National Findings on Access to Health Care and Service Use for Children Enrolled in Medicaid or CHIP

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Introduction

Medicaid and the State Children's Health Insurance Program (CHIP) currently cover millions of low-income children and adults, with both programs providing enrollees with potential access to a comprehensive set of health services at low or no cost. Children and adults with Medicaid or CHIP[1] have consistently been shown to have better health care access than those who lack health insurance.[2] In contrast, there are potential access tradeoffs associated with Medicaid and CHIP coverage as compared to employer-sponsored insurance (ESI). On the one hand, Medicaid and CHIP enrollees, particularly children, generally have a broader benefits package with lower cost sharing than those with ESI. At the same time, physician payment tends to be lower in Medicaid and CHIP and physicians are more likely to accept privately insured children as new patients over children with Medicaid or CHIP.[3]

This MACPAC Contractor Report presents national findings on Medicaid and CHIP children's access to care by using a variety of measures from two national household surveys. These estimates give a national picture of how access to care for children enrolled in Medicaid or CHIP compares to children with ESI and uninsured children, based on reports from their parents or other household members.[4] These reports constitute an important source of information about access to care for children since they are the only way to provide the family's perspective on a child's access and health care experiences.[5] The key findings are:

- For almost every measure of access to health care, children enrolled in Medicaid or CHIP have substantially better access to care than uninsured children, whether or not the comparison adjusts for differences between the two groups. Compared to uninsured children, children with Medicaid or CHIP were:
    - more likely to have a usual source of care;
    - more likely to say that it was usually or always easy to see a necessary specialist;
    - more likely to have received a well-child checkup, a flu shot, a specialist visit, and a mental health visit in the past year; and
    - less likely to have unmet needs (medical, dental, prescription drugs, mental health care or counseling, and eyeglasses) due to costs and to experience delays in getting needed medical care.

- For most, but not all of the access measures analyzed, the experiences of children with Medicaid or CHIP and those with ESI were comparable, but in some cases the magnitude and direction of the differences were dependent on whether the comparison adjusted for the health, demographic, and socioeconomic differences between the two groups. When we adjust for these differences, compared to children with ESI, children with Medicaid or CHIP:

    - had similarly high rates (approximately 95 percent) of having a usual source of care;

    - were as likely to have had a specialist visit and to have received a flu shot in the past year;

    - delayed medical care at comparable rates, but the reasons for those delays differed:

        - Children with Medicaid or CHIP were *less* likely to have delayed medical care due to costs.

        - Children with Medicaid or CHIP were *more* likely to have delayed medical care because they could not go when the office/clinic was open, because the wait to see the doctor at the office/clinic was too long, or because they did not have transportation to the office/clinic.

    - were less likely to have a usual source of care with nighttime or weekend hours and more likely to have had emergency department (ED) visits.

- Factors such as income and race/ethnicity are systematically related to a number of the access to care measures that are studied, which suggests that certain types of children face more access barriers, regardless of their insurance status.

Sources of Data

The estimates presented in this report are derived from publicly available data from two national household surveys that are administered annually by the federal government—the National Health Interview Survey (NHIS) and the Medical Expenditure Panel Survey (MEPS).[6] The survey responses for children were provided by a knowledgeable adult in the household, usually a parent.[7] While these surveys contain important indicators of access to care and service use, they provide little information on the quality and content

of the care that is provided or any consequences associated with diminished access to care.

The NHIS is an annual face-to-face household survey of civilian non-institutionalized individuals designed to monitor the health of the U.S. population through the collection of information on a broad range of health topics. Administered for the National Center for Health Statistics (NCHS) within the Centers for Disease Control and Prevention (CDC), the NHIS consists of a nationally representative sample of approximately 35,000 households containing about 87,500 people.[8] The 2009 NHIS was the primary source of data used in this report, although measures of access from the MEPS that are not available on the NHIS, such as those from the Consumer Assessment of Healthcare Providers and Systems (CAHPS) and those that provide additional information on the child's usual source of care, are highlighted in the findings below. Where there is overlap in survey content, we note the few places where the findings with respect to differences in access across the insurance groups vary between the two surveys.

The sample frame for the household component of the MEPS is drawn from a subsample of households participating in the previous year's NHIS. The MEPS obtains information on health care use and spending from respondents in five rounds of interviews over a two-year period. Like the NHIS, the MEPS is a face-to-face household survey of civilian non-institutionalized individuals. Administered for the Agency for Healthcare Research and Quality (AHRQ), the MEPS consists of a nationally representative sample of about 31,000 people.[9] The full-year consolidated MEPS data file for 2008 was used in this report.

Although state-specific estimates may be available for the largest states, neither the NHIS nor the MEPS permits state-level estimates for all 50 states. Thus, the estimates presented here do not necessarily reflect the situation in any one particular state nor do they provide information on state-level differences in access to care or the factors that drive differences across states. While other research has examined access to care for children with Medicaid or CHIP coverage at a local level, such analyses cannot be generalized to the country as a whole.[10]

Analytic Approach

The analyses in this report are limited to children who were either uninsured for the entire year or who were insured for the entire year, thus excluding those insured for only part of the year.[11] Coverage was defined this way to help ensure that the access to care reported for insured/uninsured individuals, which is based on care received over the past year, would not be affected by the parts of the year when they did not/did have coverage.[12]

In this analysis, measures of access to care for children covered by ESI are used as a proxy for the level of access that is typically available to the insured population, while access for the uninsured is used to provide insights about the likely access that children would have if Medicaid or CHIP coverage were not available.[13] An asterisk marks unadjusted differences in access to care in the tables and figures that are significantly different from Medicaid or CHIP. Comparing access to care for children enrolled in Medicaid or CHIP versus children with ESI provides important information on the relative differences in care received between these groups. However, the level of care received by children with ESI may not necessarily reflect a gold standard with respect to care (i.e., there may be over or under consumption of care) or correspond with the recommended standards of pediatric care. Moreover, this analysis provides little information on the quality of care that children are receiving.[14]

Population Characteristics. The population characteristics of Medicaid and CHIP enrollees differ from the uninsured and those with ESI. For example, Tables 3A-3C of MACStats in MACPAC's *June 2011 Report to the Congress on Medicaid and CHIP* showed that, compared to children with ESI or no insurance, children with Medicaid or CHIP were less likely to be in excellent or very good health, less likely to be non-Hispanic white, and more likely to have lower incomes and suffer from various impairments and chronic health conditions, all of which could affect the need for, access to, and use of health care. Because of these differing characteristics, unadjusted comparisons between the three groups may not accurately indicate how insurance status affects access to care. In other words, differences in access may be driven in part by differences in the underlying population's demographic and health characteristics rather than in the source of coverage.

Therefore, more in-depth analyses were conducted to assess whether differences in health status, functional limitations, age, gender, race/ethnicity, income, and other observed characteristics across the insurance groups affected the results.[15] These adjusted comparisons—that is, the comparisons that attempt to control for various characteristics—will come closer than the unadjusted comparisons to isolating the impact of Medicaid or CHIP enrollment on access to care for individuals with similar characteristics.[16]

Adjustments for Population Characteristics. Two different sets of adjustments were used, based on a method of assessing access to care that was developed by the Institute of Medicine (IOM), to make the underlying populations more comparable.[17] Each set of adjustments is intended to capture particular types of characteristics. The first set, which is designed to make the children in the different insurance groups more comparable in

terms of their observed health needs, is made up of factors that should reasonably affect the need for health care, such as age, health status, and functional limitations. In the tables and figures in this report, a single-barred cross displays cases where significant differences remain after taking into account this first set of adjustments.

The second set of adjustments includes factors that should *not* directly affect individuals' need for health care but that may still affect access nonetheless—factors such as income, race/ethnicity, family education, and household structure. The use of both sets of adjustments together is designed to make the children in each insurance group more comparable in terms of not only observed health needs, but also their race/ethnicity and socioeconomic characteristics. In the tables and figures in this report, a double-barred cross displays cases where significant differences remain after taking into account both sets of adjustments.

Interpreting the Findings. The following is an example of how to interpret the three comparisons that are done for each measure (unadjusted, regression-adjusted for health needs, and regression-adjusted for both health needs and factors related to race/ethnicity and socioeconomic characteristics), illustrated by the measure of receipt of a specialist visit in the past 12 months among children with Medicaid or CHIP and those with ESI (Figure 4, Table 1 and, in the appendix, Table 3). Overall, 14.4 percent of Medicaid/CHIP children and 18.6 percent of children with ESI had a specialist visit in the past 12 months. Thus, the unadjusted difference is 4.2 percentage points, which is statistically significant as noted by an asterisk in the relevant figure and tables.

After adjusting for health status in order to make the groups more comparable in terms of their observed health needs, the difference in the likelihood of having a specialty visit increases to 5.8 percentage points and remains statistically significant as noted by the single-barred cross. This suggests that the gap in specialty care receipt is even greater for children with Medicaid or CHIP as opposed to ESI coverage when the greater health needs of the children with Medicaid or CHIP coverage are factored in. However, when controlling not only for health status but also for race/ethnicity and other socioeconomic characteristics, the direction of the difference changes sign and is no longer statistically significant. This suggests that the lower receipt of specialty care among Medicaid/CHIP enrollees may be attributable in part to factors that are associated with their race/ethnicity and other socioeconomic characteristics, which implies that certain types of children face more access barriers to specialty care, regardless of their insurance status and health needs.[18]

The next section presents the full set of findings and briefly discusses their implications. In cases where the unadjusted comparisons show less utilization for children with

Medicaid or CHIP, because these children tend to be in poorer health than those with ESI coverage, one would expect that adjusting for health status alone would *increase* any differences compared to the unadjusted results. If significant differences between children with ESI versus Medicaid or CHIP coverage are eliminated by the addition of race/ethnicity and socioeconomic characteristics as adjustment variables, this implies that Medicaid or CHIP coverage is as effective as ESI in providing access to care, holding constant a child's health status, race/ethnicity, income, and other socioeconomic characteristics. However, that pattern would also indicate that gaps in access to care exist that are related to a child's race/ethnicity, income, or other socioeconomic characteristics, regardless of the type of coverage a child has.

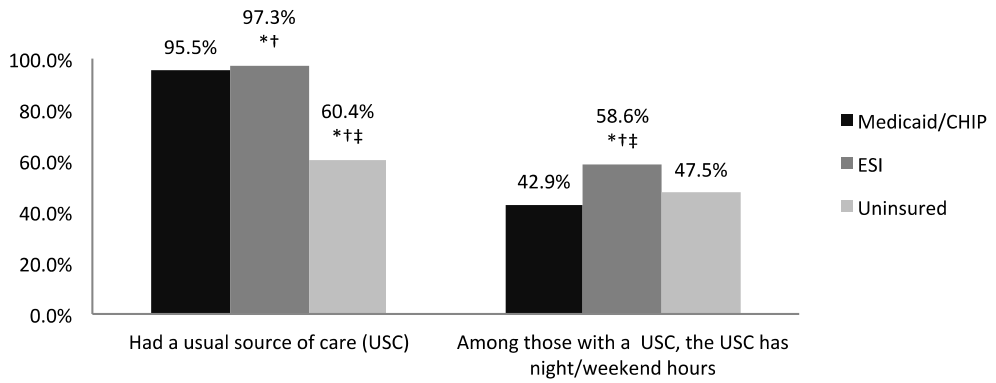
Findings

The results that follow focus on the unadjusted means for children with Medicaid or CHIP compared to those who were uninsured or with ESI. Unless otherwise indicated, the unadjusted results are consistent with those found when taking into account the two sets of adjustments described above. Tables 1 and 2 contain both the unadjusted and the regression-adjusted differences for all the outcomes discussed in this report. Only significant unadjusted and regression-adjusted differences (.05 level) are noted.

Usual Source of Care. Almost all Medicaid/CHIP children (95.5 percent) had a usual source of care (Figure 1), compared to 97.3 percent for children with ESI. In contrast, just three in five (60.4 percent) uninsured children had a usual source of care.[19]

The majority of Medicaid/CHIP children with a usual source of care had a doctor's office or Health Maintenance Organization (HMO) as their usual source of care (60.8 percent).[20] In comparison, among those with a usual source of care, uninsured children were less likely (52.2 percent) and children with ESI more likely (84.6 percent) to have had a doctor's office or HMO as their usual source of care. However, more than a third (37.7 percent) of Medicaid/CHIP children and 44.2 percent of uninsured children had a clinic or health center as their usual source of care. This compares to only 14.6 percent of children with ESI. The greater reliance by Medicaid/CHIP and uninsured children on clinics and health centers as their usual source of care may be related to supply factors, such as the relatively low physician-to-population ratios in low-income areas and the unwillingness of some office-based physicians to accept these patients; it may also result from preferences for the care offered at community health centers, which were explicitly established to serve low-income populations.[21]

Figure 1. Usual Source of Care Among Children (0-18) by Insurance Status



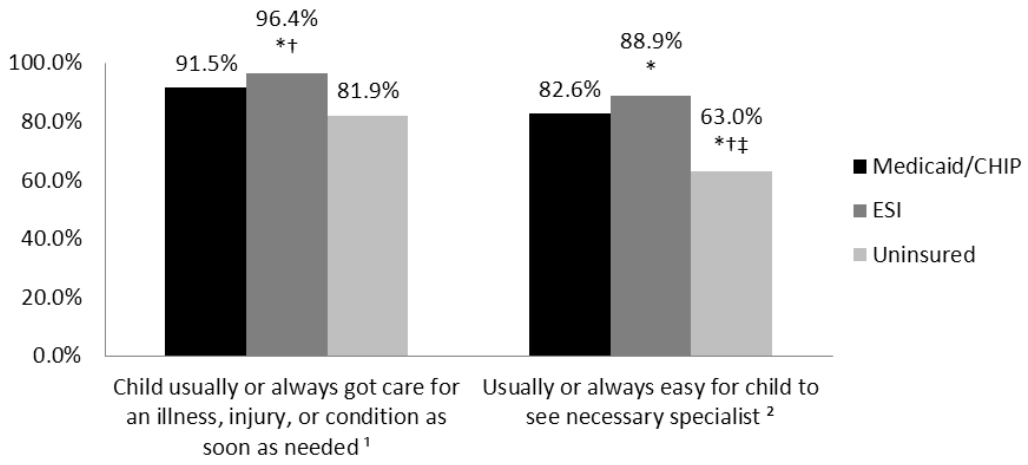
Source: Urban Institute analysis for MACPAC of the 2009 National Health Interview Survey (NHIS) and 2008 Medical Expenditure Panel Survey (MEPS).
Notes: Figure shows unadjusted numbers. ESI is employer-sponsored insurance. Usual source of care (USC) is defined as the place that the person usually goes to when sick or in need of advice about his/her health; the emergency department is not considered a USC. Estimates for "had a USC" are from the NHIS. Estimates for "USC has night/weekend hours" are from the MEPS, among those with a USC.
* Unadjusted differences from Medicaid/CHIP that are statistically significant at the (.05) level, two-tailed test.
† Regression-adjusted differences from Medicaid/CHIP controlling for age, gender, health status, and health conditions that are statistically significant at the (.05) level, two-tailed test.
‡ Regression-adjusted differences from Medicaid/CHIP controlling for age, gender, health status, health conditions, race/ethnicity, and socioeconomic characteristics that are statistically significant at the (.05) level, two-tailed test.

Timeliness and Accessibility of Care. Among children with a usual source of care, less than half of those with Medicaid or CHIP (42.9 percent) had a usual source of care with night-time or weekend office hours (Figure 1). In contrast, 58.6 percent of children with ESI and a usual source of care had one with night-time or weekend office hours. Even when controlling for health and socioeconomic characteristics, Medicaid/CHIP children are less likely than children with ESI to have a usual source of care with night-time or weekend hours.[22]

For approximately a third (34.5 percent) of Medicaid/CHIP children with a usual source of care, it was reportedly very or somewhat difficult to contact the usual source of care after hours; for 11.5 percent, it was very or somewhat difficult to contact the usual source of care over the telephone; and for 4.8 percent, it was very or somewhat difficult to get to the usual source of care. In comparison, for 20.9 percent of children with ESI and a usual source of care, it was very or somewhat difficult to contact the usual source of care after hours; for 10.6 percent, it was very or somewhat difficult to contact the usual source of care over the telephone; and for 3.0 percent, it was very or somewhat difficult to get to the usual source of care. While more problems contacting the usual source of care after hours or getting to the usual source of care were reported in Medicaid and CHIP than in ESI, these differences did not remain statistically significant after controlling for the observed health and socioeconomic characteristics of the children and their families.[23]

Additional analyses indicate that families with Hispanic children have more difficultly contacting their usual source of care after hours, regardless of the type of coverage they have (data not shown).

Figure 2. Provider Accessibility Among Children (0-17) by Insurance Status



Source: Urban Institute analysis for MACPAC of the 2008 Medical Expenditure Panel Survey (MEPS).
Notes: Figure shows unadjusted numbers. ESI is employer-sponsored insurance.
¹ Question only asked of children that had an illness, injury, or condition that needed care right away.
² Question only asked of children that needed to see a specialist.
* Unadjusted differences from Medicaid/CHIP that are statistically significant at the (.05) level, two-tailed test.
† Regression-adjusted differences from Medicaid/CHIP controlling for age, gender, health status, and health conditions that are statistically significant at the (.05) level, two-tailed test.
‡ Regression-adjusted differences from Medicaid/CHIP controlling for age, gender, health status, health conditions, race/ethnicity, and socioeconomic characteristics that are statistically significant at the (.05) level, two-tailed test.

