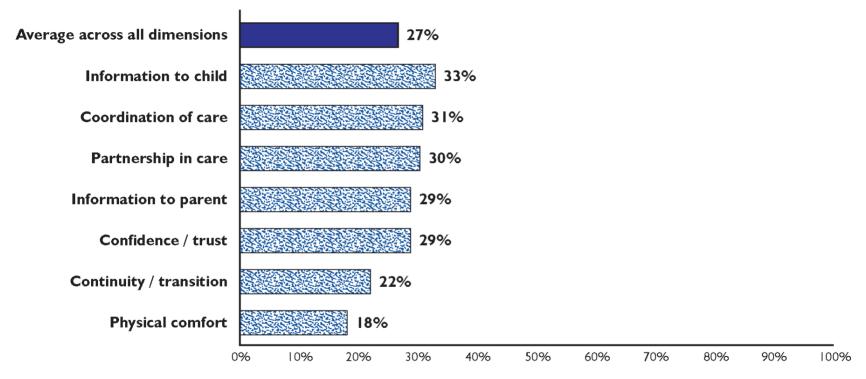
Source: Agency for Healthcare Research and Quality, 2000 Medical Expenditure Panel Survey, Parent-Administered Questionnaire (N=6,577), as reported by AHRQ (2002b). Percentages may not add to 100 because of rounding.



Parent-Reported Problems with Hospital Care

Parents of children who were treated for medical problems at 38 hospitals during 1997–1999 reported problems on 18 percent to 33 percent of the questions that they were asked

about seven dimensions of quality. Averaging across all dimensions, parents reported problems on more than one-quarter (27%) of the survey measures of hospital care.



Frequency that parents reported problems on questions within each quality dimension during 1997–1999

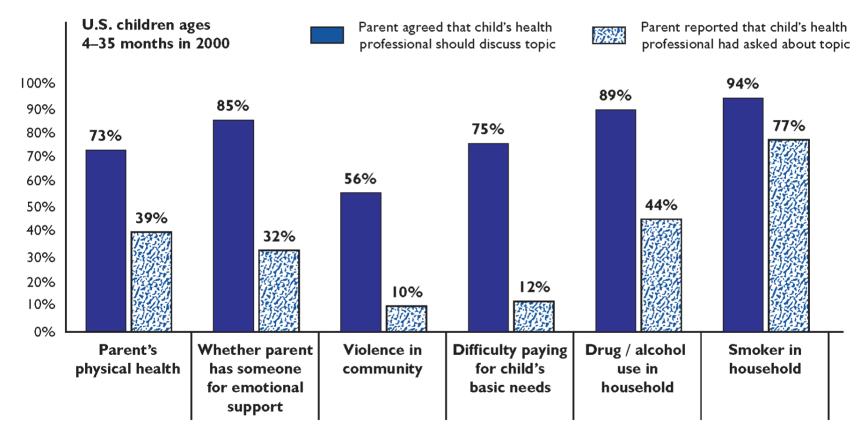
Source: 1997-1999 Picker Institute Pediatric Inpatient Survey (N=6,300 parents of children hospitalized for nonsurgical, non-intensive care unit medical conditions) as reported by Co et al. (2003). Results may not be representative of all U.S. hospitals.

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Supporting Family Well-Being: Preferences and Practices

Most parents of young children want their child's health professional to ask about family well-being during pediatric visits. Although health professionals often asked about smoking in the household, less than half (10% to 44%) of parents reported in 2000 that their child's health professional had asked about five other family well-being topics.

