The Child’s Health and Health Care

The National Survey of Children’s Health asked parents to report on factors promoting or presenting risks to their child’s health, their child’s health insurance, and the access to and quality of health care services their children received over the past year. These indicators can be used to paint a picture of children’s health and health care access and quality, and to compare children with and without special health care needs on key indicators.

This section focuses first on indicators of children’s health and development, from breastfeeding among young children to physical activity and overweight among older children and adolescents. The second group of indicators reflects children’s access to and quality of health insurance and health care, including the consistency and adequacy of children’s health coverage, their use of preventive medical and dental care, and access to specialist and mental health services. Finally, this section addresses whether or not children receive care from a medical home: a source of primary care that is accessible, family-centered, continuous, comprehensive, coordinated, compassionate, and culturally effective.
Breastfeeding and The Use of Breast Milk

Breast milk is widely recognized to be the ideal form of nutrition for infants. Infants fed breast milk are less susceptible to infectious diseases. Rates of postneonatal mortality (death between the first month and the end of the first year of life) are lower among breastfed infants. Additionally, children who were fed breast milk are less likely to suffer a variety of long-term adult health consequences, including diabetes; overweight and obesity; asthma; and lymphoma, leukemia, and Hodgkin’s disease, when compared to children who were not fed breast milk. Therefore, the American Academy of Pediatrics recommends that, with few exceptions, all infants be fed breast milk exclusively for the first 6 months of life, and recommends continuing to breastfeed as long as the mother and child desire.2

Children (aged 0-5) with special health care needs, those in lower-income households are less likely to have ever been fed breast milk: 68.5 percent of CSHCN in that age group were ever fed breast milk, compared to 76.5 percent of other children. However, this difference is not statistically different after adjustment for other differences between CSHCN and non-CSHCN, such as differences in household income and insurance status.

The proportion of children who were ever fed breast milk increased from 2003 to 2007. However, non-CSHCN saw greater increases in breast milk feeding than CSHCN (73.1 percent to 76.5 percent versus 66.2 percent to 68.3 percent). The proportion of CSHCN who were ever fed breast milk varies considerably by state, from less than half (42.1 percent) to nearly all (95.4 percent).

Among children with and without special health care needs, those in lower-income households are less likely to have ever been fed breast milk: only 53.7 percent of CSHCN with household incomes below the Federal poverty level (FPL) were ever breastfed or fed breast milk, compared with 80.9 percent of CSHCN with household incomes of 400 percent or more of FPL.

Hispanic and White children are most likely to have ever been fed breast milk. Among CSHCN, nearly all (92.6 percent) Hispanic children in Spanish-speaking households were ever breastfed/fed breast milk, 72.4 percent of Hispanic children in English primary language households were breastfed/fed breast milk, and 70.2 percent of White children were breastfed/fed breast milk.

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*Federal poverty level was $20,650 for a family of four in 2007.
Identification of developmental and behavioral disorders in children is essential so that appropriate services can be provided early in childhood. Many CSHCN experience developmental and behavioral disorders, so early and frequent assessment of developmental status is especially important for these children in order to maximize long-term adult health and functioning.

The 2007 NSCH assesses risk for developmental and behavioral disorders among children age 4 months-5 years, using the research version of the Parents’ Evaluation of Developmental Status (PEDS), a standardized developmental and behavioral screening instrument. The PEDS reports risk for developmental and behavioral disorders using general and specific parent concerns about areas of child development and behavior. Based on parent responses, a child can be assigned to no, low, or moderate/high risk for developmental or behavioral disorder.  

Overall, 26.4 percent of U.S. children are considered to be at moderate/high risk for developmental or behavioral disorders. CSHCN are much more likely to be at moderate/high risk than are non-CSHCN (45.4 percent versus 23.7 percent), even after statistical adjustment for other differences between CSHCN and non-CSHCN.

Among CSHCN, those children with more complex service needs are the most likely to be at risk for developmental and behavioral disorders (59.3 percent). Although some developmental and behavioral disorders (such as ADHD and autism spectrum disorders) are much more common in boys than girls, the NSCH shows no significant differences in risk for developmental disorders by sex.