The vast majority of parents said that their Medicaid/CHIP child was usually or always able to get care for an illness, injury, or condition that needed care right away (91.5 percent) or for routine appointments for health care (93.3 percent), and that it was usually or always easy to get necessary care, tests, or treatments (94.8 percent). Somewhat fewer (82.6 percent) said that it was usually or always easy to see a specialist when needed (Figure 2). In contrast, only 63.0 percent of parents with uninsured children who needed specialty care said it was usually or always easy to see a specialist. The need for specialty care is likely underestimated by parents—especially for uninsured children, since they may be more likely to have undiagnosed medical problems. Moreover, parents reported a lower need for specialty care for children enrolled in Medicaid or CHIP compared to children with ESI (15.2 vs. 20.3 percent) despite the fact that children covered by Medicaid or CHIP are more likely to be in fair or poor health and to have more chronic

health problems. Thus, these data may overstate access to needed specialty care particularly among uninsured children and children with Medicaid or CHIP.

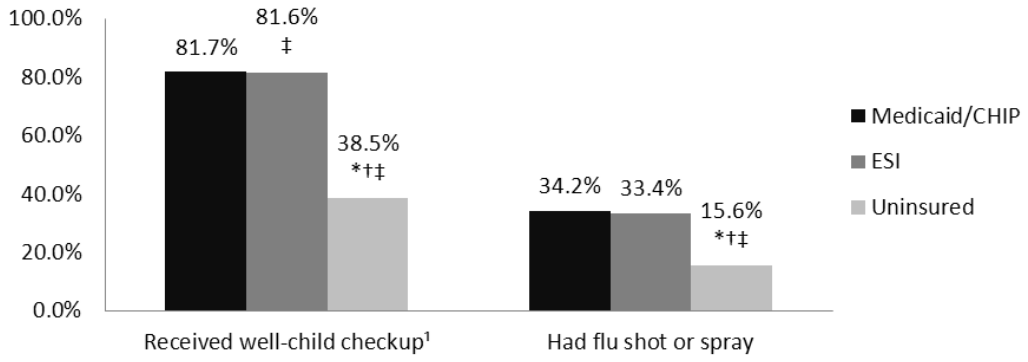
While parents with children covered by ESI were more likely than parents with Medicaid/CHIP children to say it was usually or always easy to get necessary care, tests, or treatments and to see needed specialists, those differences narrow and are no longer statistically significant when taking into account health and socioeconomic differences.[24] This finding is consistent with the finding presented below that show that while children with ESI are more likely to have a specialty visit than Medicaid/CHIP children, these differences in receipt of specialty care can be accounted for by differences in socioeconomic status, particularly related to racial/ethnic differences between the two groups, suggesting that children in racial/ethnic minority groups are experiencing greater problems obtaining specialty care than non-Hispanic white children, regardless of their insurance status.

Well-Child Checkups. A substantial portion (81.7 percent) of Medicaid/CHIP children was reported as receiving a well-child checkup in the previous twelve months (Figure 3).[25] Almost the same proportion (81.6 percent) of children with ESI reportedly received a well-child checkup. In contrast, only 38.5 percent of uninsured children had received a well-child checkup in the prior year. The difference in reported well-child receipt between uninsured children and Medicaid/CHIP children persists in size and significance even when adjusting for differences in the characteristics of the children. In addition, after adjusting for differences in their health and socioeconomic status, Medicaid/CHIP children were *more* likely than their counterparts with ESI to receive a well-child checkup. Despite these high rates of well-child care, however, other research has found that many young children covered by Medicaid or CHIP and other types of insurance coverage are not receiving regular screenings and assessments for developmental and behavioral health problems, which indicates that having a preventive visit does not guarantee that children will receive recommended care.[26] Moreover, the underlying regression model also suggests that children from lower income families and those whose parents have lower levels of educational attainment are less likely than other children to receive well-child care, regardless of their insurance status and health needs.

Office Visits and Flu Shots/Spray. More than nine in ten children with Medicaid/CHIP or with ESI had an office visit (93.9 percent and 94.5 percent, respectively), suggesting that these children come into contact with medical providers in outpatient settings at very high rates.[27] In contrast, only 60.2 percent of uninsured children had an office visit. As shown in Figure 3, Medicaid/CHIP children were as likely as children with ESI to receive a flu shot or spray (34.2 percent and 33.4 percent, respectively); for uninsured children, however, the rate was much lower (15.6 percent). While children with Medicaid or CHIP

receive flu vaccines at rates similar to those covered by ESI, the receipt of flu vaccines among all children is very low given that the Centers for Disease Control and Prevention (CDC) recommends that all children over 6 months of age be inoculated. In addition, consistent with their lower contact with the health care system, analyses of other information available on the MEPS finds that uninsured children are less likely to have screenings, such as blood pressure checks, and to receive advice on topics such as the benefits of regular dental check-ups and exercise, which could improve their health and safety (data not shown).

Figure 3. Outpatient Care Among Children (0-18) by Insurance Status

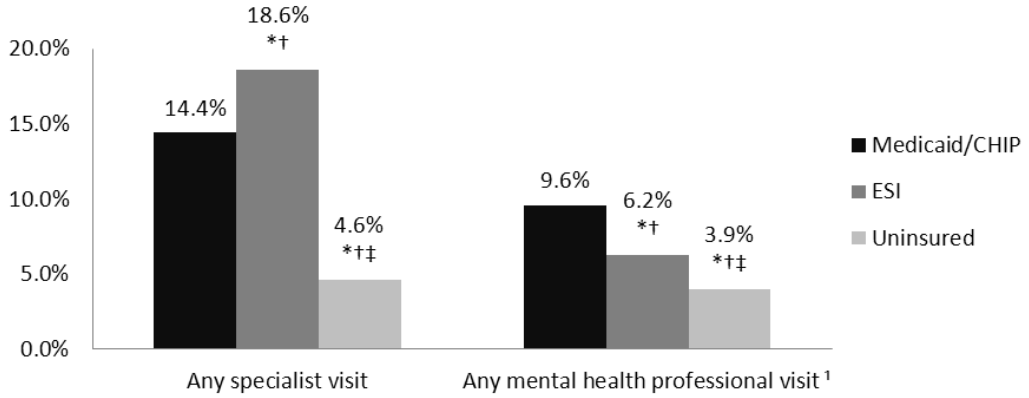


Source: Urban Institute analysis for MACPAC of the 2009 National Health Interview Survey (NHIS).
Notes: Figure shows unadjusted numbers. ESI is employer-sponsored insurance.
¹ Question only asked of children age 0-17.
* Unadjusted differences from Medicaid/CHIP that are statistically significant at the (.05) level, two-tailed test.
† Regression-adjusted differences from Medicaid/CHIP controlling for age, gender, health status, and health conditions that are statistically significant at the (.05) level, two-tailed test.
‡ Regression-adjusted differences from Medicaid/CHIP controlling for age, gender, health status, health conditions, race/ethnicity, and socioeconomic characteristics that are statistically significant at the (.05) level, two-tailed test.
For well-child visits, ESI is significantly *less* than Medicaid/CHIP using the second (full) set of adjustments.

Specialist Visits. Children with Medicaid or CHIP coverage are much more likely than uninsured children to have a visit with a specialist (14.4 vs. 4.6 percent) and to have a visit with a mental health professional (9.6 vs. 3.9 percent), as shown in Figure 4.[28] The gaps in receipt of mental health and specialty care between children with Medicaid or CHIP and uninsured children persist when taking into account differences in the health needs of these children, suggesting that uninsured children with health problems are missing out on important health services that could help address their needs. Additionally, racial/ethnic minorities and children with lower levels of family education are less likely to have reported care from specialists and mental health providers even after adjusting for health status and other socioeconomic characteristics (data not shown),

which suggest that these groups face other barriers to specialty care regardless of their health insurance coverage.

Figure 4. Specialty Care Among Children (0-18) by Insurance Status



Source: Urban Institute analysis for MACPAC of the 2009 National Health Interview Survey (NHIS).
Notes: Figure shows unadjusted numbers. ESI is employer-sponsored insurance. Specialists include medical doctors who specialize in a particular medical disease or problem (other than psychiatrist or opthamologist).
[1] Question only asked of children age 2 to 18.
* Unadjusted differences from Medicaid/CHIP that are statistically significant at the (.05) level, two-tailed test.
† Regression-adjusted differences from Medicaid/CHIP controlling for age, gender, health status, and health conditions that are statistically significant at the (.05) level, two-tailed test.
‡ Regression-adjusted differences from Medicaid/CHIP controlling for age, gender, health status, health conditions, race/ethnicity, and socioeconomic characteristics that are statistically significant at the (.05) level, two-tailed test.

As previously mentioned, Medicaid/CHIP children are less likely than children with ESI to have a specialist visit (14.4 vs. 18.6 percent). This difference is even larger when taking into account the greater health needs of children covered by Medicaid or CHIP; however, the sign of the difference changes and is no longer statistically significant when adjusting for differences in health and socioeconomic status. This suggests that the lower receipt of specialty care among Medicaid and CHIP enrollees may be driven in part by factors or circumstances that are associated with having low incomes or being in a racial/ethnic minority. Moreover, while low-income individuals may face barriers to obtaining specialty care regardless of their health insurance coverage, the reasons for those barriers may vary by type of health insurance. As described later in this report, financial barriers appear to be more common for those with ESI because of out-of-pocket costs, while non-financial barriers are more common for Medicaid/CHIP enrollees, such as not being able to get through to the doctor's office on the phone, to get an appointment,[29] or to go when the doctor's office or clinic was open.

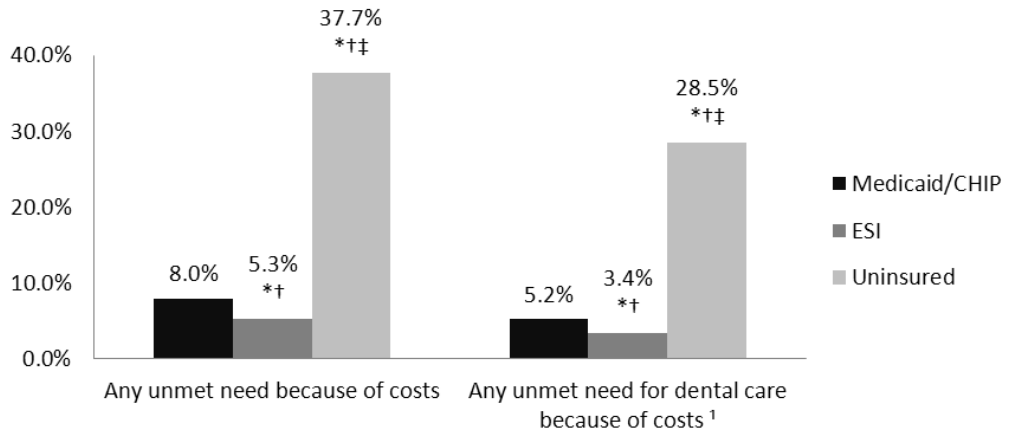
In contrast to the pattern found for specialty care, Medicaid/CHIP children are more likely than children with ESI to have a visit with a mental health professional (9.6 vs. 6.2 percent). The size of the difference in the likelihood of having a visit with a mental health professional between children with ESI and children with Medicaid or CHIP narrows somewhat, but still persists, when controlling for health status. The difference is no longer statistically significant when also controlling for socioeconomic status. The lower receipt of mental health care among children with ESI may reflect less need for such services as well as more restricted mental health benefits in ESI compared to what is available to children with Medicaid or CHIP.[30]

Unmet Health Needs Due to Costs.[31] About 8.0 percent of Medicaid/CHIP children were reported to have had an unmet need due to costs (Figure 5). The presence of unmet needs in combination with gaps in well-child checkups may indicate that some children covered by Medicaid are not getting care that is consistent with the Medicaid requirements for early and periodic screening, diagnostic and treatment services (EPSDT).

Consistent with the patterns found with respect to receipt of health care, uninsured children are much more likely to have unmet needs compared to Medicaid/CHIP children. Reported unmet health needs because of costs for uninsured children (37.7 percent) are more than four times the level reported for Medicaid/CHIP children (8.0 percent). Compared to children with Medicaid or CHIP, uninsured children have higher unmet needs due to costs overall and in each of the following five service areas that were examined: medical care, dental care, prescription drugs, mental health care or counseling, and eyeglasses. These differentials persist in comparisons that adjust for health needs and socioeconomic status.

Medicaid/CHIP children and children with ESI both have relatively low levels of unmet needs due to costs (8.0 percent and 5.3 percent respectively). Although the unadjusted difference between the two groups is statistically significant, this is no longer the case when adjusted comparisons take into account differences in the groups' health and socioeconomic status, which suggests that the higher health needs and the socioeconomic characteristics of children with Medicaid or CHIP are contributing to their higher unmet needs due to costs, relative to children with ESI.[32]

Figure 5. Unmet Need for Care Due to Cost Among Children (0-18) by Insurance Status



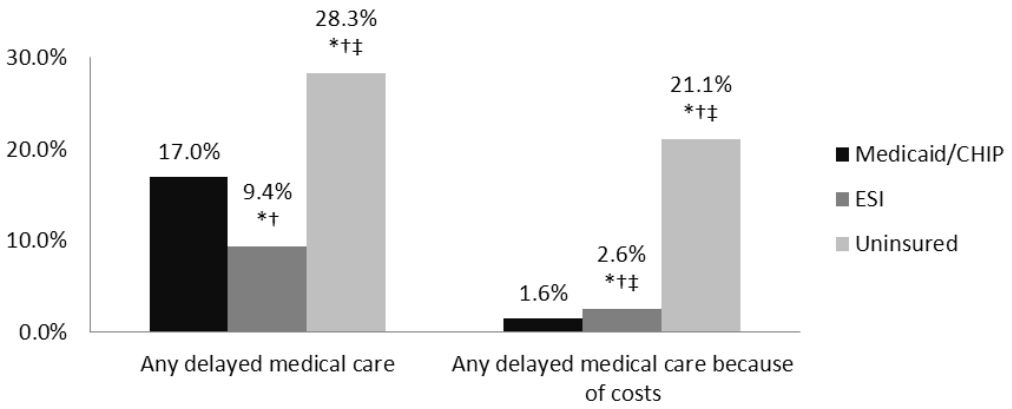
Source: Urban Institute analysis for MACPAC of the 2009 National Health Interview Survey (NHIS).
Notes: Figure shows unadjusted numbers. ESI is employer-sponsored insurance. Any unmet need because of costs includes unmet need for medical care, dental care, prescription drugs, mental health care or counseling, or eye care.
[1] Question only asked of children age 2 to 18.
* Unadjusted differences from Medicaid/CHIP that are statistically significant at the (.05) level, two-tailed test.
† Regression-adjusted differences from Medicaid/CHIP controlling for age, gender, health status, and health conditions that are statistically significant at the (.05) level, two-tailed test.
‡ Regression-adjusted differences from Medicaid/CHIP controlling for age, gender, health status, health conditions, race/ethnicity, and socioeconomic characteristics that are statistically significant at the (.05) level, two-tailed test.

Dental care was the most frequently cited unmet need due to cost for all children and for children in each of the three insurance groups. Among Medicaid/CHIP children, 5.2 percent were reported to have an unmet need for dental care due to costs (Figure 5). This compares to 3.4 percent for children with ESI and 28.5 percent for uninsured children.[33] The difference between Medicaid or CHIP and ESI in unmet need for dental care due to costs is no longer statistically significant after controlling for health status and socioeconomic characteristics.[34]

Delayed Medical Care. Among Medicaid/CHIP children, 17.0 percent reported that they had delayed medical care at some point in the prior year (Figure 6). In contrast, 9.4 percent of children with ESI delayed medical care, although this difference is much smaller and no longer statistically significant after controlling for both health and socioeconomic characteristics. Among children with no coverage, 28.3 percent delayed medical care. The difference in the extent of delayed receipt of needed medical care between children with Medicaid or CHIP and uninsured children increases and remains statistically significant after controlling for health and socioeconomic characteristics. Not surprisingly, uninsured children are substantially more likely than Medicaid/CHIP

children to experience delays receiving medical care because of costs (21.1 percent vs. 1.6 percent).

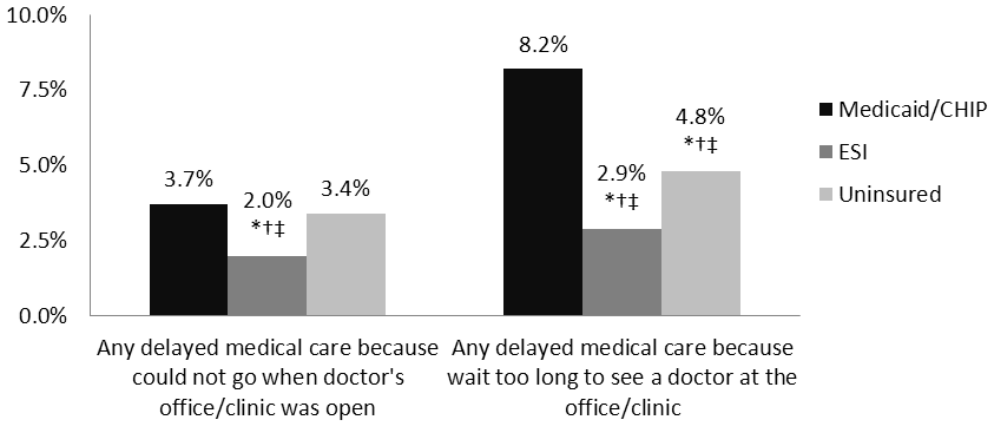
Figure 6. Delayed Medical Care Among Children (0-18) by Insurance Status



Source: Urban Institute analysis for MACPAC of the 2009 National Health Interview Survey (NHIS).
Notes: Figure shows unadjusted numbers. ESI is employer-sponsored insurance. Any delayed medical care includes delays because of costs, couldn't get an appointment, couldn't go when open, have to wait to long to see doctor, didn't have transportation, or couldn't get through on the phone.
* Unadjusted differences from Medicaid/CHIP that are statistically significant at the (.05) level, two-tailed test.
† Regression-adjusted differences from Medicaid/CHIP controlling for age, gender, health status, and health conditions that are statistically significant at the (.05) level, two-tailed test.
‡ Regression-adjusted differences from Medicaid/CHIP controlling for age, gender, health status, health conditions, race/ethnicity, and socioeconomic characteristics that are statistically significant at the (.05) level, two-tailed test.