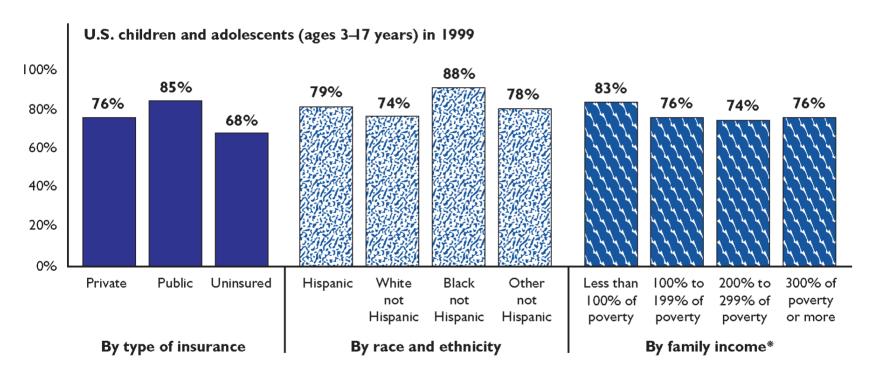


Source: National Center for Health Statistics, 2000 National Survey of Early Childhood Health (N=2,068), as reported by Halfon et al. (2002).



Differences in Receipt of Recommended Preventive Health Care Visits by Type of Insurance, Race, Ethnicity, and Family Income

Uninsured children and adolescents were least likely and those with public insurance were most likely to receive recommended preventive health visits, according to parent report in 1999. More comprehensive public coverage probably accounts for higher rates of preventive visits among minority and poor children and adolescents.



Received an annual well-child visit at recommended ages**

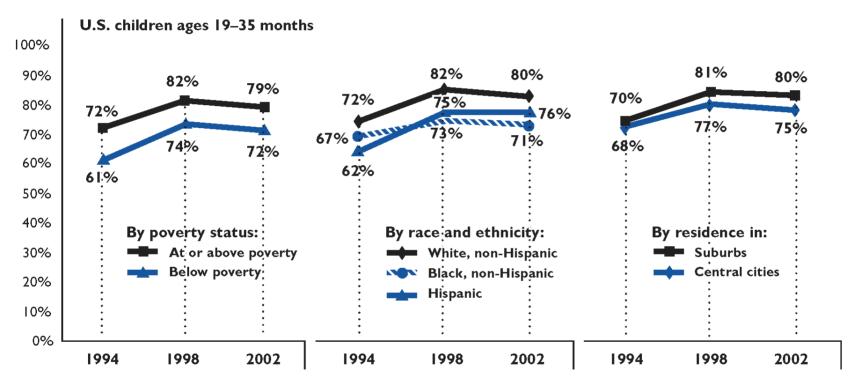
Source: Urban Institute/ Child Trends, 1999 National Survey of America's Families (N=35,938), as reported by Yu et al. (2002). *Poverty means the federal poverty level. **Pediatric experts recommend an annual well-child visit at ages 3-6, 8, and 10-21

years; children ages 7 and 9 years were considered compliant with the recommendations whether or not they received a well-child visit. Data were not sufficient to measure compliance with recommendations for children ages 0-2 years.



Income, Racial, Ethnic, and Geographic Differences in Immunizations

Poor, minority, and urban young children are less likely than nonpoor, white, and suburban young children to be up to date on immunizations. Disparity in rates of immunization has narrowed between poor and nonpoor and between Hispanic and white children, but has widened between black and white and between urban and suburban children.