Insurance status is associated with risk for developmental or behavioral disorders. Among CSHCN, those children who are privately insured have the lowest risk (38.1 percent). Additionally, CSHCN in different racial, ethnic, and language groups have different levels of risk for developmental or behavioral disorders, with Spanish-speaking Hispanic CSHCN in the most likely to be at risk for developmental or behavioral disorders (85.7 percent), and Other/Multiracial CSHCN the least likely (35.1 percent).
Physical Activity

Physical activity is an important factor in developing and maintaining overall health, as well as lowering the risk for chronic diseases throughout the life course. The Centers for Disease Control and Prevention recommend that children age 6-17 years participate in physical activity every day. This physical activity should be moderate to vigorous intensity, including aerobic exercise, muscle strengthening and bone strengthening exercises.

In the NSCH, parents were asked on how many days in the past week their child exercised, played a sport, or participated in physical activity for at least 20 minutes that made the child sweat and breathe hard. Among CSHCN, 60.9 percent exercised four or more days in the past week, compared to 65.3 percent of non-CSHCN. Across states, the percentage of CSHCN who exercise four or more days in the past week ranges from 50.3 percent to 72.8 percent.

For both CSHCN and non-CSHCN, younger children were more likely to exercise than older children: among CSHCN age 6-11 years of age, 69.9 percent exercised four or more days, compared to 52.6 of CSHCN age 12-17 years.

Household income was a significant factor in rates of exercise among all children: among CSHCN with household incomes below the Federal poverty level (FPL), 54.1 percent of children exercised four or more days, compared to 64.8 percent of CSHCN with household incomes of 400 percent or more. Similar results were found in non-CSHCN: among non-CSHCN with household incomes below the Federal poverty level (FPL), 53.7 percent of children exercised four or more days, compared to 72.7 percent of non-CSHCN with household incomes of 400 percent or more of FPL.
Overweight and Obesity

Maintaining a healthy body weight is as important for children as for adults, as overweight children are at risk for development of Type 2 diabetes, heart problems, high blood pressure and other health concerns that can continue throughout their lives. Establishing and maintaining a healthy body weight is an important precursor to long-term adolescent and adult health.

Because children are growing, their weight constantly increases. As a result, overweight and obesity in children are defined relative to the population of children of the same age and sex, rather than against an absolute standard. Those at or above the 85th percentile in body-mass index (BMI) for their age and sex are considered to be overweight, and those at or above the 95th percentile are classified as obese. The NSCH measures children’s BMI using a parent’s report of the child’s height and weight. These reports are considered to be most accurate for children aged 10-17, so this analysis is limited to that age group. Obesity can be both a cause and a consequence of special health care needs; that is, overweight and obesity can lead to health problems, but functional limitations, diet changes, and medications related to health problems can also lead to overweight and obesity.

Children aged 10-17 with special health care needs are more likely to be overweight or obese than other children of the same age: 36.3 percent of CSHCN were classified as overweight or obese based on parent-reported height and weight, compared to 30.2 percent of children without special health care needs. This difference was significant even after statistical adjustment for other socio-demographic differences between CSHCN and non-CSHCN.

Children with more complex service needs—those who require more than prescription medications to manage their conditions—are the most likely to be overweight or obese (38.5 percent). Across States, the percentage of CSHCN aged 10-17 identified as overweight or obese ranged from 18.1 percent to 54.4 percent.

Rates of overweight and obesity are highest among CSHCN in low-income households and in racial and...
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ethnic minority groups, likely due to less opportunity to access healthy foods and regular exercise. Among CSHCN with household incomes below the Federal poverty level (FPL), nearly half (48.4 percent) are overweight or obese, compared to 26.9 percent of CSHCN with household incomes of 400 percent or more of FPL. Among households with higher incomes, CSHCN are more likely to be overweight or obese than non-CSHCN.

Rates of overweight and obesity also vary by racial/ethnic group: nearly 45 percent of Black children and Hispanic children in English-speaking households were overweight or obese, compared to 31.9 percent of White children and 34.7 percent of Hispanic children in Spanish-speaking households.

While the percentage of children who are overweight or obese remained stable between 2003 and 2007, the rate of obesity increased from 14.8 percent to 16.4 percent. Among CSHCN, the rates of both overweight/obesity and obesity alone did not change significantly over this period, although in both periods CSHCN were at higher risk than non-CSHCN for overweight or obesity.
Gaps in Health Insurance

Children with special health care needs are no more likely than other children to lack health insurance entirely, and are less likely than children without special health care needs to go without health insurance for all or part of a year. Of CSHCN, 12.3 percent were either uninsured or experienced gaps in their insurance coverage in the past year, compared to 15.8 percent of non-CSHCN. The proportion of CSHCN who had gaps in their insurance in the past year ranged across States from 3.4 percent to 27.5 percent.