Medicaid/CHIP children were *less* likely than children with ESI to have delayed care due to costs but *more* likely to experience a delay in getting care because they could not get an appointment, could not go when the place was open, had to wait too long to see a doctor once they reached the site of care, did not have transportation, or could not get through on the phone (Figure 7). Delayed medical care due to not being able to go during office hours, having to wait too long to see a provider, or not having transportation remains higher for Medicaid/CHIP children than for children with ESI in all comparisons, including those that adjust for health and socioeconomic characteristics. These differences in the relative accessibility of providers may be driven by differences in the mix of providers who accept Medicaid and CHIP or they could relate to differences in the characteristics of the children in the two groups such as their residential location, which may make it more difficult for parents with Medicaid/CHIP children to get care for their children.[35] In addition, the multivariate models indicate that, other things equal, lower-income children are more likely to experience delays receiving needed care, which suggests that they may face additional barriers regardless of their insurance status and health needs.

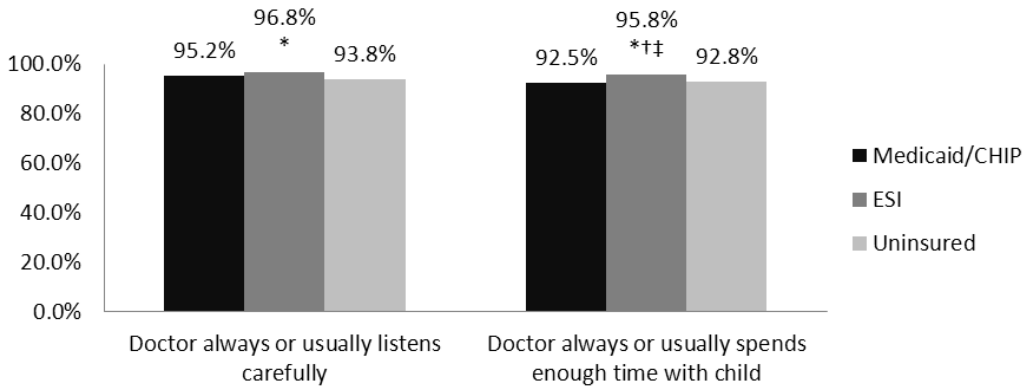
Figure 7. Provider-Related Delayed Medical Care Among Children (0-18) by Insurance Status



Source: Urban Institute analysis for MACPAC of the 2009 National Health Interview Survey (NHIS).
Notes: Figure shows unadjusted numbers. ESI is employer-sponsored insurance.
* Unadjusted differences from Medicaid/CHIP that are statistically significant at the (.05) level, two-tailed test.
† Regression-adjusted differences from Medicaid/CHIP controlling for age, gender, health status, and health conditions that are statistically significant at the (.05) level, two-tailed test.
‡ Regression-adjusted differences from Medicaid/CHIP controlling for age, gender, health status, health conditions, race/ethnicity, and socioeconomic characteristics that are statistically significant at the (.05) level, two-tailed test.

Patient Experiences with Care. The vast majority of families report that they have positive interactions with their child's providers. For all three insurance groups, over 90 percent of children who visited a doctor's office or clinic for health care in the prior year had respondents who said that their doctor or health care provider usually or always listened carefully, explained things in a way that was easy to understand, showed respect, and spent enough time with the child (Figure 8). The more detailed responses indicate that more than three-quarters of families, regardless of their child's insurance coverage, say that the child's doctor *always* does these things, but that children with ESI coverage are more likely than Medicaid/CHIP children to have providers who always listen carefully, show respect, and spend enough time with the child, even when adjusting for differences in health and socioeconomic status.[36]

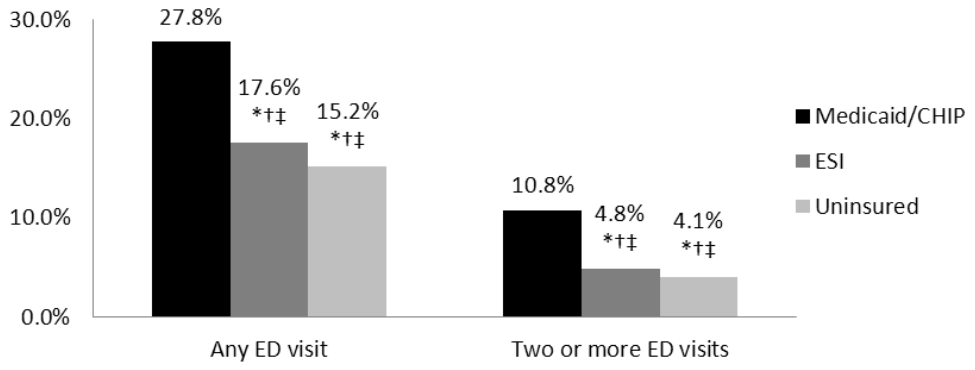
Figure 8. Patient-Centered Measures Among Children (0-17) by Insurance Status



Source: Urban Institute analysis for MACPAC of the 2008 Medical Expenditure Panel Survey (MEPS).
Notes: Figure shows unadjusted numbers. ESI is employer-sponsored insurance. Questions only asked of children that had at least one doctor or health care professional visit in the past 12 months.
* Unadjusted differences from Medicaid/CHIP that are statistically significant at the (.05) level, two-tailed test.
† Regression-adjusted differences from Medicaid/CHIP controlling for age, gender, health status, and health conditions that are statistically significant at the (.05) level, two-tailed test.
‡ Regression-adjusted differences from Medicaid/CHIP controlling for age, gender, health status, health conditions, race/ethnicity, and socioeconomic characteristics that are statistically significant at the (.05) level, two-tailed test.

Emergency Department Visits. Medicaid/CHIP children are much more likely than children lacking health insurance coverage and children with ESI to have had an emergency department (ED) visit and to have had multiple ED visits in the past 12 months (Figure 9).[37] More than a quarter (27.8 percent) of Medicaid/CHIP children had at least one ED visit. In contrast, 15.2 percent of uninsured children and 17.6 percent of those with ESI had at least one ED visit. Moreover, 10.8 percent of Medicaid/CHIP children had two or more ED visits, compared to 4.1 percent for the uninsured and 4.8 percent for those with ESI. The differences in the likelihood of having an ED visit and of having two or more ED visits narrow but remain statistically significant when adjustments are made for the health and socioeconomic status of children in the different insurance groups. The higher rates of ED visits found for Medicaid/CHIP enrollees may be due in part to their lower access to night-time and weekend care through their usual source of care and to the greater difficulties that they report getting in to see their providers. More analysis is needed to understand what is driving the higher rates of ED use among Medicaid/CHIP children and the extent to which the drivers are a reflection of access barriers to primary or specialty care.[38,39]

Figure 9. Emergency Department (ED) Visits Among Children (0-18) by Insurance Status



Source: Urban Institute analysis for MACPAC of the 2009 National Health Interview Survey (NHIS).
Notes: Figure shows unadjusted numbers. ESI is employer-sponsored insurance.
* Unadjusted differences from Medicaid/CHIP that are statistically significant at the (.05) level, two-tailed test.
† Regression-adjusted differences from Medicaid/CHIP controlling for age, gender, health status, and health conditions that are statistically significant at the (.05) level, two-tailed test.
‡ Regression-adjusted differences from Medicaid/CHIP controlling for age, gender, health status, health conditions, race/ethnicity, and socioeconomic characteristics that are statistically significant at the (.05) level, two-tailed test.

Conclusion

Consistent with findings from prior research,[40] for almost all the measures considered, children with Medicaid or CHIP have substantially better access to care compared to the uninsured. Compared to the uninsured, Medicaid/CHIP children are much more likely to have a usual source of care and to receive well-child checkups, flu vaccinations, specialty visits, and mental health visits; they are also much less likely to have unmet needs for care and to experience delays getting needed care. Overall, the access picture is poor for uninsured children, with many forgoing preventive care and experiencing unmet needs. This suggests that there would be significant access improvements associated with enrolling more uninsured children, the majority of whom are eligible for Medicaid or CHIP, into health coverage programs.[41]

The comparison of access for children enrolled in Medicaid or CHIP to those with ESI yields a more complex picture, also consistent with past research. For some measures, such as having a usual source of care and receipt of flu vaccines, access looks fairly comparable. In the case of well-child checkups and delaying care due to costs, access appears even better under Medicaid or CHIP when differences in health and socioeconomic status are taken into account. In contrast, children with Medicaid or CHIP

have worse access to care as measured by not having a usual source of care with night or weekend hours and delaying care due to not being able to go to the doctor's office or clinic during office hours, having to wait too long to see the doctor at the office or clinic, and not having transportation to get to the doctor's office or clinic in both unadjusted and regression-adjusted comparisons. These differences narrow but are still statistically significant when accounting for health status and socioeconomic factors. In addition, Medicaid/CHIP children are more likely than those with ESI to have emergency department visits, even after controlling for health and socioeconomic status, which may in part be a reflection of their lower access to outpatient care on nights and weekends and other barriers associated with getting care from their usual source of care.

For other measures, such as delaying medical care for any reason and receipt of specialty care, children with Medicaid or CHIP appeared to also have worse access compared to children with ESI based on unadjusted comparisons, but these gaps were eliminated after accounting for demographic and socioeconomic differences between the two groups of children. This implies that certain types of children face more access barriers, regardless of their insurance status.

This report shows the importance of Medicaid and CHIP in providing children with access to care; compared to uninsured children, children enrolled in Medicaid or CHIP have substantially better access to health care services. However, the findings highlight the need for a better understanding of the factors that may be contributing to access differences between the Medicaid or CHIP population and those with ESI and the extent to which specific insurance attributes, such as cost sharing, benefits, and provider reimbursement and participation may contribute to these patterns. The findings also point to the need to understand other barriers that may systematically be reducing access to care and service use, particularly for lower income children, those from minority backgrounds, and those whose parents have lower levels of educational attainment. Moreover, understanding the consequences of access problems for the health and wellbeing of children will be critical to the design of appropriate policy responses.

[1] Survey estimates generally combine Medicaid and CHIP coverage, since it is not appropriate to classify them separately with the information available on the surveys. However, given the differences in benefits, cost-sharing, and service delivery systems for children covered by CHIP as compared to Medicaid in many states, there could be systematic differences in access to care and service use among beneficiaries covered by CHIP as opposed to Medicaid.

[2] Institute of Medicine, "America's Uninsured Crisis: Consequences for Health and Health Care," Washington, DC: National Academies Press, 2009; Hargraves, J. Lee and Jack Hadley, "The Contribution of Insurance Coverage and Community Resources to Reducing Racial/Ethnic Disparities in Access to Care," *Health Services Research*, 38: 3, June 2003.

[3] Zuckerman, S., A. Williams, and K. Stockley, "Trends in Medicaid Physician Fees, 2003-2008," *Health Affairs*, 28(3): w510-w519, 2009; Government Accountability Office (GAO), "Medicaid and CHIP: Most Physicians Serve Covered Children but Have Difficulty Referring Them for Specialty Care," GAO-11-624, June 2011.

[4] For examples of federal reports that provide ongoing information on access to care for children by health insurance coverage status and key past research on this topic, see the following: Agency for Healthcare Research and Quality, "National Healthcare Quality Report" and "National Healthcare Disparities Report," 2010; Department of Health and Human Services (HHS), "Connecting Kids to Coverage: Continuing the Progress (2010 CHIPRA Annual Report)," 2010; Dubay, L. and G. Kenney, "Heath Care Access And Use Among Low-Income Children: Who Fares Best?" *Health Affairs*, 20(1): 112-121, 2001; Hoffman, C. and J. Paradise, "Health Insurance and Access to Health Care in the United States," *Annals of the New York Academy of* Sciences, 1136: 149-160, 2008; Howell, E., and G. Kenney, "The Impact of the Medicaid/CHIP Expansions on Children: A Synthesis of the Evidence," *Medical Care Research and Review*, forthcoming; Kogan, M., P. Newacheck, S. Blumberg, R. Ghandour, G. Singh, B. Strickland, and P. van Dyck, "Underinsurance among Children in the United States," *The New England Journal of Medicine*, 363(9): 841-851, 2010; Newacheck, P., D. Hughes, Y.Y. Hung, S. Wong, and J. Stoddard, "The Unmet Health Needs of America's Children," *Pediatrics*, 105(4): 989-997, 2000; Selden, T. and J. Hudson, "Access to Care and Utilization Among Children: Estimating the Effects of Public and Private Coverage," *Medical Care*, 44(5): I-19-I-26, 2006; and Skinner, A. and M. Mayer, "Effects of insurance status on children's access to specialty care: a systematic review of the literature," *BMC Health Services Research*, 7: 194, 2007.

[5] Reports from household surveys complement the information on access to care that can be derived from other sources, such as provider surveys, chart review, and administrative data. While household survey data constitute an important source of information about access to care for children, they have some inherent weaknesses. In particular, household survey data rely on the respondent's recall of healthcare events, which may involve measurement error. In addition, respondents may feel pressure to provide certain answers to survey questions (for example, indicating that their child had received a well-child visit even if they did not do so). Finally, the data are based on subjective perceptions which may not match objective criteria (e.g., parents may not be aware that their child needs a particular type of care and may therefore underreport unmet needs) or may over estimate a child's need for care.

[6] The NHIS and the MEPS were used in this report because they provide the largest sample sizes annually among the federal surveys that obtain information on access to and use of health care services among both children and non-elderly adults. Based on its content related to access to care for children, consideration was given to including estimates from the National Survey of Children's Health (NSCH). The NSCH was not included here since it is not fielded annually and the most recent publicly available estimates are for 2007.

[7] Children are defined as age 0 to 18 in this report. However, in both the NHIS and MEPS, 18-year-olds are considered adults and are not included in the child instruments. As such, the survey responses for 18-year-olds used in this report are from the individuals as reported in the adult instruments, rather than a knowledgeable adult in the household.

[8] Centers for Disease Control and Prevention (CDC), "About the National Health Interview Survey," last modified April 18, 2011, http://www.cdc.gov/nchs/nhis/about_nhis.htm. The annual NHIS questionnaire consists of three major components—the Family Core, the Sample Adult Core, and the Sample Child Core. The Family Core collects information for all family members regarding household composition and socio-demographic characteristics, along with basic indicators of health status, activity limitations, and health insurance. The Sample Adult and Sample Child Cores obtain additional information on the health of one randomly selected adult and child in the family.

[9] Agency for Healthcare Research and Quality (AHRQ), "Medical Expenditure Panel Survey: Household Component," http://meps.ahrq.gov/mepsweb/survey_comp/household.jsp. The NHIS and MEPS yield somewhat different profiles of health care access, likely reflecting the differences in survey design, survey fielding, and question content, among other differences. In general, estimates of health care use reported in MEPS are lower than those in NHIS. For this study, we rely on 2009 NHIS data as our primary data source, noting key instances where NHIS estimates differ from MEPS estimates. Additional research is needed to understand the differences between the two surveys in reported access to care and service use.

[10] For example, see: Bisgaier, J. and K.V. Rhodes, "Auditing Access to Specialty Care for Children with Public Insurance," *The New England Journal of Medicine*, 364: 2324-2333, 2011; Kuhlthau, K., T.G. Ferris, A. Beal, S. Gortmaker, and J. Perrin, "Who Cares for Medicaid-Enrolled Children With Chronic Conditions?" *Pediatrics*, 108(4): 906-912, 2001; and Perrin, J., K. Kuhlthau, S. Gormaker, A. Beal, and T. Ferris, "Generalist and Subspecialist Care for Children with Chronic Conditions," *Ambulatory Pediatrics*, 2(6): 462-469, 2002.

[11] For a discussion of the characteristics of children insured for only part of the year and the complexities involved with measuring their access to care, see: Buchmueller, T., S. Orzol, and L. Shore-Sheppard, "Stability of Children's Insurance Coverage and Implications for Access to Care: Evidence from the Survey of Income and Program Participation," Ann Arbor, MI: University of Michigan, NBER, and Williams College, February 2011; and Olson, L., S.F. Tang, P. Newacheck, "Children in the United States with Discontinuous Health Insurance Coverage," *The New England Journal of Medicine*, 353(4): 382-391, 2005.

[12] The coverage categories used in this report are as follows: (a) full-year uninsured, (b) full-year insured with Medicaid or CHIP at the time of the survey (and not with ESI or Medicare at the time of the survey), and (c) full-year insured with ESI at the time of the survey. While the full-year insurance variables are defined over a 12-month period, some of the children in the ESI category may have had Medicaid or CHIP or other types of coverage over the course of the year; likewise, some of the children in the Medicaid or CHIP category may have had ESI coverage over the course of the year. Children who report more than one type of health insurance coverage at the time of the survey were assigned to a single coverage category. For purposes of this report, children for whom other coverage along with Medicaid or CHIP was reported at the time of the survey are generally not reported as Medicaid/CHIP children; this is to ensure that the access to care enabled from that other coverage (e.g., ESI, Medicare) is not attributed to Medicaid or CHIP. (Children dually enrolled in Medicaid and Medicare account for less than 0.5% of all children.) As a result, the health insurance coverage categories used in this report (i.e., the use of a hierarchy to assign a single type of coverage) differ from the coverage definitions used in the March and June 2011 MACStats, which categorize children who report multiple types of coverage at the time of the survey as having multiple types of coverage.