Received all recommended doses of four key vaccines (4:3:1:3 series)*

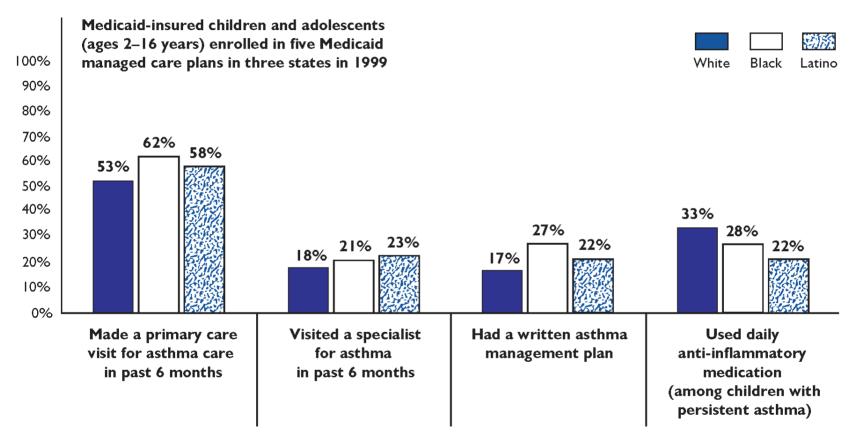
Source: National Center for Health Statistics, National Immunization Survey (N=25,247 households for Apr.-Dec. 1994 and 30,000+ households for Jan.-Dec. of other years), as reported by Eberhardt et al. (2001) and the CDC (2003e). *4:3:1:3; series = 4+

doses of diphtheria and tetanus toxoids and pertussis vaccine or diphtheria and tetanus toxoids only, 3+ doses of poliovirus vaccine, 1+ dose of measles-containing vaccine, and 3+ doses of Haemophilus influenzae type b vaccine.



Racial and Ethnic Differences in Asthma Management

Among low-income children with asthma insured by Medicaid during 1999, black and Latino children were equally or more likely to have primary and specialty care visits and to receive a written plan to help them manage their asthma symptoms compared to white children. Yet, black and Latino children were less likely to be regularly using preventive medication when indicated to control their asthma symptoms.



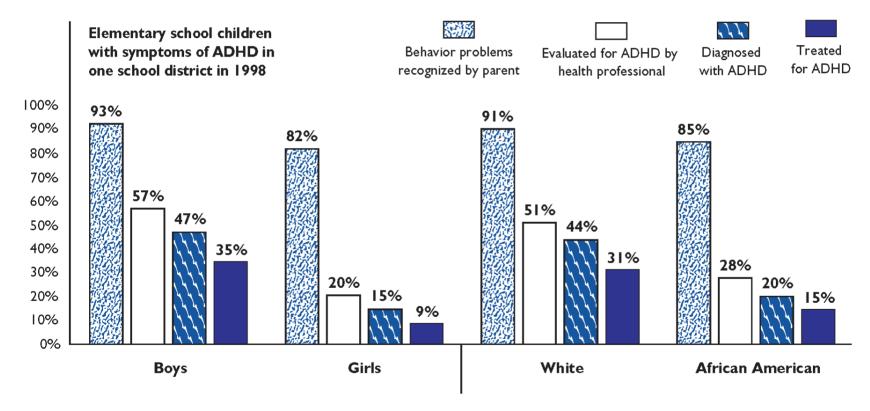
Source: 1999 Asthma Care Quality Assessment Project, telephone survey with parents (N=1,658) and computerized medical records and claims data, as reported by Lieu et al. (2002).



Gender and Racial Differences in Evaluation and Treatment for Attention-Deficit/Hyperactivity Disorder

In 1998, most elementary school children with symptoms of attention-deficit/hyperactivity disorder (ADHD) were recognized by their parent as having behavior problems. Boys were more likely than girls and white children were more

likely than African American children to have been professionally evaluated and subsequently diagnosed and treated for ADHD.



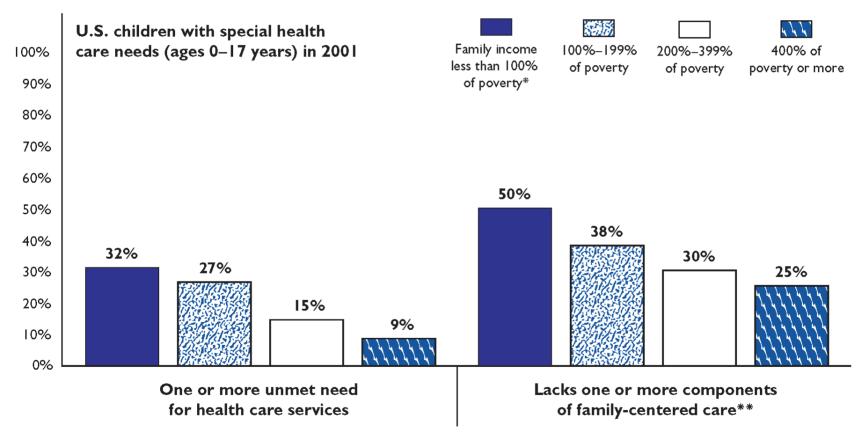
Source: 1998 teacher and parent surveys (N=1,615 children screened and 389 identified with symptoms), as reported by Bussing et al. (2003). Note: study did not assess the appropriateness of diagnosis or treatment.