Gaps in health insurance are especially likely to occur among CSHCN in low-income households: among CSHCN with household incomes below 100 percent of the Federal poverty level (FPL), 19.6 percent were uninsured for all or part of the year, compared to 4.5 percent of CSHCN with household incomes of 400 percent of the FPL or more. Within lower-income households, children without special health care needs were more likely than CSHCN to have gaps in their insurance coverage.

CSHCN who have public insurance, such as Medicaid or the Child Health Insurance Program, are also more likely to experience gaps in their coverage. Of publicly insured CSHCN, 11.5 percent had gaps in their coverage, compared to 3.7 percent of privately insured CSHCN. These percentages were similar among non-CSHCN.
Adequacy of Health Insurance

Parents whose children were currently insured were asked three questions regarding the services and costs associated with their child’s health insurance: whether the out-of-pocket costs they incurred were reasonable; whether their children’s insurance offered benefits or covered services that met their children’s needs; and whether their children were able to see the providers they needed. Children were considered to have adequate health insurance coverage if their parent answered “usually” or “always” to each of the three questions. Among CSHCN, 29.4 percent had inadequate coverage, compared to 22.1 percent of children without special health care needs. This difference was persistent even after adjustment for other sociodemographic differences between CSHCN and non-CSHCN.

Inadequate insurance is a far more prevalent problem than gaps in insurance or uninsurance among CSHCN: 29.4 percent had inadequate coverage, compared to 12.3 percent of children without special health care needs. On the state level, the proportion of CSHCN with inadequate insurance ranged from 19.7 percent to 37.6 percent.

The percentage of insured CSHCN with inadequate insurance did not vary substantially by household income, but the parents of children with private insurance were considerably more likely to report that their insurance was inadequate (33.7 percent) than parents of children with public insurance (22.4 percent). This discrepancy also exists, to a lesser extent, among non-CSHCN.

Among insured CSHCN, approximately 28 percent in each racial and ethnic group were reported to have inadequate insurance, with the exception of Spanish-speaking Hispanic children, of whom 41.3 percent had inadequate coverage (data not shown). This discrepancy was not seen among children without special health care needs.

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<th>Adequacy of Insurance Coverage Among Currently Insured CSHCN</th>
<th>Adequacy of Insurance Coverage Among Currently Insured Non-CSHCN</th>
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Insurance Gaps And Insurance Inadequacy Among CSHCN

Children Lacking Adequate Health Insurance Coverage by Type of Insurance and CSHCN Status

- CSHCN with no insurance or gaps in insurance: 12.3%
- CSHCN with inadequate insurance: 29.4%
- Non-CSHCN with no insurance or gaps in insurance: 22.4%
- Non-CSHCN with inadequate insurance: 17.4%
- Public insurance: 24.1%
- Private insurance: 33.7%
Preventive Health Care Visits

The Bright Futures guidelines for health supervision of infants, children, and adolescents recommend that children visit a physician six times during the first year of life, three times in the second year, and annually thereafter for preventive health care (or “well-child”) visits. An annual preventive health care visit provides an opportunity to monitor a child’s growth, to assess his or her development and behavior, to provide appropriate immunizations, to discuss important issues such as nutrition and prevention of injury and violence, and to answer parents’ questions about their children’s health and care. These visits are perhaps more important for children with special health care needs, who may have more health risks and need ongoing monitoring of chronic health conditions.

The data show that CSHCN are somewhat more likely than children without special needs to receive at least one preventive health care visit in a year, even after statistical adjustment for other differences between CSHCN and non-CSHCN. Of CSHCN, 91.4 percent were reported to have had an annual visit, compared to 87.8 percent of non-CSHCN. These percentages have increased since 2003, when 86.5 percent of CSHCN and 75.9 percent of non-CSHCN had at least one preventive health care visit. Across states, the percentage of CSHCN with at least one preventive visit ranged from 80.5 percent to 97.6 percent.