[13] It is not possible to draw causal linkages between health insurance status and access to care based on the estimates presented here since the findings may be biased due to unobserved differences in health care needs and preferences that affect enrollment in health insurance coverage and the type of coverage that is taken up (i.e., selection) as well as access to care and service use. Research by Buchmueller et al. that attempts to address the selection issue by using panel data finds that differences in access to care and service use persist after controlling for child and family characteristics and child fixed effects (Buchmueller et al. 2011). While a recent study examined the effects of Medicaid coverage on access to care and service use in the context of a randomized trial, that study did not examine the impacts of Medicaid enrollment of children (Finkelstein, A., S. Taubman, B. Wright, M. Bernstein, J. Gruber, J. Newhouse, H. Allen, K. Baicker, "The Oregon Health Insurance Experiment: Evidence from the First Year," NBER Working Paper 17190, 2011).

[14] Mangione-Smith, R., A. DeCristofaro, C. Setodji, J. Keesey, D. Klein, J. Adams, M. Schuster, and E. McGynn, "The Quality of Ambulatory Care Delivered to Children in the United States," *The New England Journal of Medicine*, 357: 1515-1523, 2007.

[15] The appendix to this report provides additional detail on the data and methods used in this analysis, including how the outcomes and multivariate models are defined and how the analytic samples and standard errors are derived.

[16] However, even with these adjustments, the access differentials presented here may not necessarily be wholly attributable to insurance status, since there may be unobserved factors related to health status, health seeking behavior, socioeconomic status, and geographic location that influence both insurance status and access to care. Prior studies that have attempted to address these methodological concerns have concluded that insurance coverage (and Medicaid and CHIP specifically for children) improves access to care relative to being uninsured (Institute of Medicine, "America's Uninsured Crisis: Consequences for Health and Health Care," Washington, DC: National Academies Press, 2009; Hargraves, J. Lee and Jack Hadley, "The Contribution of Insurance Coverage and Community Resources to Reducing Racial/Ethnic Disparities in Access to Care," *Health Services Research*, 38: 3, June 2003). Many fewer studies have examined the impact of Medicaid and CHIP on access to care relative to having ESI coverage, and fewer still have attempted to address the methodological issues inherent in those comparisons (Long, S., T. Coughlin, J. King. 2005. "How Well Does Medicaid Work in Improving Access to Care?" *Health Services Research*, 40(1): 39-58; Selden, T. and J. Hudson. 2006. "Access to Care and Utilization Among Children: Estimating the Effects of Public and Private Coverage." *Medical Care*, 44(5): i19-i26). The findings in this report are generally consistent with earlier work by others using different data, different time periods, and different methods, particularly in comparing Medicaid or CHIP and uninsurance.

[17] Institute of Medicine, "Unequal Treatment: Confronting Racial and Ethnic Disparities in Health Care," Washington, DC: National Academies Press, 2002; McGuire, T., M. Alegria, B. Cook, K. Wells, and A. Zaslavsky, "Implementing the Institute of Medicine Definition of Disparities: An Application to Mental Health Care," *Health Services Research*, 41(5): 1979-2005, October 2006.

[18] Kuhlthau, K., R. Nyman, T. Ferris, A. Beal, and J. Perrin, "Correlates of Use of Specialty Care," *Pediatrics*, 113(3): 249-255, 2004.

[19] The difference in the share reporting a usual source of care among children with ESI compared to those with Medicaid or CHIP changes sign and is no longer statistically significant when controlling for both health status and socioeconomic characteristics. However, the share of children with Medicaid or CHIP and those with ESI who report a usual source of care remains very high (95.5 percent and 94.5 percent respectively) even after adjusting for health status and socioeconomic characteristics.

[20] The NHIS survey question on the place of the usual source of care includes clinic or health center, doctor's office or HMO, hospital emergency room, hospital outpatient department, some other place, or doesn't go to one place most often. Individuals who reported emergency room or who don't go to one place

most often as their place of usual source of care are not considered to have a USC in this analysis (these individuals account for less than one percent of all sample children on the NHIS). Additionally, hospital outpatient department and some other place are combined into a single category. The summary categories for place of usual source of care are clinic or health center, doctor's office or HMO, and other.

[21] Hing, E. and S. Uddin, "Visits to primary care delivery sites, United States 2008," *NCHS Data Brief*, October 2010, http://www.cdc.gov/nchs/data/databriefs/db47.pdf; MACPAC, "Chapter 4: Examining Access to Care in Medicaid and CHIP," *Report to the Congress on Medicaid and CHIP*, March 2011. The regression models indicated that other things equal, children with higher incomes, those with more-educated parents, and those who were citizens or non-Hispanic were more likely to have a doctor's office/HMO as their usual source of care and less likely to have a clinic as usual source of care (data not shown).

[22] After adjusting for race/ethnicity and socioeconomic characteristics, the difference between Medicaid or CHIP and ESI narrows but remains statistically significant. The only significant coefficients among the included variables are for single fathers, children without parents in the health insurance unit (HIU), and an indicator of unknown household citizenship status (data not shown) and it is not clear through which mechanisms those factors affect access to care.

[23] After controlling for health status and socioeconomic characteristics, differences between children with Medicaid or CHIP and those with ESI in terms of reporting that it was very or somewhat difficult to reach the USC after hours or in person change sign and are no longer statistically significant.

[24] In the estimates that adjust for health status and socioeconomic characteristics, the differences between children with Medicaid or CHIP and those with ESI change sign but are not statistically significant in terms of usually or always being able to get an appointment for routine care when wanted and saying that it was usually or always easy to see a specialist when necessary.

[25] There is concern that parents may be over-reporting receipt of well-child care on household surveys, possibly because of recall or social desirability bias (Selden, T., "Compliance with Well-Child Visit Recommendations: Evidence From the Medical Expenditure Panel Survey, 2000-2002," *Pediatrics*, 118: e1766-e1778, 2006). Prior analysis suggests that rates of well-child receipt based on the NHIS are substantially higher than in the MEPS—and while the NHIS estimates exceed those derived from administrative totals, there is concern that the administrative data may understate receipt of well-child care (Selden 2006; Steinwachs et al. 1998).

[26] Halfon, N., M. Regalado, H. Sareen, M. Inkelas, C.P. Reuland, F. Clascoe, and L. Olson, "Assessing Development in the Pediatric Office," *Pediatrics*, 113: 1926-1933, 2004.

[27] The unadjusted difference (0.6 percentage points) between children with Medicaid or CHIP and those with ESI in having had an office visit in the past 12 months is statistically insignificant. After controlling for health status, the difference increases to 1.5 percentage points and becomes statistically significant. After further controlling for socioeconomic status, the direction of difference changes and children with Medicaid or CHIP are found to be 2.6 percentage points *more* likely than those with ESI to have had an office visit in the past 12 months.

[28] Specialist and mental health professional visits are defined as the child seeing or speaking with the health professional during the past 12 months. Therefore specialist and mental health professional visits may include phone contacts as well as in-person visits. In addition, the comparisons of specialty and mental visits need to be interpreted with caution for a number of reasons. First, both specialty and mental health visits are reported with error since respondents may not know if a particular provider is a specialist or if a particular visit was with a mental health professional. Second, while the adjustments do attempt to take into account both physical and mental health issues, they do not capture the full range or severity of health problems and may not adequately reflect underlying need for care. In addition, the health status controls do not include undiagnosed health conditions of which the respondent was not aware and thus understate

existing health problems. Third, no information is available on the extent or nature of treatment associated with a particular visit. As with the other service use measures, the reported receipt of visits with a mental health professional is much higher on the NHIS than on the MEPS. Moreover, the differences between mental health receipt for children with Medicaid or CHIP coverage and children with ESI are statistically significant on the MEPS after controlling for health and socioeconomic characteristics; the difference between Medicaid/CHIP children and children with ESI is not statistically significant on the NHIS after controlling for health and socioeconomic characteristics.

[29] As described in detail later in this report, the unadjusted comparison and the comparison that controls for health status suggest that children with Medicaid or CHIP are more likely than those with ESI to delay care due to not being able to get an appointment, but the difference is no longer statistically significant when also controlling for socioeconomic characteristics. A recent study of physicians by the Government Accountability Office (GAO) found that physicians have greater difficulty referring children with Medicaid or CHIP to specialty care than privately insured children. See GAO, *Medicaid and CHIP: Most Physicians Serve Covered Children but Have Difficulty Referring Them for Specialty Care*, GAO-11-624, June 2011.

[30] However, it is likely that both groups of children have even higher unmet mental health needs than reported here since studies indicate that many children who need mental health services do not receive any (McMorrow, S. and E. Howell, "State Mental Health Systems for Children: A Review of the Literature and Available Data Sources," Washington, DC: The Urban Institute, June 2010).

[31] The reported level of unmet need is consistently higher in the NHIS than in the MEPS. The MEPS and the NHIS use different approaches for identifying the extent and nature of unmet needs, but no published study appears to address the reason for the differences. For example, the MEPS asks whether the individual was "unable to obtain dental care, tests, or treatments they or a dentist believed necessary," while the NHIS asks about dental care (including check-ups) as part of a question about whether they "needed any of the following, but did not get it" because they could not afford it. We focus on the NHIS questions as we believe they are focused more broadly on unmet need for services. While the reported level of unmet needs and delayed care are higher in the NHIS than in the MEPS, they are higher on both surveys for uninsured children compared to Medicaid/CHIP children and for dental care than for other services, and the patterns with respect to the adjusted differences in unmet need between children with Medicaid or CHIP and children with ESI are similar across the two surveys. No information is available on the consequences of the unmet needs that are reported in either survey.

[32] After controlling for health and socioeconomic status, the direction of the difference in any unmet need because of costs between children with Medicaid or CHIP and those with ESI changes and becomes insignificant.

[33] Among children with ESI coverage, unmet dental needs are likely higher for children with employer-sponsored insurance coverage that does not include dental benefits (Kenney, G., J. McFetters, and J. Yee, "Preventive Dental Care and Unmet Dental Needs Among Low-Income Children," *Am J Public Health*, 95(8): 1360-1366, 2005.).

[34] The difference in unmet need for dental care because of costs between children with Medicaid or CHIP and those with ESI changes sign and becomes insignificant when controlling for health status and socioeconomic characteristics. However, this measure of unmet need explicitly focuses on costs, and prior research suggests that children with Medicaid and CHIP who have unmet dental needs are more likely than low-income children with private coverage to report experiencing non-financial barriers to receiving dental care, such as not being able to find a dentist who accepts Medicaid or CHIP or having trouble getting to a participating provider because of transportation issues, while low-income children with private coverage were more likely to cite financial barriers to care (McBroome et al. 2005; Kenney, Ko, and Ormond 2000).

[35] Research has found that communities with high proportions of black and Hispanic residents are much more likely than others to have a shortage of physicians, regardless of the average income in the

community (Komaromy, M.S., Grumback, K., Drake, M., Vranizan, K., Lurie, N., and Bindman, A.B. "The role of black and Hispanic physicians in providing health care for underserved populations," *The New England Journal of Medicine*, 334: 1305-1310, 1996).

[36] See technical appendix for additional detail.

[37]The MEPS has much lower levels of ED use overall compared the NHIS, but showed the same pattern with respect to insurance coverage, with higher rates found for children enrolled in Medicaid or CHIP. Prior work has shown the NHIS to provide estimates of ED use that are closer to those from the National Hospital Ambulatory Medical Care Survey (NHAMCS) than those of the MEPS (Machlin, S.R., and M.W. Zodet, "A Methodological Comparison of Ambulatory Health Care Data Collected in Two National Surveys," AHRQ Working Paper 07001, October 2007).

[38] A.N. Ortega et al., "Use of health services by insurance status among children with asthma," *Medical Care*, 39:10, October 2001.

[39] Preliminary analysis suggests that rates of ED use are higher among children who report difficulties accessing their usual source of care, especially among those who report that it was very or somewhat difficult to travel to their usual source of care, which suggests that there may be a link between the accessibility of the child's usual source of care and their ED use (data not shown).

[40] Institute of Medicine, *America's Uninsured Crisis: Consequences for Health and Health Care*, Washington, DC: National Academies Press, 2009.

[41] Kenney, G., V. Lynch, A. Cook, and S. Phong, "Who And Where Are The Children Yet To Enroll In Medicaid And The Children's Health Insurance Program," *Health Affairs*, 29(10): 1920-1929, 2010.

Table 1: Access and Service Use Among Children by Insurance Status

Measure	Medicaid/ CHIP	ESI				Uninsured			
	%	%	Percentage Point Difference from Medicaid/ CHIP	(I) Regression-adjusted Difference from Medicaid/ CHIP	(II) Regression-adjusted Difference from Medicaid/ CHIP	%	Percentage Point Difference from Medicaid/ CHIP	(I) Regression-adjusted Difference from Medicaid/ CHIP	(II) Regression-adjusted Difference from Medicaid/ CHIP
Access and service use measures (past 12 months)									
Had a usual source of care [a]	95.5%	97.3%	-1.8 *	-2.0 †	1.0	60.4%	35.1 *	34.4 †	32.5 ‡
Doctor's office or HMO	60.8%	84.6%	-23.8 *	-23.5 †	-10.5 ‡	52.2%	8.6 *	8.0 †	8.8 ‡
Clinic or health center	37.7%	14.6%	23.2 *	23.0 †	10.6 ‡	44.2%	-6.4	-5.7	-6.8
Other	1.5%	0.8%	0.7 *	0.6	0.0	3.6%	-2.1	-2.1	-2.0
Had same usual source of care for past 12 months	92.3%	93.1%	-0.8	-0.3	1.7	95.2%	-2.9 *	-2.4	-1.9
Received well-child checkup [b]	81.7%	81.6%	0.1	-1.5	4.7 ‡	38.5%	43.2 *	39.3 †	38.2 ‡
Any office visit	93.9%	94.5%	-0.6	-1.5 †	2.6 ‡	60.2%	33.7 *	31.7 †	31.1 ‡
Had flu shot or spray	34.2%	33.4%	0.8	-1.5	1.9	15.6%	18.6 *	13.9 †	16.2 ‡
Any mental health professional visit [c]	9.6%	6.2%	3.4 *	2.7 †	2.6	3.9%	5.7 *	5.4 †	4.2 ‡
Any specialist visit [d]	14.4%	18.6%	-4.2 *	-5.8 †	1.7	4.6%	9.8 *	8.9 †	9.0 ‡
Any emergency department visit	27.8%	17.6%	10.2 *	7.7 †	4.4 ‡	15.2%	12.6 *	10.0 †	6.5 ‡
Two or more emergency department visits	10.8%	4.8%	6.0 *	4.2 †	2.1 ‡	4.1%	6.7 *	5.2 †	3.2 ‡
Any unmet need because of costs	8.0%	5.3%	2.7 *	2.6 †	-1.4	37.7%	-29.7 *	-28.9 †	-29.1 ‡
Medical care	1.1%	0.9%	0.2	0.0	-0.8	15.3%	-14.1 *	-14.2 †	-14.2 ‡
Dental care [c]	5.2%	3.4%	1.8 *	1.7 †	-1.7	28.5%	-23.3 *	-23.3 †	-24.4 ‡
Prescription drugs	2.5%	1.5%	0.9 *	0.4	-0.8	12.7%	-10.2 *	-10.4 †	-10.8 ‡
Mental health care or counseling [c]	0.5%	0.8%	-0.3	-0.6	-0.9	3.6%	-3.1 *	-3.1 †	-3.3 ‡
Eyeglasses [c]	2.2%	1.3%	0.9	0.9	0.2	6.8%	-4.6 *	-4.4 †	-4.1 ‡
Any delayed medical care	17.0%	9.4%	7.6 *	5.7 †	0.9	28.3%	-11.3 *	-12.6 †	-12.8 ‡
Because of costs	1.6%	2.6%	-0.9 *	-1.4 †	-3.3 ‡	21.1%	-19.5 *	-19.7 †	-20.0 ‡
Because couldn't get an appointment	6.9%	3.6%	3.3 *	2.8 †	1.3	4.3%	2.6 *	2.1	1.9
Because couldn't go when open	3.7%	2.0%	1.7 *	1.4 †	1.2 ‡	3.4%	0.3	0.0	-0.2
Because have to wait too long to see doctor at site	8.2%	2.9%	5.2 *	4.6 †	2.3 ‡	4.8%	3.3 *	3.0 †	4.1 ‡
Because didn't have transportation	4.6%	0.3%	4.3 *	3.7 †	1.1 ‡	3.0%	1.6	1.1	0.6
Because couldn't get through on the phone	2.9%	1.3%	1.6 *	1.3 †	0.8	2.6%	0.4	0.2	0.4
Sample Size	3,742	5,657				672			

Source: Urban Institute analysis for MACPAC of the 2009 National Health Interview Survey (NHIS).

Notes: Sample sizes are average sample sizes across the five estimation samples derived from multiply imputed income data. Medicaid includes both Medicaid and the Children's Health Insurance Program (CHIP). ESI is employer-sponsored insurance. HMO is health maintenance organization. The federal poverty level (FPL) is measured using the Department of Health and Human Services poverty guidelines.

* Unadjusted differences significantly different from zero at the .05 level, two-tailed test.

† Regression-adjusted differences derived from multivariate regression models that control for age, gender, health status, diabetes, heart condition, asthma, mental retardation, developmental delay, use of special medical equipment, and any limitation caused by physical, mental or emotional problems, significantly different from zero at the .05 level, two-tailed test.

‡ Regression-adjusted differences derived from multivariate regression models that control for age, gender, health status, diabetes, heart condition, asthma, mental retardation, developmental delay, use of special medical equipment, race/ethnicity, citizenship, parent composition, and education, employment, income, homeownership, health status and any functional limitation at the HIU level significantly different from zero at the .05 level, two-tailed test.

[a] Usual source of care (USC) is defined as the place that the person usually goes to when sick or in need of advice about his/her health. USC is measured at the time of the survey and does not include individuals who reported the emergency department or multiple providers as having a USC.