Effect of Family Income on Parent Perceptions of Accessibility and Interpersonal Quality of Care for Children with Special Health Care Needs

Among children who have a chronic physical, developmental, behavioral, or emotional condition and who require health and related services beyond what is usual for children

generally, those with lower family income were more likely to have an unmet need for health care and to lack family centeredness in their care, according to parent report in 2001.



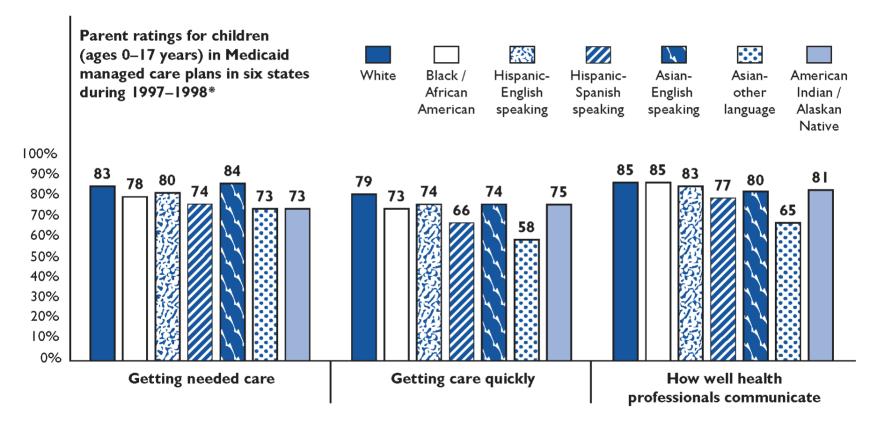
Source: National Center for Health Statistics, preliminary data from the 2001 National Survey of Children with Special Health Care Needs (N=38,866), as reported by van Dyck (2003) and Blumberg (2003). *Poverty means the federal poverty level.

^{**}Components of family-centered care include: the doctor spends enough time with child, listens carefully, provides needed information, is sensitive to the family's culture and values, and makes the family feel like a partner in the child's care.



Effect of Race, Ethnicity, and Language on Parent Assessment of Accessibility and Interpersonal Quality of Care

Minority parents of children and adolescents enrolled in Medicaid health plans in six states rated the accessibility and interpersonal quality of their child's care lower than white parents during 1997–1998. Language barriers were a major factor in disparity of ratings for Asian and Hispanic parents.