Among both children with and without special health care needs, the likelihood of an annual visit is highest among the youngest children and lowest among adolescents. Whether or not they have special health care needs, fewer than three-quarters of uninsured children receive an annual preventive health visit.
In addition to an annual preventive medical care visit, it is also recommended that children see a dentist every 6 months beginning by age 1.6 Children with special health care needs are more likely than other children to have had two dental visits in the past year, even after statistical adjustment for differences between CSHCN and non-CSHCN: 57.1 percent of CSHCN had two annual dental visits, compared to 48.9 percent of non-CSHCN. The percent of CSHCN with two yearly dental visits ranged from 43.9 percent to 69.8 percent across states.

Among children with and without special health care needs, the youngest children were the least likely to see a dentist twice a year; the percentage of school-aged children and adolescents who had two dental visits in the past year was similar for all children.

Among uninsured children, fewer than one-third had two dental visits in the past year: 31.2 percent of uninsured CSHCN and 28.4 percent of uninsured non-CSHCN saw the dentist twice. Privately insured children were the most likely to visit the dentist twice a year in both CSHCN and non-CSHCN.
Developmental Screening

The American Academy of Pediatrics recommends assessment of child development and behavior at every well-child visit, and formal developmental, social and behavioral screening with a standardized instrument at the 9, 18, and 24-30 month visits. Early identification of developmental disorders is important so that at-risk children can receive needed services as promptly as possible.

To assess developmental screening, the 2007 NSCH asks parents of children age 10 months to 5 years if they “filled out a questionnaire about specific concerns or observations” about their child’s development communication or social behaviors. In addition, parents are asked a series of questions about the content of the questionnaire to confirm that that questionnaire was a developmental screening instrument.

Overall, fewer than one in five children (19.5 percent) aged 0-5 received developmental screening. States ranged in their rates of developmental screening from 10.7 percent in the worst-performing state to 47.0 percent in the best-performing state. CSHCN were more likely to be screened than non-CSHCN, even after adjusting for other socio-demographic differences between CSHCN and non-CSHCN. However, overall rates were low, with less than 1 in 4 CSHCN receiving developmental screening.

Screening is particularly important among children with emotional, behavioral, or developmental (EBD) conditions, such as attention deficit hyperactivity disorder, autism, speech problems, anxiety, or depression. The data suggest that these children are being screened more frequently than other CSHCN; however, the overall rate of screening was still low, with less than 1 in 3 CSHCN with an EBD condition receiving screening.

Previous studies show that publicly insured children are more likely to receive standardized developmental and behavioral screening than privately insured children. Among CSHCN, there is a trend toward increased screening of publicly insured CSHCN compared to privately insured CSHCN, though due to small sample sizes, this is not statistically significant (28.5 percent versus 21.3 percent). Similarly, there are no significant differences in rates of developmental and behavioral screening of CSHCN according to race, sex, or household income.
Specialist and Mental Health Care

Many CSHCN have unmet needs for specialty medical care. In the NSCH, parents of children who needed care from a specialist in the past year were asked whether their children had problems accessing that care. Of those children who needed specialist care, CSHCN were more likely to have problems accessing specialty care: 27.0 percent had problems, compared to 21.2 percent of children without special health care needs. At the state level, the percentage of CSHCN with problems accessing specialty care ranged from 14.2 percent to 42.7 percent.

CSHCN with more complex service needs may have particular need for medical care given that their health conditions are more likely to affect their ongoing functioning. Of CSHCN with more complex service needs, 30.7 percent had problems gaining access to the specialists that they needed (data not shown).

Health insurance may also help facilitate specialist access. Of CSHCN without health insurance, more than half (57.6 percent) were reported to have problems accessing specialty care, as did nearly one-third (31.8 percent) of CSHCN with public insurance (data not shown).

Access to mental health care can be difficult as well. Of CSHCN who had one of seven emotional, behavioral, or developmental conditions, 48.8 percent did not receive mental health services.