[b] Question only asked of children age 0 to 17.

[c] Question only asked of children age 2 to 18.

[d] Specialists include medical doctors who specialize in a particular medical disease or problem (other than psychiatrist or ophthalmologist).

Table 2: Access and Service Use Among Children by Insurance Status

Measure	Medicaid/ CHIP	ESI				Uninsured			
	%	%	Percentage Point Difference from Medicaid/ CHIP	(I) Regression-adjusted Difference from Medicaid/ CHIP	(II) Regression-adjusted Difference from Medicaid/ CHIP	%	Percentage Point Difference from Medicaid/ CHIP	(I) Regression-adjusted Difference from Medicaid/ CHIP	(II) Regression-adjusted Difference from Medicaid/ CHIP
Timeliness and provider accessibility measures (past 12 months)									
Usual source of care has night/weekend hours [a]	42.9%	58.6%	-15.7 *	-15.9 †	-8.5 ‡	47.5%	-4.6	-5.3	-3.2
Very/somewhat difficult to contact the usual source of care after hours [a]	34.5%	20.9%	13.6 *	12.2 †	-0.4	28.2%	6.3	5.3	1.4
Very/somewhat difficult to get to the usual source of care [a]	4.8%	3.0%	1.8 *	1.6 †	-0.7	2.7%	2.1	1.9	0.5
Very/somewhat difficult to contact the usual source of care over the telephone [a]	11.5%	10.6%	0.9	-0.3	-1.5	13.5%	-2.0	-3.1	-3.8
Child always or usually got care for an illness, injury, or condition as soon as needed [b g]	91.5%	96.4%	-4.9 *	-4.3 †	-3.6	81.9%	9.6	9.2	8.2
Child always or usually got appointment for health care as soon as needed [c g]	93.3%	94.0%	-0.7	-0.6	1.3	93.1%	0.2	0.2	0.4
Always or usually easy to get child necessary care, tests, or treatments [d f g]	94.8%	97.2%	-2.4 *	-1.4	-0.7	91.3%	3.5	4.0	3.9
Always or usually easy for child to see necessary specialist [e g]	82.6%	88.9%	-6.3 *	-4.8	0.9	63.0%	19.6 *	21.5 †	24.1 ‡
Patient-centered measures (past 12 months)									
Doctor always or usually listens carefully [f g]	95.2%	96.8%	-1.6 *	-1.2	-0.2	93.8%	1.4	1.8	2.1
Doctor always or usually explains things in a way that is easy to understand [f g]	94.4%	97.9%	-3.5 *	-3.0 †	-1.4	94.5%	-0.1	0.2	0.7
Doctor always or usually shows respect [f g]	95.4%	97.6%	-2.3 *	-1.8 †	-1.8	95.0%	0.3	0.7	0.8
Doctor always or usually spends enough time with child [f g]	92.5%	95.8%	-3.3 *	-2.6 †	-2.5 ‡	92.8%	-0.3	0.5	0.2
Sample Size [a]	3,720	3,511				904			

Source: 2008 Medical Expenditure Panel Survey (MEPS).

Notes: Insurance coverage is defined as full-year coverage. Medicaid includes both Medicaid and the Children's Health Insurance Program (CHIP). ESI is employer-sponsored insurance. The federal poverty level (FPL) is measured using the Department of Health and Human Services poverty guidelines.

* Unadjusted difference significantly different from zero at the .05 level, two-tailed test.

† Regression-adjusted differences derived from multivariate regression models that control for age, gender, health status, mental health status, any physical, activity, or social limitations or use assistive devices, and asthma significantly different from zero at the .05 level, two-tailed test.

‡ The regression-adjusted differences derived from multivariate regression models that control for age, gender, health status, mental health status, any physical, activity, or social limitations or use assistive devices, asthma, race/ethnicity, citizenship, parent composition, and education, employment, any non-citizen, health status and any functional limitations at the HIU level significantly different from zero at the .05 level, two-tailed test.

[a] Universe is children age 0-18.

[b] Question only asked of children that had an illness, injury, or condition that needed care right away.

[c] Question only asked of children that had appointments for health care, not counting the times the child needed care right away.

[d] Question only asked of children that needed necessary care, tests, or treatments.

[e] Question only asked of children that needed to see a specialist.

[f] Question only asked of children that had a least one doctor or health care professional visit.

[g] Universe is children age 0-17.

TECHNICAL APPENDIX TO
MACPAC CONTRACTOR REPORT NO. 1

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Contents

I. Data Sources

For the MACPAC Contractor Report, we use data from two large nationally representative household surveys, the National Health Interview Survey (NHIS) and the Medical Expenditure Panel Survey (MEPS), to measure access to care and service use among children enrolled in Medicaid and the State Children's Health Insurance Program (CHIP). The NHIS has the advantage of larger sample sizes and more detailed questions about individuals' health, while the MEPS collects more detailed information on health care expenditures and utilization. A significant difference between the two surveys in terms of their design is that the NHIS provides cross-sectional data, while the MEPS provides both cross-sectional and longitudinal data, drawing from a panel that follows individuals over a two-year period.

A. National Health Interview Survey

The NHIS provides detailed information on the health and health care use of a representative sample of the civilian, non-institutionalized population of the United States. The NHIS is conducted for the National Center for Health Statistics (NCHS), Centers for Disease Control and Prevention (CDC), which releases annual public use microdata files. The NHIS is fielded continuously throughout the year, with data collected through an in-person household interview using computer-assisted personal interviewing (CAPI). The NHIS employs a complex, multistage sample design and includes an oversample of minority populations, including black, Hispanic, and Asian persons.

The NHIS Basic Module remains relatively constant over time and consists of the Family, Sample Adult, and Sample Child Core components. For the Family Core component, information is collected for each member of the household. One sample child (if any children under age 18 are present) and one sample adult are randomly selected from each household to collect more detailed information for the Sample Child Core and the Sample Adult Core components. Responses to the Sample Child Core questionnaire are obtained from a knowledgeable adult residing in the household. The sample adult responds to the questionnaire for himself/herself unless he/she is unable to do so, in which case an adult proxy is selected from the household. The Sample Adult and Sample Child questionnaires differ in some items, but both collect basic information on health status, health care service use, and health-related behaviors.

B. Medical Expenditure Panel Survey

The MEPS provides detailed information on the health and health care use of Americans, as well as medical expenditures and insurance coverage offered by employers. The MEPS is conducted for the Agency for Healthcare Research and Quality (AHRQ), which releases annual public use microdata files. The MEPS has two major components: the Household Component (MEPS-HC) and the Insurance Component (MEPS-IC). For the purposes of the MACPAC Contractor Report, we do not use the MEPS-IC, which collects data from a sample of private and public sector employers on the health insurance plans they offer their employees.

The MEPS-HC collects data from a nationally representative sample of the U.S. civilian non-institutionalized population through an overlapping panel design. The sampling frame for the MEPS is drawn from a subsample of households participating in the previous year's NHIS. MEPS also oversamples additional subgroups, including low-income households. A new panel of sample households is selected each year, and data for each panel are collected for two calendar years. The two years of data for each panel are collected in five rounds of interviews that take place over a two and a half year period. A single household respondent reports information for the entire household though in-person household interviews using CAPI technology. The survey collects detailed information on health care use, expenditures, sources of payment, and health insurance coverage for all household members. The MEPS also provides estimates of health status, demographic and socioeconomic characteristics, and access to health care.

Additionally, the MEPS Medical Provider Component (MEPS-MPC) collects data, including cost data, from hospitals, physicians, home health care providers, and pharmacies identified by MEPS-HC respondents. The data are used to supplement and/or replace information received from the MEPS-HC respondents and are incorporated into the MEPS-HC data files.

II. Analysis Sample

In keeping with Medicaid and CHIP eligibility policies, children are defined to be age 0 to 18 (unless otherwise noted). However, the MEPS and NHIS ask child-specific questions, including the Sample Child Core component of the NHIS, of children age 0 to 17 only. In the MEPS, most access and service use measures are collected for all individuals in the survey (age 0 to 85); therefore the unit of analysis for most measures is all children age 0 to 18. Only the patient-centered, timeliness, and provider accessibility measures, based on the CAHPS component for children, are restricted to children age 0 to

17.[1] The NHIS sample for this report includes all children from the Sample Child Core component (age 0 to 17) and 18-year-olds from the Sample Adult Core component.

The NHIS assigns unique weights to sample children and sample adults. Weights for children age 0 to 17 and children age 18 were drawn from the Sample Child Core and Sample Adult Core components, respectively.[2] The combined weighted distribution of children age 0 to 18 was in line with the 0 to 17 estimates (results not reported). Analyses conducted separately for children defined as ages 0 to 17 were consistent with the findings presented here.

III. Estimation Methods

This MACPAC Contractor Report describes health care access and use for children using measures from both the NHIS and the MEPS. We estimate unadjusted and regression-adjusted differences in health care access and use between children with Medicaid or CHIP and those with employer-sponsored insurance (ESI) and the uninsured. In estimating the regression-adjusted differences, we specify similar models in the NHIS and MEPS, although there are some differences due to differences in survey content.

A. Model Specifications

In estimating differences in the measures of interest we estimate two multivariate regression models to capture differences related to two types of factors. For the first set of models, based on the Institute of Medicine (IOM) (Institute of Medicine 2002) recommendations, we control for differences in health care needs and behaviors. We interpret the adjusted differences from this specification as indicating that the differences are due to factors other than health care needs and preferences. For children, those factors are age, gender, reported health status, chronic conditions, and disability status. The second set of factors, which we refer to as the "full" model, include the above health care need and behavior variables in addition to demographic and socioeconomic characteristics. The additional variables are race/ethnicity, citizenship, parent composition and, at the health insurance unit level (HIU, described in greater detail later in this appendix), highest educational attainment, employment, income, homeownership,

[1] CAHPS questions are also asked of adults in a different section of the MEPS. However, not all CAHPS questions asked of children were asked of adults. Therefore the CAHPS variables analyzed in this MACPAC Contractor Report are only those taken from the section for children age 0-17.

[2] The NHIS also provides final sample weights for individuals based on the full sample included in the Person-Level file. The final Sample Child and final Sample Adult weights were used for these MACPAC Contractor Report products rather than the final Person-Level weight because nearly every measure analyzed from the NHIS was taken from either the Sample Child Core or Sample Adult Core component.

citizenship, health status and disability status. In the full models, we attempt to control for all observed differences between the populations other than insurance coverage.

The control variables are described in detail in the measure specification section below. Table 1 provides a summary of these variables based on the NHIS. In order to minimize bias, we include person-level missing data indicators for control variables with a high share of missing data (greater than 2% for the overall sample). The analysis samples include individuals with complete information on the variables included in the full regression models. Since the NHIS and MEPS are based on a complex survey design, we obtain design-adjusted estimates of the standard errors using the "svy" procedures in Stata 11. For ease of presentation and comparisons across models, we estimate linear probability models.

B. Interpretation

Comparisons of the unadjusted, partially regression-adjusted, and fully regression-adjusted differences are informative in understanding the potential source of differences in access to and use of health care for children with Medicaid/CHIP as compared to those with ESI and the uninsured. However, as factors for which we cannot control may be correlated with an individual's propensity to be enrolled in Medicaid/CHIP or to take up ESI, we cannot interpret these regression-adjusted differences as the "effect" of Medicaid/CHIP on access to and use of health care. Although we estimate the most comprehensive models possible given the available data, unmeasured differences between the samples may still introduce bias.

IV. Measure Specifications

The NHIS and the MEPS questionnaires cover similar content, but important differences exist in question wording and other design factors between the two surveys. Where the question items are identical or nearly identical, we provide one description of the measure's construction for both of the surveys. Where significant differences exist, or where information is available for only one of the surveys, we note that below. (See Table 2 for complete variable names and descriptions of the access, service use, and patient experience measures used.)

A. Insurance Coverage

1. Type of Coverage

Although most people accurately report whether they have insurance coverage in surveys, there is some evidence of misreporting of coverage type (Call et al. 2008/2009, Cantor et

al. 2007). This is likely to be more of an issue in states with multiple program names and/or with public/private coverage initiatives. In an attempt to minimize measurement error in type of insurance coverage in the NHIS and the MEPS, we define the Medicaid/CHIP population as those who report Medicaid/CHIP or other public coverage and limit the comparison population of the privately insured to individuals reporting ESI. In the NHIS, the Medicaid/CHIP population is defined as those who report Medicaid/CHIP, other government or public coverage, or those who report private coverage that the government either helped pay for or that they obtained through the government. In the MEPS, the Medicaid/CHIP population is defined as those who report Medicaid/CHIP or other public coverage. In the NHIS, ESI coverage is defined as those who report coverage through an employer (including self-employed), union, or the military (TRICARE/CHAMPVA). In the MEPS, ESI is defined as private group coverage through an employer or union, self-employed coverage, or TRICARE/CHAMPVA. These specifications differ somewhat from the standard NHIS and MEPS definitions of Medicaid/CHIP and ESI provided on the public use files. Children who report more than one type of health insurance coverage at the time of the survey are assigned to a single coverage category based on a hierarchy of ESI, Medicaid/CHIP, and other coverage, with the exception of children dually enrolled in Medicaid and Medicare who are categorized as having other coverage. Children dually enrolled in Medicaid and Medicare account for less than 0.5% of all children. In both surveys, uninsured children are defined as those without insurance coverage for the 12 month reference period.

2. Full-year Status

For the MACPAC Contractor Report, we focus on individuals with full-year insurance coverage. In the MEPS, information is available on coverage status and type of coverage for each month of the year. For the MEPS analyses, the full-year Medicaid/CHIP and ESI samples are defined as those individuals who had Medicaid/CHIP or ESI coverage for the entire year. The NHIS asks about insurance coverage status and coverage type at the time of the survey and coverage status (but not type) over the prior year. In the NHIS, we can determine whether the individual had insurance coverage for the entire year, but not whether the individual had the same type of coverage over the entire year. Therefore, the NHIS full-year insured samples are defined as children who had coverage for the entire year, with Medicaid/CHIP or ESI respectively at the time of the survey. In both surveys, full-year uninsured individuals are those without any insurance coverage for the entire 12 month period.

B. Health Insurance Units

For control variables defined at the family-level, we use the health insurance unit (HIU) as the measure of the family unit. An HIU includes the members of a nuclear family who can typically be covered under one health insurance policy. This includes an individual, his/her spouse, all unmarried children aged 18 and younger, and children aged 24 and younger who are full-time students. The HIU definition used in this study does not encompass the expanded eligibility to dependents aged 26 and younger from the Patient Protection and Affordable Care Act. In the MEPS, we use the HIU (referred to as the health insurance eligibility unit, or HIEU, on the MEPS) identifiers constructed by AHRQ and provided on the public use file. Since the NHIS does not provide HIU identifiers, we construct our own HIU identifiers using the age, family relationship, and mother, father, and spouse identifier variables. In both surveys, HIUs only include individuals living in the household since neither survey gathers information on family members living outside of the household.

C. Income

The NHIS asks about individual earnings and has a single question about total family income. Work by Czajka and Denmead (2008) finds that a family income estimate constructed as the sum of the earnings of the individuals in the family exceeds family income for a substantial share of cases. For this study, we assign HIU income in the NHIS as the reported family income minus the personal earnings for each member of the NHIS family that is not a member of the HIU (if any). HIU income as a percent of the federal poverty level is constructed using the Department of Health and Human Services (HHS) poverty guidelines for that year. Because state identifiers are not available on the public use file, we apply guidelines for the 48 contiguous states to the entire sample. Guidelines for Hawaii and Alaska are somewhat higher.

In both the NHIS and the MEPS, HIU income was not reported by all sample respondents. The NCHS uses multiple imputation methods to impute personal earnings and family income values each year for the NHIS. We use the imputed income files developed by the NCHS to construct our HIU income measures. We adjust our standard errors to account for the multiply-imputed data (Schenker et al. 2006) using the MI suite of commands in Stata 11.

In the MEPS, we construct HIU income as the sum of person-level income for all members of the HIU. Total person-level income is constructed by AHRQ as the sum of all person-level income components, including wages and salaries and income from other sources. The MEPS imputes missing income component values using weighted,

sequential hot-deck methods. For the MEPS analyses, we treat imputed values as actual values with no additional adjustments to our estimates or standard errors since multiple imputations for income are not currently available on the MEPS.

D. Control Variables

1. Health Characteristics

Health status. For health status, individuals were asked to categorize their child's overall health as fair, poor, good, very good, or excellent. We create indicators for (1) fair or poor health status, (2) good health status, and (3) excellent and very good health status (excluded category).

Chronic conditions. In both surveys, individuals were asked if they were ever diagnosed with asthma by a doctor or other health professional. In the NHIS, children were also asked if they were ever diagnosed with diabetes or heart disease or condition. We create indicators for each of these three condition variables to include in the models.

Disability/Limitations. To reflect a child's limitations, we use the NHIS composite measure of limitations attributable to physical, mental or emotional problems. For children, the measure includes limited in ability to play, receipt of special education, needing help with personal care, having difficulty walking, and being limited because of memory issues. The MEPS limitation variable includes children who reported activity, social/cognitive or physical function limitations, use of assistive devices, or needing help with activities of daily living (ADLs) or instrumental activities of daily living (IADLs).

Mental health status. In the MEPS, a child's mental health status is categorized as fair, poor, good, very good, or excellent by the respondent. We create indicators for fair or poor mental health status and good mental health status, with excellent and very good mental health status being the excluded category. The NHIS "any limitation" variable includes whether the child has any chronic mental, emotional or behavioral problem that causes a limitation. We also create indicators for mental retardation and developmental delay on both the NHIS and the MEPS.