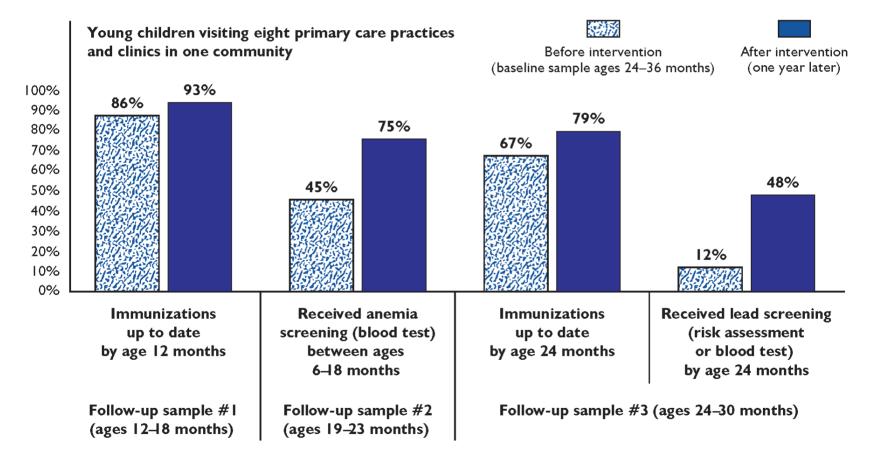
Source: 1997–1998 Consumer Assessment of Health Plans (CAHPS) Benchmarking Database (N=9,540), as reported by Weech-Maldonado et al. (2001), and personal communication with Robert Weech-Maldonado (2003). *Scores were adjusted for differences in parent's age, parent's gender, parent's education, and child's health status.



Improving Primary Care Office Systems to Increase Preventive Care for Young Children

Rates of preventive care increased among young children who were patients of primary care practices and clinics in one community that collaborated with researchers to adopt and

enhance quality-improvement systems, such as chart prescreening, risk-assessment forms, flowsheets, prompting and reminder systems, and patient education materials.



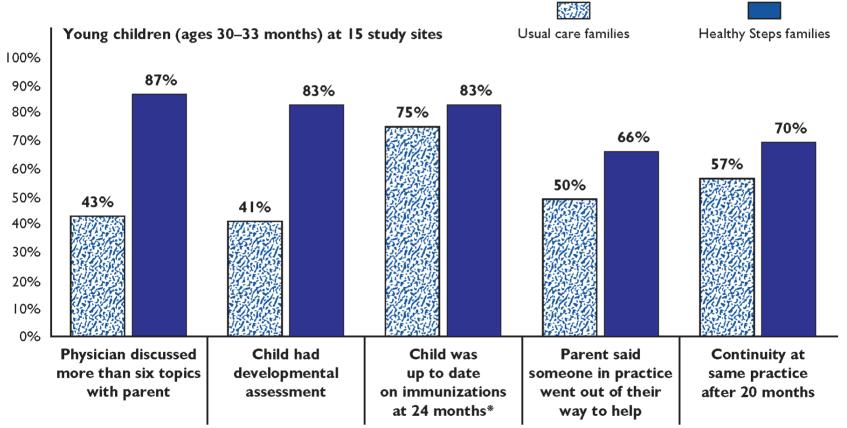
Source: random samples of medical records (N=339 in baseline sample and 285 to 300 in follow-up samples) as reported by Bordley et al. (2001). Samples were not the same children. Some results omitted for clarity.



Enhancing Primary Care Developmental Services for Young Children

The Healthy Steps program integrates child development specialists into primary care along with other enhanced services to promote the physical, emotional, and intellectual development of young children. Families taking part in

Healthy Steps were more likely to receive recommended preventive and developmental services and continuous, patient-centered care.



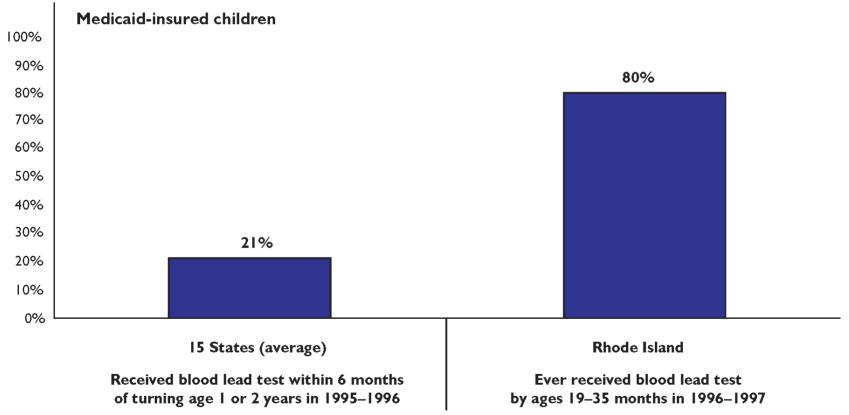
Source: Parent interviews and medical records (N=3,737), as reported by Minkovitz et al. (2003). *4 doses of diphtheria-tetanus-pertussis vaccine; 3 doses of oral polio or inactivated poliovirus vaccine; and 1 dose of measles-mumps-rubella vaccine.