Among CSHCN, more than half of Black children with emotional, behavioral, or developmental conditions (50.7 percent) who needed mental health services did not receive them, compared to 40.2 percent of Hispanic CSHCN in Spanish-speaking households with these conditions. Nearly half of White CSHCN and Hispanic CSHCN in English-speaking households with these conditions who were in need of mental health services did not receive them (49.5 and 48.8 percent, respectively).
Medical Home

A number of characteristics of high-quality health care for children can be combined into the concept of the medical home. As defined by the American Academy of Pediatrics, children’s medical care should be accessible, family-centered, continuous, comprehensive, coordinated, compassionate, and culturally effective.9 Multiple studies have shown that having a medical home is associated with improved health care among CSHCN.10

The survey included several questions that sought to measure whether a child’s health care met the criteria for a medical home:

- Whether the child has at least one personal doctor or nurse who knows him or her well,
- Whether the child has a usual source of sick care,
- Whether the child has problems obtaining needed referrals to specialty care, other services, or equipment,
- Whether the family is satisfied with the level of communication among their child’s health care providers and other programs, such as schools and support service programs,
- Whether the family receives needed help coordinating a child’s care,
- Whether the child’s health care providers spend enough time with the family, listen carefully to their concerns, and are sensitive to their values and customs,
- Whether the health care provider supplies the family with enough information,
- Whether the family feels like a partner in their child’s care,
- Whether the family receives interpreter services, if needed.

A child was defined as having a medical home if his or her care is reported to meet all of these criteria. Among children without special health care needs, nearly 60 percent (59.4 percent) received care in a medical home. Among CSHCN, 49.8 percent had a medical home.
percent received care that met this standard. CSHCN were significantly less likely to receive care within a medical home, even after statistical adjustment for other differences between CSHCN and non-CSHCN.

Among children whose special needs are more complex—that is, they require more than just prescription medications to manage their conditions—41.5 percent received care within a medical home (data not shown). The percentage of CSHCN with a medical home ranged across states from 30.3 percent to 61.0 percent.

Among CSHCN, more than half (55.4 percent) of those aged 0-5 years had a medical home, compared to less than half of older children (47.2 percent of those aged 6-11 years and 49.4 percent of those aged 12-17) (data not shown). Uninsured CSHCN were the least likely to receive care in a medical home: only 28.9 percent did so, compared to 42.1 percent of those with public insurance and 56.6 percent of those with private coverage.

CSHCN aged 2-17 with emotional, behavioral, or developmental conditions are less likely to receive care from a medical home than CSHCN without these conditions. Forty percent of CSHCN with at least one of these conditions were reported to have a medical home, compared to 56.4 percent of CSHCN in this age group with none of the seven conditions.
Components of the Medical Home

One important aspect of the medical home is whether or not children receive care that is “family-centered”; that is, whether parents report that their children’s doctors usually or always spend enough time with the family, listen carefully to their concerns, are sensitive to their values and customs, provide needed information, make the family feel like a partner in their child’s care, and provide an interpreter when needed. Together, these measures of family-centered care provide an important picture of how comfortable families feel with their children’s medical care. Whether or not they have special health care needs, approximately two-thirds of children are reported to receive family-centered care. However, when one takes into account other differences between CSHCN and non-CSHCN (such as income, insurance status, and race), CSHCN are slightly less likely (65.5 percent) to receive family-centered care than non-CSHCN (67.8 percent).

CSHCN with more complex service needs are less likely to receive family-centered care: 60.5 percent receive care that meets this standard. Of all racial and ethnic groups, Black and Hispanic CSHCN are the least likely to receive family-centered care. Of Hispanic CSHCN in Spanish-speaking households, only 33.2 percent receive family-centered care.

CSHCN with emotional, behavioral, or developmental problems are less likely than CSHCN without these problems to receive family-centered care. Of CSHCN with these problems, 54.2 percent received family-centered care, compared to 70.9 percent of CSHCN who do not have emotional, behavioral, or developmental problems.

Also important to the concept of the medical home is children’s access to primary and preventive care.
care, consistent care when they are sick, and support for care coordination. Overall, more than 90 percent of children receive care that meets these standards; however, CSHCN are slightly more likely than children without special health care needs to have a personal doctor or nurse and a regular source of care when they are sick. In contrast, CSHCN are considerably less likely than other children to receive effective care coordination services: only 59.3 percent of CSHCN who used two or more health care services received coordinated care, compared to 73.6 percent of children without special health care needs. Of CSHCN with emotional, behavioral, or developmental problems, 48.0 percent received effective care coordination, compared to 66.3 percent of CSHCN who do not have these problems.

Uninsured CSHCN are considerably less likely than those with either public or private insurance to have a personal doctor or nurse, have a regular source of sick care, or to receive coordinated care.