2. Demographic and Socioeconomic Characteristics

Race/ethnicity. The race/ethnicity variables are defined using NHIS and MEPS edited variables. In the models we include indicators for individuals who are Hispanic, non-Hispanic black, and other non-white, non-Hispanic. The omitted category is white, non-Hispanic.

Citizenship. The MEPS does not report citizenship information on the public use file. We use the NHIS-MEPS link files to link the MEPS sample to the corresponding NHIS record from the prior year. Thus, the MEPS measure corresponds to citizenship at the time of the NHIS interview, which occurred either one or two years prior to the MEPS calendar year file. We also control for whether there are any non-citizens in the HIU.

Educational attainment. For children in both surveys, educational attainment is measured as the highest educational status obtained by an adult member of the HIU. We control for households whose highest educational status was less than high school, a high school diploma/GED, and a four-year college degree or higher. The omitted category was some college.

Employment. Household employment status for both NHIS and MEPS is defined by the number of adults in the HIU employed full-time or part-time, or non-working. A hierarchical variable is constructed to categorize an HIU with (i) at least 2 full-time workers, (ii) 1 full-time worker, (iii) part-time workers only, or (iv) non-workers only. We defined part-time employment as individuals working less than 35 hours per week and full-time employment as individuals working 35 hours per week or more. The omitted category was 1 full-time worker.

Children residing in HIUs by themselves (e.g., child residing with non-parent relative) or in an HIU without an adult (e.g., parent under age 19 with a child) have undefined education and employment status, both of which require either the presence of a parent or another adult in the HIU. Therefore all analyses of children additionally controlled for whether the child lived in an HIU without an adult.

Homeownership. We include an indicator for whether an adult in the HIU owns or is buying their home in the NHIS models. Homeownership is not available in the MEPS files.

Parent composition. In both surveys we define parents as those with at least one dependent child under the age of 19 living in the household. The parent composition variable is defined as a single mother, single father, mother and father, or no parents. The omitted category was mother and father.

Family size. We control for family size as the number of individuals in the HIU.

Measures of family's health. We control for whether anyone in the HIU had a functional limitation and whether anyone in the HIU was in fair/poor health.

Family income. As described earlier, family income is constructed as total HIU income.

E. Access and Use Measures

The following section provides an overview of the outcome measures we analyzed for the MACPAC Contractor Report. Table 2 provides the complete variable names from the surveys and descriptions of the access to care and service use measures analyzed. Tables 3-8 show for children ages 0-18 the unadjusted point estimates and how the estimates for those with ESI or without coverage differ from those with Medicaid/CHIP when the point estimates are (1) unadjusted, (2) regression-adjusted for characteristics related to the need for health care (e.g., age and health status), and (3) regression-adjusted for characteristics related to the need for health care and for other factors such as race/ethnicity and income that should not affect the need for care, using the IOM approach described earlier. The regression-adjusted point estimates are calculated for children with ESI and the uninsured using the health, demographic, and socioeconomic characteristics of the children with Medicaid/CHIP coverage.

1. Access to Care

In the NHIS and the MEPS, most questions on health care access cover a reference period of the 12 months prior to the interview date. The access measures include having a usual source of care, characteristics of the usual source of care, unmet need for various types of health care because of cost, and measures of delayed care for a number of reasons—because of cost, because could not get an appointment, and because the hours of care were not convenient.

Usual Source of Care

Both the NHIS and MEPS define usual source of care (USC) as a place that the person usually goes to when sick or in need of advice about his/her health. The NHIS defines the type of USC as a clinic or health center, doctor's office or HMO, hospital emergency room, hospital outpatient department, or some other place. We recode those who report not going to one place most often or relying on the emergency room as not having a usual source of care; these individuals account for less than one percent of all sample children on the NHIS. The MEPS identifies whether the USC is a facility, person, or a person in a facility. For all provider types, the location is identified as an office, hospital non-emergency room, or hospital emergency room. Again, those who report an emergency room as their usual source of care are recoded as not having a USC. The MEPS also includes measures of whether the usual source of care has night or weekend hours and whether it was difficult to get to the usual source of care, or contact the usual source of care over the telephone or after hours.

Unmet Needs

The NHIS defines unmet need for medical, dental, prescription drugs, or mental health care because of costs. Delayed medical care, on the other hand, is defined across a number of dimensions, including cost, provider hours, transportation, office wait time, appointment availability, and telephone accessibility. The MEPS asks respondents whether they have an unmet or delayed need for medical care, prescription drugs or dental care. If the person was unable to receive treatment, then he/she was asked to indicate the primary reason, including affordability, insurance, transportation, language, child care, and time. We focused on unmet and delayed need for any reason and cost, in particular.

2. Use of Services

The NHIS collects data on service use over specified reference periods, generally the 12 months prior to the survey. Therefore, for an individual interviewed midway through the year, information reflects service use for the first part of the survey year and the second part of the calendar year prior to the survey.

The MEPS collects more detailed information on service use. The MEPS-HC collects data in each round on use of office- and hospital-based care, home health care, dental services, vision aids, and prescription medicines. Data are collected at the event level (e.g., doctor visit, hospital stay) and summed across rounds 3-5 for the first panel and across rounds 1-3 for the second panel to produce the annual utilization data for the calendar year.

We examine use of health care over the previous 12 months, including any office or outpatient visit, care from a general doctor or specialist, a nurse practitioner/physician's assistant/midwife, or a dentist, and emergency room visits. We also examine a limited number of preventive care use measures over the previous 12 months, including having a well-child visit and a flu vaccination.

3. Patient-centered, Timeliness and Provider Accessibility

For children, patient-centered, timeliness and provider accessibility measures are identified by responses to the Consumer Assessment of Healthcare Providers and Systems (CAHPS) component of the MEPS. Responses to these CAHPS questions are only analyzed for children age 0 to 17 on the MEPS. Patient-centered measures are based on questions asking whether the doctor listens carefully, explains things in a way that is easy to understand, shows respect, and spends enough time with the child. Timeliness and provider accessibility questions ask whether the child needed care, including acute care,

routine care, tests/treatments, or specialty care, and if so, whether the child received the care as soon as wanted/needed and whether it was easy to get the care.

V. Differences Between NHIS and MEPS

Prior studies have highlighted the differences across the NHIS and MEPS in health insurance distributions and ambulatory care service use (Cohen, Makuc and Ezzati-Rice, 2007; Rhoades, Cohen and Machlin, 2010). Consistent with these studies, we found significantly different estimates of reported office, doctor, and dental visits, with the NHIS showing higher levels across all three measures. Reports of any unmet or delayed need for care were also significantly greater on the NHIS than the MEPS. These differences may be attributable to the longer NHIS recall period (three to six months on the MEPS versus 12 months on the NHIS) or survey fatigue from the number of additional questions asked on the MEPS for ambulatory service use.

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Table 1. Summary of Health Related Characteristics, and Demographic and Socioeconomic Characteristics of Children (Age 0 to 18) by Insurance Status, 2009 (Unadjusted)

	Overall	Medicaid/CHIP	ESI	Uninsured
	%	%	%	%
Health Related Characteristics				
Age				
0 to 1	10.6%	15.0%	8.9% **	3.9% **
2 to 3	11.1%	12.5%	10.6% *	8.7% *
4 to 6	15.5%	16.9%	14.9%	11.0% **
13 to 18	31.6%	26.4%	32.7% **	44.1% **
Sex				
Female	48.6%	49.0%	48.6%	47.3%
Self-reported health status				
Good	14.7%	22.7%	9.3% **	19.7%
Fair/poor	1.8%	3.4%	0.9% **	2.0%
Chronic conditions				
Asthma	13.8%	15.5%	12.8% **	8.0% **
Diabetes	0.2%	0.4%	0.1%	0.2%
Heart disease or condition	1.3%	1.4%	1.4%	0.4% *
Disability status				
Limited because of physical, mental or emotional problems	8.4%	11.3%	6.8% **	7.3% **
Use of assistive medical devices	1.1%	1.0%	1.2%	0.4% *
Mental health status				
Developmental delay	3.9%	4.8%	3.5% *	4.0%
Mental retardation	0.7%	1.4%	0.3% **	1.0%
Demographic and Socioeconomic Characteristics				
Race/ethnicity				
Black, non-Hispanic	15.6%	25.7%	10.7% **	10.9% **
Hispanic	22.0%	35.2%	12.5% **	46.7% **
Other non-white, non-Hispanic	5.5%	4.1%	6.1% **	5.7%
Mother, no father				
Noncitizen	2.9%	3.0%	1.0% **	20.8% **
Any noncitizen in HIU	15.0%	23.8%	7.9% **	39.7% **
Highest level of education in HIU				
Less than high school	12.8%	27.7%	2.3% **	34.3% *
High school diploma/GED	20.2%	30.3%	13.6% **	26.7%
College or graduate degree	33.1%	8.0%	51.1% **	10.9%
Employment in HIU				
At least 2 full-time workers	24.6%	8.6%	37.1% **	13.9% **
Part-time workers only	6.6%	11.9%	2.6% **	9.9%
Non-workers only	15.2%	32.8%	4.0% **	15.9% **
Homeownership				
Adult homeownership in HIU	63.0%	36.8%	80.2% **	51.9% **
Parent composition				
Mother, no father	24.6%	43.0%	13.7% **	22.6% **
Father, no mother	3.2%	3.6%	2.5% *	5.6%
No parents	3.7%	6.4%	1.7% **	5.9%
Health status in HIU				
Anyone in fair/poor health	12.8%	20.8%	7.2% **	17.1%
Anyone with a functional limitation	22.4%	29.5%	18.3% **	18.5% **
HIU income as a percent of the federal poverty level (FPL)				
50% to 99% FPL	13.0%	27.6%	2.9% **	21.0% *
100% to 149% FPL	11.8%	20.5%	5.8% **	16.5%
150% to 199% FPL	10.1%	10.7%	8.5% *	15.3% *
200% to 249% FPL	8.3%	5.4%	9.2% **	10.6% *
250% to 299% FPL	7.4%	3.0%	9.9% **	6.7%
300% to 399% FPL	11.6%	3.0%	17.6% **	6.5% **
400% to 499% FPL	8.5%	0.9%	13.8% **	1.8%
> 500% FPL	17.8%	0.8%	30.7% **	3.7% **
Sample Size	11,486	3,742	5,657	672

Source: Urban Institute analysis for MACPAC of the 2009 National Health Interview Survey (NHIS).

Notes: Sample sizes are average sample sizes across the five estimation samples derived from multiply imputed income data. Medicaid includes both Medicaid and the Children's Health Insurance Program (CHIP). ESI is employer-sponsored insurance. The federal poverty level (FPL) is measured using the 2009 US Department of Health and Human Services (HHS) poverty guidelines. HIU is health insurance unit. GED is General Education Development test. The overall category includes all sample children regardless of their insurance status. The other categories include only full-year insured with Medicaid/CHIP or ESI at the time of the survey, or full-year uninsured.

* (**) Statistically different from Medicaid/CHIP at the .05 (.01) level, two-tailed test.

Table 2. Descriptions of Access and Service Use Measures from the NHIS, 2009

Measure	Description
Access and service use measures (past 12 months)	
Had a usual source of care	=1 if person had a place (excluding 'Hospital emergency room' and 'Doesn't go to one place most often' [CPLKIND, APLKIND]) that he/she usually goes to when sick or in need of advice about his/her health [CUSUALPL, AUSUALPL] (0 to 18)
Doctor's office or HMO	=1 if person had doctor's office or HMO as his/her usual source of care conditional on having a usual source of care [CPLKIND, APLKIND] (0 to 18)
Clinic or health center	=1 if person had clinic or health center as his/her usual source of care conditional on having a usual source of care [CPLKIND, APLKIND] (0 to 18)
Other	=1 if person had other place ('Hospital outpatient department' or 'Some other place') as his/her usual source of care conditional on having a usual source of care [CPLKIND, APLKIND] (0 to 18)
Had same usual source of care for past 12 months	=1 if person had same usual source of care for the past 12 months conditional on having a usual source of care [CHCCHGYR, AHCCHGYR] (0 to 18)
Received well-child checkup	=1 if during the past 12 m, child received a well-child checkup [CHPXYR_C] (0 to 17)
Any office visit	=1 if during the past 12 m, person saw a doctor or other health care provider about his/her health at a doctor's office, a clinic, or some other place, excluding those times he/she was hospitalized overnight, visits to ED, telephone calls or dental visits [CHCNOYR2, AHCNOYR2] (0 to 18)
Had flu shot or spray	=1 if during the past 12m, person had a flu shot or had a flu vaccine sprayed in his/her nose by a doctor or health professional [CSHFLUYR, CSPFLUYR, SHTFLUYR, SPRFLUYR] (0 to 18)
Any mental health professional visit	=1 if during the past 12 m, person saw or talked to a mental health professional such as a psychiatrist, psychologist, psychiatric nurse, or clinical social worker [CHCSYR1, AHCSYR1] (2 to 18)
Any specialist visit	=1 if during the past 12 m, person saw or talked to a medical doctor who specializes in a particular medical disease or problem, including obstetrician/gynecologist [CHCSYR81, CHCSYR7, AHCSYR8, AHCSYR7] (0 to 18)
Any emergency department visit	=1 if during the past 12 m, person went to a hospital emergency department about his/her health, including emergency department visits that resulted in a hospital admission [CHERNOY2, AHERNOY2] (0 to 18)
Two or more emergency department visits	=1 if during the past 12 m, person went to a hospital emergency department two or more times about his/her health, including emergency department visits that resulted in a hospital admission [CHERNOY2, AHERNOY2] (0 to 18)
Any unmet need because of costs	=1 if during the past 12 m, person had any unmet need for medical care, dental care, prescription drugs, mental health care or counseling, or vision care because of costs (0 to 18)
Medical care	=1 if during the past 12 m, there was a time when person needed medical care, but did not get it because he/she could not afford it [PNMED12M] (0 to 18)
Dental care	=1 if during the past 12 m, there was a time when person needed dental care, but did not get it because he/she could not afford it [CHCAFYR4, AHCAFYR4] (2 to 18)
Prescription drugs	=1 if during the past 12 m, there was a time when person needed prescription medicines, but did not get it because he/she could not afford it [CHCAFYR, CHCAFYR1, AHCAFYR1] (0 to 18)
Mental health care or counseling	=1 if during the past 12 m, there was a time when person needed mental health care or counseling, but did not get it because he/she could not afford it [CHCAFYR2, AHCAFYR2] (2 to 18)
Eyeglasses	=1 if during the past 12 m, there was a time when person needed eyeglasses, but did not get them because he/she could not afford them [CHCAFYR4, AHCAFYR4] (2 to 18)
Any delayed medical care	=1 if during the past 12 m, person delayed medical care because of worry about the cost, couldn't get an appointment soon enough, clinic/doctor's office wasn't open when he/she could get there, wait too long to see the doctor, didn't have transportation or couldn't get through on the telephone (0 to 18)
Because of costs	=1 if during the past 12 m, person delayed medical care because of worry about the cost [PDMED12M] (0 to 18)
Because couldn't get an appointment	=1 if during the past 12 m, person delayed medical care because he/she couldn't get an appointment soon enough [CHCDLYR2, AHCDLYR2] (0 to 18)
Because couldn't go when open	=1 if during the past 12 m, person delayed medical care because the clinic/doctor's office wasn't open when he/she could get there [CHCDLYR4, AHCDLYR4] (0 to 18)
Because wait too long to see doctor at site	=1 if during the past 12 m, person delayed medical care because he/she had to wait too long to see the doctor [CHCDLYR3, AHCDLYR3] (0 to 18)
Because didn't have transportation	=1 if during the past 12 m, person delayed medical care because he/she didn't have transportation [CHCDLYR5, AHCDLYR5] (0 to 18)
Because couldn't get through on the phone	=1 if during the past 12 m, person delayed medical care because he/she couldn't get through on the telephone [CHCDLYR1, AHCDLYR1] (0 to 18)

Source: Urban Institute analysis for MACPAC of the 2009 National Health Interview Survey (NHIS).

Notes: Survey variable names are given in brackets. Ages given in parentheses.

Table 2 Cont. Descriptions of Timeliness and Provider Accessibility, and Patient-Centered Measures from the MEPS, 2008

Measure	Description
Timeliness and provider accessibility measures (past 12 months)	
Usual source of care has night/weekend hours	=1 if the usual source of care provider has night or weekend hours conditional on having a usual source of care (excluding 'hospital emergency room') [OFFHOU42, HAVEUS42, PLCTYP42] (0 to 18)
Difficult to contact usual source of care after hours	=1 if very difficult or somewhat difficult to contact the usual source of care provider after their regular hours in case of urgent medical needs conditional on having a usual source of care (excluding 'hospital emergency room') [AFTHOU42, HAVEUS42, PLCTYP42] (0 to 18)
Difficult to get to the usual source of care	=1 if very difficult or somewhat difficult to get to the usual source of care provider conditional on having a usual source of care (excluding 'hospital emergency room') [DFTOUS42, HAVEUS42, PLCTYP42] (0 to 18)
Difficult to contact usual source of care over the telephone	=1 if very difficult or somewhat difficult to contact the usual source of care provider during regular business hours over the telephone about a health problem conditional on having a usual source of care (excluding 'hospital emergency room') [PHNREG42, HAVEUS42, PLCTYP42] (0 to 18)
Child got care as soon as needed	=1 if a child usually or always got care as soon as needed for an illness, injury, or condition conditional on needing care for an illness, injury, or condition that needed care right away from a clinic, emergency room, or doctor's office [CHILWW42, CHILCR42] (0 to 17)
Child got appointment for health care as soon as needed	=1 if a child usually or always got an appointment for health care as soon as was needed conditional on making an appointment, not counting the times the child needed health care right away [CHRTWW42, CHRTCR42] (0 to 17)
Easy to get child necessary care, tests, or treatments	=1 if it was usually or always easy for a child to get the care, tests or treatment that the parent or a doctor believed necessary conditional on the parent or a doctor believing that the child needed any care, tests or treatment AND having at least one visit to a doctor's office or clinic for health care [CHNECP42, CHNDCR42, CHAPPT42] (0 to 17)
Easy for child to see necessary specialist	=1 if it was usually or always easy for a child to see a specialist (not including dental) conditional on the parent or a doctor believing that the child needed to see a specialist [CHEYRE42, CHSPEC42] (0 to 17)
Patient-centered measures (past 12 months)	
Doctor listens carefully	=1 if doctor or other health providers usually or always listened carefully to the parent conditional on having at least one visit to a doctor's office or clinic for health care [CHLIST42, CHAPPT42] (0 to 17)
Doctor explains things in a way that is easy to understand	=1 if doctor or other health providers usually or always explained things in a way the parent could understand conditional on at least one visit to a doctor's office or clinic for health care [CHEXPL42, CHAPPT42] (0 to 17)
Doctor shows respect	=1 if doctor or other health providers usually or always showed respect for what the parent had to say conditional on having at least one visit to a doctor's office or clinic for health care [CHRESP42, CHAPPT42] (0 to 17)
Doctor spends enough time with child	=1 if doctor or other health providers usually or always spent enough time the child conditional on having at least one visit to a doctor's office or clinic for health care [CHPRTM42, CHAPPT42] (0 to 17)

Source: Urban Institute analysis for MACPAC of the 2008 Medical Expenditure Panel Survey (MEPS).