Promoting Lead Screening for Medicaid-Insured Young Children

Lead poisoning remains a danger to low-income children who often live in older housing with lead-based paint. The CDC recommends (and federal policy requires) that all children insured by Medicaid be screened at ages 1 and 2 years to

detect lead poisoning, but rates have remained low nationally. Rhode Island has achieved a high screening rate among Medicaid children through a multifaceted education and outreach program.

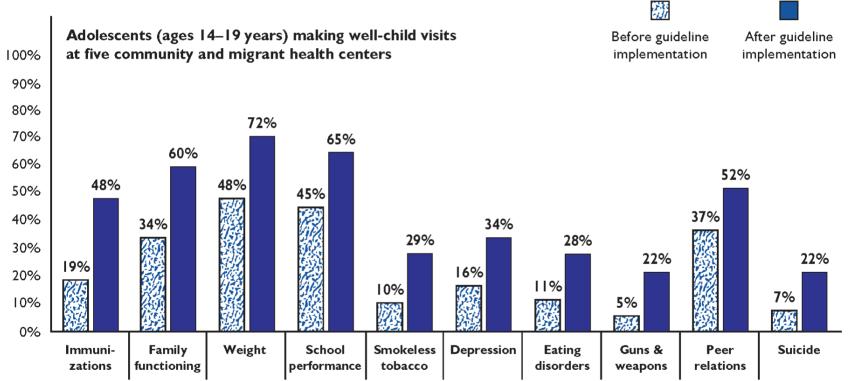


Sources: Medicaid fee-for-service claims data for 15 states (N=288,963), as reported by the GAO (1999); physician medical record audit for Rhode Island (N=1,988), as reported by Vivier et al. (2001).



Improving Delivery of Adolescent Preventive Care in Community and Migrant Health Centers

Implementing adolescent preventive care guidelines as part of an intervention that included training, changes in scheduling policies, use of a risk-assessment tool, and enhanced education and referral services significantly increased the rates at which poor and uninsured adolescents reported discussing several health- and lifestyle-related topics with their clinician.



Discussed topic with their health professional at most recent well-child visit*

Source: Patient surveys (N=260 pre-intervention and 274 post-intervention) as reported by Klein et al. (2001). *Nineteen of 31 measured topics showed significant increase in

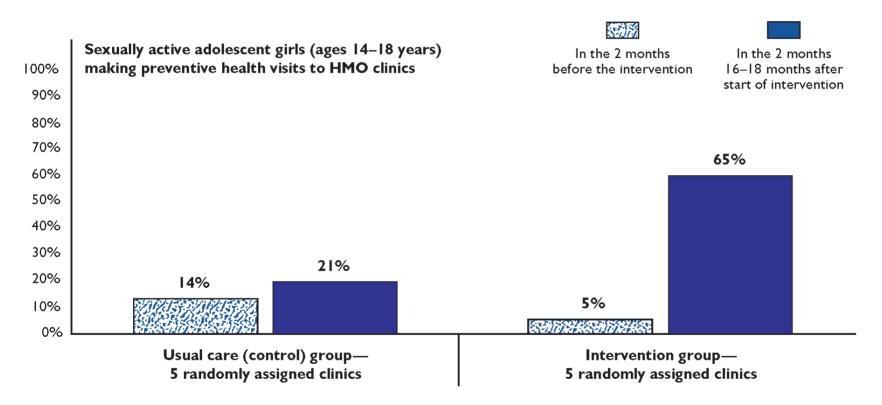
discussion; topics shown are the 10 exhibiting the greatest percentage point increase in reported discussion, arranged from left to right by magnitude of change.



Improving Screening for Chlamydia Infection Among Adolescent Girls Seen at HMO Clinics

HMO clinics that implemented an intervention—including team development, performance monitoring, and clinical practice improvements such as flowcharts, universal urine

specimen collection, and an educational campaign—significantly boosted the proportion of adolescent girls screened for chlamydia infection.



Received screening for chlamydia infection

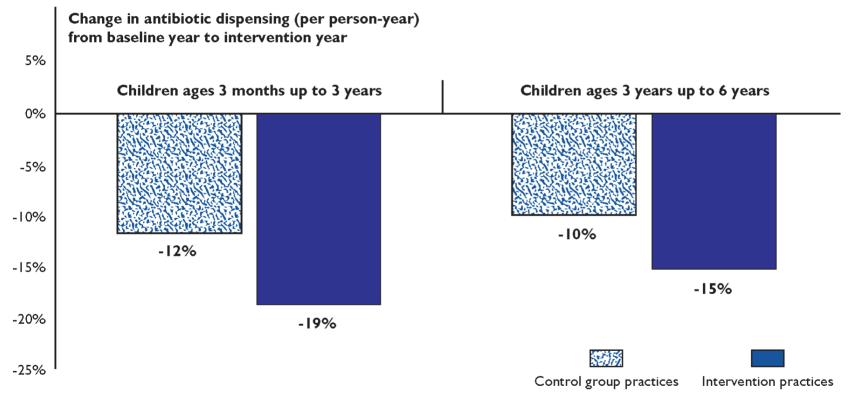
Source: patient encounter and laboratory data (N=7,920 routine checkup visits), as reported by Shafer et al. (2002).



Reducing Unnecessary Antibiotic Use Among Young Children Visiting Physician Group Practices and HMO Clinics

An education and outreach intervention, directed at physicians and parents of young children visiting practices affiliated with two managed health care plans, reduced antibiotic dispensing beyond an independent trend toward

lower antibiotic use in control group practices. The intervention involved peer-led physician education and performance feedback combined with educational materials mailed to parents and displayed in clinic waiting rooms.

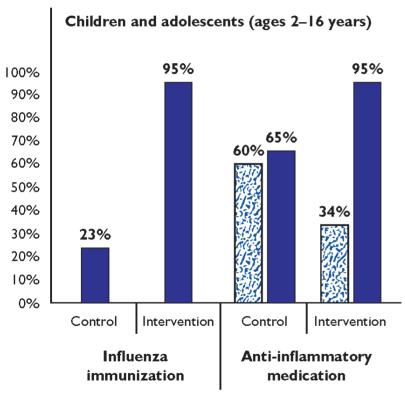


Source: computerized claims data (N=14,468 and 13,460 patients in baseline and intervention years, respectively), as reported by Finkelstein et al. (2001).



Education and Outreach to Improve Asthma Care and Outcomes at an Inner-City Hospital Specialty Clinic Serving Low-Income Children

A comprehensive asthma intervention that provided Medicaid-insured children with education, treatment, and regular follow-up in an inner-city hospital-based specialty care clinic improved quality of care and outcomes.



Quality of care (higher is better)

Before intervention Intervention year 4.0 3.6 3.5 3.0 2.4 2.5 1.8 2.0 1.7 1.7 1.5 0.9 1.0 0.5 Control Intervention Intervention Control **Emergency visits** Hospital days (average number) (average number)