Notes: Survey variable names are given in brackets. Ages given in parentheses.

Table 3. Unadjusted and Regression-Adjusted Estimates of Health Care Access and Use for Children (age 0 to 18) Overall and Among Full-Year Insured Children with Medicaid or ESI at the Time of the Survey, 2009

Measure	Overall	Medicaid/ CHIP	ESI		(I) Regression-adjusted Estimates for ESI †		(II) Regression-adjusted Estimates for ESI ‡	
	%	%	%	Percentage Point Difference from Medicaid/CHIP	%	Percentage Point Difference from Medicaid/CHIP	%	Percentage Point Difference from Medicaid/CHIP
Access and service use measures (past 12 months)								
Had a usual source of care [a]	93.7%	95.5%	97.3%	-1.8 **	97.5%	-2.0 **	94.5%	1.0
Doctor's office or HMO	74.8%	60.8%	84.6%	-23.8 **	84.3%	-23.5 **	71.3%	-10.5 **
Clinic or health center	23.9%	37.7%	14.6%	23.2 **	14.8%	23.0 **	27.2%	10.6 **
Other	1.2%	1.5%	0.8%	0.7 *	0.9%	0.6	1.5%	0.0
Had same usual source of care for past 12 months	92.0%	92.3%	93.1%	-0.8	92.6%	-0.3	90.6%	1.7
Received well-child checkup [b]	77.9%	81.7%	81.6%	0.1	83.2%	-1.5	77.0%	4.7 *
Any office visit	91.6%	93.9%	94.5%	-0.6	95.5%	-1.5 *	91.3%	2.6 *
Had flu shot or spray	31.8%	34.2%	33.4%	0.8	35.7%	-1.5	32.3%	1.9
Any mental health professional visit [c]	7.1%	9.6%	6.2%	3.4 **	7.0%	2.7 **	7.1%	2.6
Any specialist visit [d]	16.1%	14.4%	18.6%	-4.2 **	20.1%	-5.8 **	12.6%	1.7
Any emergency department visit	21.0%	27.8%	17.6%	10.2 **	20.0%	7.7 **	23.4%	4.4 *
Two or more emergency department visits	6.9%	10.8%	4.8%	6.0 **	6.6%	4.2 **	8.7%	2.1 *
Any unmet need because of costs	10.3%	8.0%	5.3%	2.7 **	5.4%	2.6 **	9.4%	-1.4
Medical care	2.7%	1.1%	0.9%	0.2	1.1%	0.0	1.9%	-0.8
Dental care [c]	7.0%	5.2%	3.4%	1.8 **	3.5%	1.7 *	6.9%	-1.7
Prescription drugs	3.2%	2.5%	1.5%	0.9 **	2.0%	0.4	3.3%	-0.8
Mental health care or counseling [c]	1.1%	0.5%	0.8%	-0.3	1.0%	-0.6	1.4%	-0.9
Eyeglasses [c]	2.4%	2.2%	1.3%	0.9	1.4%	0.9	2.0%	0.2
Any delayed medical care	14.8%	17.0%	9.4%	7.6 **	11.3%	5.7 **	16.1%	0.9
Because of costs	5.1%	1.6%	2.6%	-0.9 *	3.1%	-1.4 **	4.9%	-3.3 **
Because couldn't get an appointment	5.1%	6.9%	3.6%	3.3 **	4.2%	2.8 **	5.6%	1.3
Because couldn't go when open	2.8%	3.7%	2.0%	1.7 **	2.3%	1.4 **	2.5%	1.2 *
Because have to wait too long to see doctor at site	5.0%	8.2%	2.9%	5.2 **	3.6%	4.6 **	5.9%	2.3 **
Because didn't have transportation	2.0%	4.6%	0.3%	4.3 **	0.8%	3.7 **	3.4%	1.1 **
Because couldn't get through on the phone	2.0%	2.9%	1.3%	1.6 **	1.6%	1.3 *	2.2%	0.8
Sample Size	11,486	3,742	5,657					

Source: Urban Institute analysis for MACPAC of the 2009 National Health Interview Survey (NHIS).

Notes: Sample sizes are average sample sizes across the five estimation samples derived from multiply imputed income data. Medicaid includes both Medicaid and the Children's Health Insurance Program (CHIP). ESI is employer-sponsored insurance. HMO is health maintenance organization. The federal poverty level (FPL) is measured using the 2009 US Department of Health and Human Services (HHS) poverty guidelines. The overall category includes all sample children regardless of their insurance status.

† The regression-adjusted differences are derived from multivariate regression models that control for age, gender, health status, diabetes, heart condition, asthma, mental retardation, developmental delay, use of special medical equipment, and any limitation caused by physical, mental or emotional problems. The means reported for children with ESI coverage are regression-adjusted, using the health characteristics (listed above) of the children with Medicaid/CHIP coverage.

‡ The regression-adjusted differences are derived from multivariate regression models that control for age, gender, health status, diabetes, heart condition, asthma, mental retardation, developmental delay, use of special medical equipment, any limitation caused by physical, mental or emotional problems, race/ethnicity, citizenship, parent composition, and education, employment, income, homeownership, any non-citizen, health status and any functional limitation at the HIU level. The means reported for children with ESI coverage are regression-adjusted, using the health, demographic, and socioeconomic characteristics (listed above) of the children with Medicaid/CHIP coverage.

* (**) Significantly different from zero at the .05 (.01) level, two-tailed test.

[a] Usual source of care (USC) is defined as the place that the person usually goes to when sick or in need of advice about his/her health. USC is measured at the time of the survey and does not include individuals who reported the emergency department or multiple providers as a USC.

[b] Question only asked of children age 0 to 17.

[c] Question only asked of children age 2 to 18.

[d] Specialist include medical doctors who specialize in a particular medical disease or problem (other than psychiatrist or ophthalmologist).

Table 4. Unadjusted and Regression-Adjusted Estimates of Health Care Access and Use for Children (age 0 to 18) Overall and Among Full-Year Insured Children with Medicaid at the Time of the Survey or Full-Year Uninsured Children, 2009

	Overall	Medicaid/ CHIP	Uninsured		(I) Regression-adjusted Estimates for Uninsured †		(II) Regression-adjusted Estimates for Uninsured ‡	
Measure	%	%	%	Percentage Point Difference from Medicaid/CHIP	%	Percentage Point Difference from Medicaid/CHIP	%	Percentage Point Difference from Medicaid/CHIP
Access and service use measures (past 12 months)								
Had a usual source of care [a]	93.7%	95.5%	60.4%	35.1 **	61.1%	34.4 **	63.0%	32.5 **
Doctor's office or HMO	74.8%	60.8%	52.2%	8.6 *	52.8%	8.0 *	51.9%	8.8 *
Clinic or health center	23.9%	37.7%	44.2%	-6.4	43.5%	-5.7	44.5%	-6.8
Other	1.2%	1.5%	3.6%	-2.1	3.6%	-2.1	3.5%	-2.0
Had same usual source of care for past 12 months	92.0%	92.3%	95.2%	-2.9 *	94.6%	-2.4	94.2%	-1.9
Received well-child checkup [b]	77.9%	81.7%	38.5%	43.2 **	42.4%	39.3 **	43.6%	38.2 **
Any office visit	91.6%	93.9%	60.2%	33.7 **	62.3%	31.7 **	62.9%	31.1 **
Had flu shot or spray	31.8%	34.2%	15.6%	18.6 **	20.3%	13.9 **	18.0%	16.2 **
Any mental health professional visit [c]	7.1%	9.6%	3.9%	5.7 **	4.2%	5.4 **	5.5%	4.2 **
Any specialist visit [d]	16.1%	14.4%	4.6%	9.8 **	5.4%	8.9 **	5.4%	9.0 **
Any emergency department visit	21.0%	27.8%	15.2%	12.6 **	17.7%	10.0 **	21.3%	6.5 **
Two or more emergency department visits	6.9%	10.8%	4.1%	6.7 **	5.6%	5.2 **	7.6%	3.2 **
Any unmet need because of costs	10.3%	8.0%	37.7%	-29.7 **	36.9%	-28.9 **	37.1%	-29.1 **
Medical care	2.7%	1.1%	15.3%	-14.1 **	15.4%	-14.2 **	15.4%	-14.2 **
Dental care [c]	7.0%	5.2%	28.5%	-23.3 **	28.5%	-23.3 **	29.6%	-24.4 **
Prescription drugs	3.2%	2.5%	12.7%	-10.2 **	12.8%	-10.4 **	13.2%	-10.8 **
Mental health care or counseling [c]	1.1%	0.5%	3.6%	-3.1 **	3.6%	-3.1 **	3.8%	-3.3 **
Eyeglasses [c]	2.4%	2.2%	6.8%	-4.6 **	6.6%	-4.4 **	6.3%	-4.1 **
Any delayed medical care	14.8%	17.0%	28.3%	-11.3 **	29.6%	-12.6 **	29.8%	-12.8 **
Because of costs	5.1%	1.6%	21.1%	-19.5 **	21.3%	-19.7 **	21.6%	-20.0 **
Because couldn't get an appointment	5.1%	6.9%	4.3%	2.6 *	4.9%	2.1	5.0%	1.9
Because couldn't go when open	2.8%	3.7%	3.4%	0.3	3.7%	0.0	3.9%	-0.2
Because have to wait too long to see doctor at site	5.0%	8.2%	4.8%	3.3 **	5.1%	3.0 **	4.0%	4.1 **
Because didn't have transportation	2.0%	4.6%	3.0%	1.6	3.5%	1.1	4.0%	0.6
Because couldn't get through on the phone	2.0%	2.9%	2.6%	0.4	2.8%	0.2	2.5%	0.4
Sample Size	11,486	3,742	672					

Source: Urban Institute analysis for MACPAC of the 2009 National Health Interview Survey (NHIS).

Notes: Sample sizes are average sample sizes across the five estimation samples derived from multiply imputed income data. Medicaid includes both Medicaid and the Children's Health Insurance Program (CHIP). ESI is employer-sponsored insurance. HMO is health maintenance organization. The federal poverty level (FPL) is measured using the 2009 US Department of Health and Human Services (HHS) poverty guidelines. The overall category includes all sample children regardless of their insurance status.

† The regression-adjusted differences are derived from multivariate regression models that control for age, gender, health status, diabetes, heart condition, asthma, mental retardation, developmental delay, use of special medical equipment, and any limitation caused by physical, mental or emotional problems. The means reported for uninsured children are regression-adjusted, using the health characteristics (listed above) of the children with Medicaid/CHIP coverage.

‡ The regression-adjusted differences are derived from multivariate regression models that control for age, gender, health status, diabetes, heart condition, asthma, mental retardation, developmental delay, use of special medical equipment, any limitation caused by physical, mental or emotional problems, race/ethnicity, citizenship, parent composition, and education, employment, income, homeownership, any non-citizen, health status and any functional limitation at the HIU level. The means reported for uninsured children are regression-adjusted, using the health, demographic, and socioeconomic characteristics (listed above) of the children with Medicaid/CHIP coverage.

* (**) Significantly different from zero at the .05 (.01) level, two-tailed test.

[a] Usual source of care (USC) is defined as the place that the person usually goes to when sick or in need of advice about his/her health. USC is measured at the time of the survey and does not include individuals who reported the emergency department or multiple providers as a USC.

[b] Question only asked of children age 0 to 17.

[c] Question only asked of children age 2 to 18.

[d] Specialist include medical doctors who specialize in a particular medical disease or problem (other than psychiatrist or ophthalmologist).

Table 5. Unadjusted and Regression-Adjusted Estimates of Timeliness and Provider Accessibility Measures, and Patient-Centered Measures for Children (age 0 to 18) Overall and Among Full-Year Insured Children with Medicaid or ESI, 2008

Measure	Overall	Medicaid/ CHIP	ESI		(I) Regression-adjusted Estimates for ESI †		(II) Regression-adjusted Estimates for ESI ‡	
	%	%	%	Percentage Point Difference from Medicaid/CHIP	%	Percentage Point Difference from Medicaid/CHIP	%	Percentage Point Difference from Medicaid/CHIP
Timeliness and provider accessibility measures (past 12 months)								
Usual source of care has night/weekend hours	53.1%	42.9%	58.6%	-15.7 **	58.8%	-15.9 **	51.4%	-8.5 *
Very/somewhat difficult to contact the usual source of care after hours	26.3%	34.5%	20.9%	13.6 **	22.3%	12.2 **	35.0%	-0.4
Very/somewhat difficult to get to the usual source of care	3.9%	4.8%	3.0%	1.8 *	3.3%	1.6 *	5.5%	-0.7
Very/somewhat difficult to contact the usual source of care over the telephone	11.0%	11.5%	10.6%	0.9	11.8%	-0.3	12.9%	-1.5
Child had an illness, injury, or condition that needed care right away [a]	21.2%	21.4%	23.2%	-1.8	25.0%	-3.6 **	20.7%	0.8
Child always or usually got care as soon as needed [a b]	94.3%	91.5%	96.4%	-4.9 **	95.8%	-4.3 *	95.1%	-3.6
Child had appointments for health care [a]	65.7%	64.6%	73.3%	-8.7 **	75.5%	-10.9 **	61.0%	3.6
Child always or usually got appointment for health care as soon as needed [a c]	93.5%	93.3%	94.0%	-0.7	93.9%	-0.6	92.0%	1.3
Child needed necessary care, tests, or treatments [a d]	49.9%	43.5%	54.0%	-10.5 **	56.2%	-12.7 **	44.1%	-0.6
Always or usually easy to get child necessary care, tests, or treatments [a d e]	95.8%	94.8%	97.2%	-2.4 *	96.2%	-1.4	95.4%	-0.7
Child needed to see a specialist [a]	17.0%	15.2%	20.3%	-5.1 **	22.7%	-7.4 **	17.0%	-1.7
Always or usually easy for child to see necessary specialist [a f]	86.2%	82.6%	88.9%	-6.3 *	87.5%	-4.8	81.7%	0.9
Patient-centered measures (past 12 months)								
Doctor always or usually listens carefully [a d]	95.7%	95.2%	96.8%	-1.6 *	96.4%	-1.2	95.4%	-0.2
Doctor always or usually explains things in a way that is easy to understand [a d]	96.3%	94.4%	97.9%	-3.5 **	97.4%	-3.0 **	95.8%	-1.4
Doctor always or usually shows respect [a d]	96.2%	95.4%	97.6%	-2.3 **	97.2%	-1.8 *	97.1%	-1.8
Doctor always or usually spends enough time with child [a d]	94.2%	92.5%	95.8%	-3.3 **	95.1%	-2.6 **	95.0%	-2.5 *
Sample Size	10,186	3,720	3,511					

Source: Urban Institute analysis for MACPAC of the 2008 Medical Expenditure Panel Survey (MEPS).

Notes: Insurance coverage is defined as full-year coverage. Medicaid includes both Medicaid and the Children's Health Insurance Program (CHIP). ESI is employer-sponsored insurance. The federal poverty level (FPL) is measured using the 2009 US Department of Health and Human Services (HHS) poverty guidelines. The overall category includes all sample children regardless of their insurance status.

† The regression-adjusted differences are derived from multivariate regression models that control for age, gender, health status, mental health status, any physical, activity or social limitations or use of assistive devices, and asthma. The means reported for children with ESI coverage are regression-adjusted, using the health characteristics (listed above) of the children with Medicaid/CHIP coverage.

‡ The regression-adjusted differences are derived from multivariate regression models that control for age, gender, health status, mental health status, any physical, activity or social limitations or use of assistive devices, asthma, race/ethnicity, citizenship, parent composition, and education, employment, any non-citizen, health status and any functional limitations at the HIU level. The means reported for children with ESI coverage are regression-adjusted, using the health, demographic, and socioeconomic characteristics (listed above) of the children with Medicaid/CHIP coverage.

* (**) Significantly different from zero at the .05 (.01) level, two-tailed test.

[a] Question only asked of children age 0 to 17.

[b] Question only asked of children that had an illness, injury, or condition that needed care right away.

[c] Question only asked of children that had appointments for health care, not counting the times the child needed care right away.

[d] Question only asked of children that had at least one doctor or health professional visit.

[e] Question only asked of children that needed necessary care, tests, or treatments.

[f] Question only asked of children that needed to see a specialist.