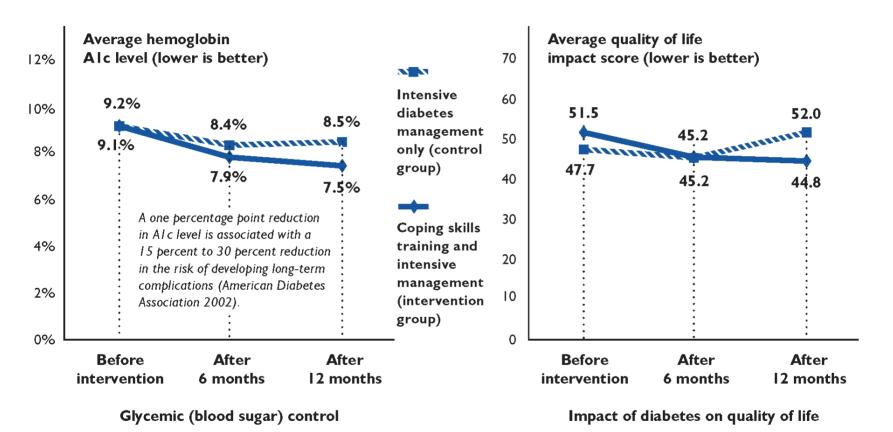
Adverse outcomes (lower is better)

Source: parent interviews and medical records (N=78) as reported by Kelly et al. (2000). Adapted and reproduced by permission of *Pediatrics*, Volume 105, Page 1032, Figure 1, Copyright 2000.



Improving Diabetes Outcomes Through Coping Skills Training

A nurse-led behavioral intervention to teach coping skills for stresses associated with intensive diabetes management helped adolescents (ages 12–20 years) achieve better blood sugar control and improvement in quality of life as compared to a similar group of youth engaged in intensive diabetes management only.



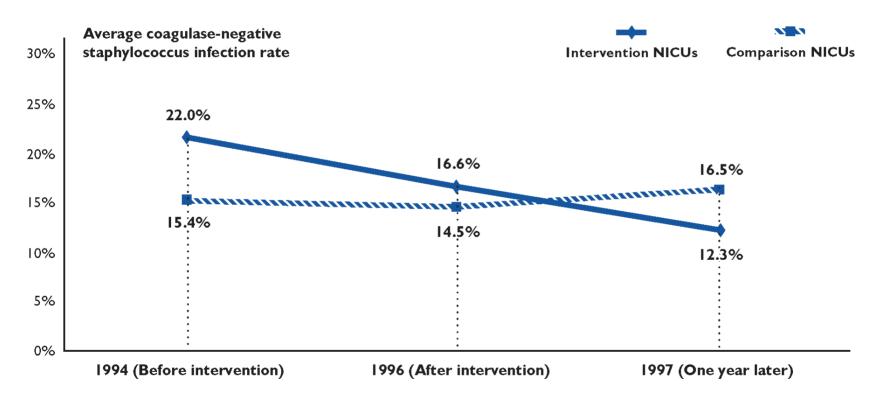
Source: ABCs of Diabetes Study (N=77), clinical data and youth self-reports, as reported by Grey et al. (1999, 2000), and personal communication with Margaret Grey (2003).

Adapted and reprinted from the Journal of Pediatrics, Volume 127, Margaret Grey et al., Coping skills training for youth with diabetes mellitus, Page 110, Copyright 2000, with permission from Elsevier.



Decreasing Infections Acquired in the Neonatal Intensive Care Unit

The coagulase-negative staphylococcus (CONS) bacterium is the most frequent cause of infections acquired by premature, very low birthweight infants in the neonatal intensive care unit (NICU). A collaborative quality-improvement project among six NICUs resulted in a 44 percent lower incidence of CONS infection among such infants. This change was significantly different from the trend in infection rates among 66 other NICUs participating in a surveillance system.



Source: Vermont Oxford Network, Neonatal Intensive Care Collaborative Quality Project (N=745 to 789 infants at six intervention sites and 5,108 to 5,572 infants at 66 comparison sites, all with birthweight 501 to 1500 grams and admitted at or within 28

days of birth in each year), as reported by Horbar et al. (2001). Adapted and reproduced by permission of *Pediatrics*, Volume 107, Page 19, Figure 3, Copyright 2001.