Table 6. Unadjusted and Regression-Adjusted Estimates of Timeliness and Provider Accessibility Measures, and Patient-Centered Measures for Children (age 0 to 18) Overall and Among Full-Year Insured Children with Medicaid or Full-Year Uninsured, 2008

	Overall	Medicaid/ CHIP	Uninsured		(I) Regression-adjusted Estimates for Uninsured †		(II) Regression-adjusted Estimates for Uninsured ‡	
Measure	%	%	%	Percentage Point Difference from Medicaid/CHIP	%	Percentage Point Difference from Medicaid/CHIP	%	Percentage Point Difference from Medicaid/CHIP
Timeliness and provider accessibility measures (past 12 months)								
Usual source of care has night/weekend hours	53.1%	42.9%	47.5%	-4.6	48.3%	-5.3	46.1%	-3.2
Very/somewhat difficult to contact the usual source of care after hours	26.3%	34.5%	28.2%	6.3	29.2%	5.3	33.1%	1.4
Very/somewhat difficult to get to the usual source of care	3.9%	4.8%	2.7%	2.1	3.0%	1.9	4.3%	0.5
Very/somewhat difficult to contact the usual source of care over the telephone	11.0%	11.5%	13.5%	-2.0	14.5%	-3.1	15.3%	-3.8
Child had an illness, injury, or condition that needed care right away [a]	21.2%	21.4%	10.1%	11.4 **	12.5%	9.0 **	12.2%	9.2 **
Child always or usually got care as soon as needed [a b]	94.3%	91.5%	81.9%	9.6	82.3%	9.2	83.3%	8.2
Child had appointments for health care [a]	65.7%	64.6%	32.8%	31.7 **	36.7%	27.9 **	34.3%	30.3 **
Child always or usually got appointment for health care as soon as needed [a c]	93.5%	93.3%	93.1%	0.2	93.0%	0.2	92.9%	0.4
Child needed necessary care, tests, or treatments [a d]	49.9%	43.5%	44.0%	-0.5	45.4%	-1.9	42.2%	1.3
Always or usually easy to get child necessary care, tests, or treatments [a d e]	95.8%	94.8%	91.3%	3.5	90.8%	4.0	90.9%	3.9
Child needed to see a specialist [a]	17.0%	15.2%	6.2%	9.0 **	7.9%	7.3 **	7.6%	7.7 **
Always or usually easy for child to see necessary specialist [a f]	86.2%	82.6%	63.0%	19.6 *	61.2%	21.5 *	58.6%	24.1 **
Patient-centered measures (past 12 months)								
Doctor always or usually listens carefully [a d]	95.7%	95.2%	93.8%	1.4	93.4%	1.8	93.1%	2.1
Doctor always or usually explains things in a way that is easy to understand [a d]	96.3%	94.4%	94.5%	-0.1	94.2%	0.2	93.7%	0.7
Doctor always or usually shows respect [a d]	96.2%	95.4%	95.0%	0.3	94.6%	0.7	94.5%	0.8
Doctor always or usually spends enough time with child [a d]	94.2%	92.5%	92.8%	-0.3	92.0%	0.5	92.3%	0.2
Sample Size	10,186	3,720	904					

Source: Urban Institute analysis for MACPAC of the 2008 Medical Expenditure Panel Survey (MEPS).

Notes: Insurance coverage is defined as full-year coverage. Medicaid includes both Medicaid and the Children's Health Insurance Program (CHIP). ESI is employer-sponsored insurance. The federal poverty level (FPL) is measured using the 2009 US Department of Health and Human Services (HHS) poverty guidelines. The overall category includes all sample children regardless of their insurance status.

† The regression-adjusted differences are derived from multivariate regression models that control for age, gender, health status, mental health status, any physical, activity or social limitations or use of assistive devices, and asthma. The means reported for uninsured children are regression-adjusted, using the health characteristics (listed above) of the children with Medicaid/CHIP coverage.

‡ The regression-adjusted differences are derived from multivariate regression models that control for age, gender, health status, mental health status, any physical, activity or social limitations or use of assistive devices, asthma, race/ethnicity, citizenship, parent composition, and education, employment, any non-citizen, health status and any functional limitations at the HIU level. The means reported for uninsured children are regression-adjusted, using the health, demographic, and socioeconomic characteristics (listed above) of the children with Medicaid/CHIP coverage.

* (**) Significantly different from zero at the .05 (.01) level, two-tailed test.

[a] Question only asked of children age 0 to 17.

[b] Question only asked of children that had an illness, injury, or condition that needed care right away.

[c] Question only asked of children that had appointments for health care, not counting the times the child needed care right away.

[d] Question only asked of children that had at least one doctor or health professional visit.

[e] Question only asked of children that needed necessary care, tests, or treatments.

[f] Question only asked of children that needed to see a specialist.

Table 7. Unadjusted and Regression-Adjusted Estimates of Timeliness and Provider Accessibility Measures, and Patient-Centered Measures for Children (age 0 to 17) Overall and Among Full-Year Insured Children with Medicaid or ESI, 2008

Measure	Overall	Medicaid/ CHIP	ESI		(I) Regression-adjusted Estimates for ESI †		(II) Regression-adjusted Estimates for ESI ‡	
	%	%	%	Percentage Point Difference from Medicaid/CHIP	%	Percentage Point Difference from Medicaid/CHIP	%	Percentage Point Difference from Medicaid/CHIP
Timeliness and provider accessibility measures (past 12 months)								
Child had illness, injury, or condition that needed care right away	21.2%	21.4%	23.2%	-1.8	25.0%	-3.6 **	20.7%	0.8
Child got care as soon as needed [a]								
Never	1.3%	1.8%	0.9%	0.9	0.9%	1.0	2.4%	-0.5
Sometimes	4.3%	6.7%	2.7%	4.0 **	3.3%	3.3 *	2.5%	4.1
Usually	11.7%	16.3%	9.3%	7.1 **	9.8%	6.6 **	6.7%	9.6 **
Always	82.6%	75.2%	87.1%	-11.9 **	86.0%	-10.9 **	88.4%	-13.2 **
Child had appointments for health care	65.7%	64.6%	73.3%	-8.7 **	75.5%	-10.9 **	61.0%	3.6
Child got appointment for health care as soon as needed [b]								
Never	1.2%	1.6%	1.4%	0.2	1.3%	0.3	1.4%	0.1
Sometimes	5.2%	5.1%	4.6%	0.5	4.8%	0.4	6.6%	-1.4
Usually	17.4%	19.6%	15.8%	3.7	16.7%	2.8	15.8%	3.8
Always	76.1%	73.7%	78.2%	-4.5 *	77.2%	-3.5	76.2%	-2.5
Child needed necessary care, tests, or treatments [c]	49.9%	43.5%	54.0%	-10.5 **	56.2%	-12.7 **	44.1%	-0.6
Easy to get child necessary care, tests, or treatments [c] [d]								
Never	0.4%	0.8%	0.3%	0.5	0.3%	0.4	1.0%	-0.3
Sometimes	3.7%	4.4%	2.5%	1.9 *	3.5%	1.0	3.5%	0.9
Usually	16.4%	23.0%	14.0%	9.0 **	15.2%	7.8 **	16.0%	7.0
Always	79.4%	71.8%	83.2%	-11.4 **	81.0%	-9.2 **	79.4%	-7.6 *
Child needed to see a specialist	17.0%	15.2%	20.3%	-5.1 **	22.7%	-7.4 **	17.0%	-1.7
Easy for child to see necessary specialist [e]								
Never	4.5%	8.3%	2.7%	5.6 **	3.4%	4.9 *	5.3%	3.0
Sometimes	9.4%	9.1%	8.4%	0.7	9.2%	-0.1	12.9%	-3.9
Usually	21.6%	21.7%	22.7%	-1.0	24.4%	-2.6	20.6%	1.2
Always	64.6%	60.9%	66.2%	-5.3	63.1%	-2.2	61.2%	-0.3
Patient-centered measures (past 12 months)								
Doctor listens carefully [c]								
Never	0.7%	0.5%	0.6%	0.0	0.5%	0.0	0.6%	-0.1
Sometimes	3.6%	4.3%	2.7%	1.6 *	3.1%	1.2	4.0%	0.3
Usually	17.2%	21.4%	15.2%	6.2 **	15.5%	5.8 **	12.8%	8.6 **
Always	78.5%	73.8%	81.6%	-7.8 **	80.8%	-7.0 **	82.6%	-8.8 **
Doctor explains things in a way that is easy to understand [c]								
Never	0.4%	0.6%	0.3%	0.3	0.3%	0.3	0.5%	0.1
Sometimes	3.3%	5.0%	1.9%	3.1 **	2.3%	2.7 **	3.7%	1.3
Usually	17.0%	19.2%	15.8%	3.5 *	16.6%	2.6	16.5%	2.8
Always	79.3%	75.2%	82.1%	-6.9 **	80.8%	-5.6 **	79.3%	-4.1
Doctor shows respect [c]								
Never	0.6%	0.4%	0.4%	0.0	0.4%	0.1	0.4%	0.0
Sometimes	3.2%	4.2%	2.0%	2.3 **	2.5%	1.8 *	2.5%	1.8
Usually	15.7%	19.1%	14.3%	4.8 **	14.9%	4.2 *	14.3%	4.8
Always	80.5%	76.3%	83.4%	-7.1 **	82.3%	-6.0 **	82.8%	-6.6 *
Doctor spends enough time with child [c]								
Never	0.9%	1.2%	0.5%	0.7	0.6%	0.6	1.1%	0.1
Sometimes	5.0%	6.4%	3.7%	2.6 **	4.4%	2.0 *	3.9%	2.5 *
Usually	20.2%	21.0%	19.1%	2.0	19.6%	1.5	16.8%	4.2
Always	74.0%	71.4%	76.7%	-5.3 **	75.5%	-4.1 *	78.2%	-6.7 *
Sample Size	10,186	3,699	3,489					

Source: Urban Institute analysis for MACPAC of the 2008 Medical Expenditure Panel Survey (MEPS).

Notes: Insurance coverage is defined as full-year coverage. Medicaid includes both Medicaid and the Children's Health Insurance Program (CHIP). ESI is employer-sponsored insurance. The federal poverty level (FPL) is measured using the 2009 US Department of Health and Human Services (HHS) poverty guidelines. The overall category includes all sample children regardless of their insurance status.

† The regression-adjusted differences are derived from multivariate regression models that control for age, gender, health status, mental health status, any physical, activity or social limitations or use of assistive devices, and asthma. The means reported for children with ESI coverage are regression-adjusted, using the health characteristics (listed above) of the children with Medicaid/CHIP coverage.

‡ The regression-adjusted differences are derived from multivariate regression models that control for age, gender, health status, mental health status, any physical, activity, or social limitations or use of assistive devices, asthma, race/ethnicity, citizenship, parent composition, and education, employment, any non-citizen, health status and any functional limitations at the HIU level. The means reported for children with ESI coverage are regression-adjusted, using the health, demographic, and socioeconomic characteristics (listed above) of the children with Medicaid/CHIP coverage.

* (**) Significantly different from zero at the .05 (.01) level, two-tailed test.

[a] Question only asked of children that had an illness, injury, or condition that needed care right away.

[b] Question only asked of children that had appointments for health care, not counting the times the child needed care right away.

[c] Question only asked of children that had at least one doctor or health professional visit.

[d] Question only asked of children that needed necessary care, tests, or treatments.

[e] Question only asked of children that needed to see a specialist.

Table 8. Unadjusted and Regression-Adjusted Estimates of Timeliness and Provider Accessibility Measures, and Patient-Centered Measures for Children (age 0 to 17) Overall and Among Full-Year Insured Children with Medicaid or Full-Year Uninsured, 2008

	Overall	Medicaid/ CHIP	Uninsured		(I) Regression-adjusted Estimates for Uninsured †		(II) Regression-adjusted Estimates for Uninsured ‡	
Measure	%	%	%	Percentage Point Difference from Medicaid/CHIP	%	Percentage Point Difference from Medicaid/CHIP	%	Percentage Point Difference from Medicaid/CHIP
Timeliness and provider accessibility measures (past 12 months)								
Child had illness, injury, or condition that needed care right away	21.2%	21.4%	10.1%	11.4 **	12.5%	9.0 **	12.2%	9.2 **
Child got care as soon as needed [a]								
Never	1.3%	1.8%	9.1%	-7.2	8.6%	-6.7	8.7%	-6.9
Sometimes	4.3%	6.7%	9.0%	-2.4	9.2%	-2.5	8.0%	-1.3
Usually	11.7%	16.3%	12.1%	4.3	13.5%	2.9	9.2%	7.2
Always	82.6%	75.2%	69.8%	5.3	68.8%	6.4	74.1%	1.1
Child had appointments for health care	65.7%	64.6%	32.8%	31.7 **	36.7%	27.9 **	34.3%	30.3 **
Child got appointment for health care as soon as needed [b]								
Never	1.2%	1.6%	1.1%	0.5	1.0%	0.6	0.5%	1.1
Sometimes	5.2%	5.1%	5.8%	-0.7	5.9%	-0.8	6.6%	-1.5
Usually	17.4%	19.6%	26.3%	-6.7	26.9%	-7.3	25.3%	-5.7
Always	76.1%	73.7%	66.8%	6.9	66.2%	7.6	67.7%	6.0
Child needed necessary care, tests, or treatments [c]	49.9%	43.5%	44.0%	-0.5	45.4%	-1.9	42.2%	1.3
Easy to get child necessary care, tests, or treatments [c] [d]								
Never	0.4%	0.8%	0.6%	0.2	0.6%	0.2	0.8%	0.0
Sometimes	3.7%	4.4%	8.1%	-3.7	8.6%	-4.2	8.3%	-3.9
Usually	16.4%	23.0%	20.0%	3.0	20.9%	2.1	21.7%	1.3
Always	79.4%	71.8%	71.2%	0.5	69.9%	1.8	69.2%	2.6
Child needed to see a specialist	17.0%	15.2%	6.2%	9.0 **	7.9%	7.3 **	7.6%	7.7 **
Easy for child to see necessary specialist [e]								
Never	4.5%	8.3%	11.7%	-3.4	12.9%	-4.6	13.6%	-5.3
Sometimes	9.4%	9.1%	25.3%	-16.2 *	25.9%	-16.9 *	27.9%	-18.8 *
Usually	21.6%	21.7%	8.3%	13.5 *	8.3%	13.4 *	3.8%	17.9 *
Always	64.6%	60.9%	54.8%	6.2	52.9%	8.0	54.8%	6.2
Patient-centered measures (past 12 months)								
Doctor listens carefully [c]								
Never	0.7%	0.5%	1.5%	-1.0	1.4%	-0.9	1.5%	-1.0
Sometimes	3.6%	4.3%	4.7%	-0.4	5.2%	-0.9	5.4%	-1.1
Usually	17.2%	21.4%	19.5%	1.9	19.6%	1.8	17.7%	3.7
Always	78.5%	73.8%	74.3%	-0.5	73.8%	0.0	75.4%	-1.6
Doctor explains things in a way that is easy to understand [c]								
Never	0.4%	0.6%	0.0%	0.6 **	0.0%	0.6 **	0.2%	0.4 *
Sometimes	3.3%	5.0%	5.5%	-0.5	5.8%	-0.8	6.2%	-1.2
Usually	17.0%	19.2%	16.9%	2.4	17.6%	1.7	17.3%	1.9
Always	79.3%	75.2%	77.6%	-2.5	76.6%	-1.4	76.3%	-1.2
Doctor shows respect [c]								
Never	0.6%	0.4%	0.5%	-0.1	0.5%	-0.1	0.6%	-0.2
Sometimes	3.2%	4.2%	4.4%	-0.2	4.8%	-0.6	4.9%	-0.7
Usually	15.7%	19.1%	15.4%	3.6	16.1%	2.9	15.1%	3.9
Always	80.5%	76.3%	79.6%	-3.3	78.5%	-2.2	79.4%	-3.1
Doctor spends enough time with child [c]								
Never	0.9%	1.2%	0.9%	0.2	1.0%	0.1	1.3%	-0.2
Sometimes	5.0%	6.4%	6.3%	0.1	7.0%	-0.6	6.4%	0.0
Usually	20.2%	21.0%	23.4%	-2.4	23.8%	-2.8	21.8%	-0.7
Always	74.0%	71.4%	69.4%	2.0	68.2%	3.2	70.5%	0.9
Sample Size	10,186	3,699	876					

Source: Urban Institute analysis for MACPAC of the 2008 Medical Expenditure Panel Survey (MEPS).

Notes: Insurance coverage is defined as full-year coverage. Medicaid includes both Medicaid and the Children's Health Insurance Program (CHIP). ESI is employer-sponsored insurance. The federal poverty level (FPL) is measured using the 2009 US Department of Health and Human Services (HHS) poverty guidelines. The overall category includes all sample children regardless of their insurance status.

† The regression-adjusted differences are derived from multivariate regression models that control for age, gender, health status, mental health status, any physical, activity or social limitations or use of assistive devices, and asthma. The means reported for uninsured children coverage are regression-adjusted, using the health characteristics (listed above) of the children with Medicaid/CHIP coverage.

‡ The regression-adjusted differences are derived from multivariate regression models that control for age, gender, health status, mental health status, any physical, activity, or social limitations or use of assistive devices, asthma, race/ethnicity, citizenship, parent composition, and education, employment, any non-citizen, health status and any functional limitations at the HIU level. The means reported for uninsured children coverage are regression-adjusted, using the health, demographic, and socioeconomic characteristics (listed above) of the children with Medicaid/CHIP coverage.

* (**) Significantly different from zero at the .05 (.01) level, two-tailed test.

[a] Question only asked of children that had an illness, injury, or condition that needed care right away.

[b] Question only asked of children that had appointments for health care, not counting the times the child needed care right away.

[c] Question only asked of children that had at least one doctor or health professional visit.

[d] Question only asked of children that needed necessary care, tests, or treatments.

[e] Question only asked of children that needed to see a specialist.