Stability of Children's Insurance Coverage and Implications for Access to Care: Evidence from the Survey of Income and Program Participation

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Abstract

We use data from the 1996 and 2001 Panels of the Survey of Income and Program Participation to examine the stability of health insurance coverage of children. The data show that over the course of a year a significant percentage of children experience insurance transitions—either gaining or losing insurance or moving between public and private coverage. One implication of these transitions is that the number of children who are uninsured at some point in the year is substantially greater than either the number insured for the full year or those who are uninsured at a particular point in time. We find a statistically and economically significant relationship between insurance coverage stability and access to primary care. Children who have part-year public or private insurance are more likely to have at least one doctor's visit than children who are uninsured for a full year, but they are less likely to have a visit than children with full-year coverage. Among children who were insured all year, those who had either public or private coverage all 12 months are more likely to have had at least one visit than children who moved between public and private coverage.

Introduction

Over the past two decades there has been a dramatic expansion in public health insurance for children. Whereas public insurance was once limited almost exclusively to poor children receiving cash welfare, income eligibility limits for the State Children's Health Insurance Program (SCHIP) now extend to at least 200 percent of the Federal poverty level in most states. In implementing SCHIP, states not only increased income eligibility limits, but experimented with new strategies for outreach and plan design. These efforts appear to have had a positive effect on program take-up. The SCHIP expansion significantly increased insurance coverage among children in "working poor" families (LoSasso and Buchmueller 2004), a group that had shown relatively weak response to earlier Medicaid expansions (Card and Shore-Sheppard 2004).

A key objective of expanding public health insurance coverage for children is to increase timely and appropriate access to health care. A large literature documents a positive relationship between insurance coverage and various measures of utilization for children (see Buchmueller et al. 2004 for a review). Commonly in these studies insurance status is categorized based on coverage at the time of the survey and utilization is measured over some period preceding the survey, typically a year. However, this approach has the potentially important limitation that it fails to account for changes in insurance status over the course of the year. Children currently reporting private coverage, for example, may have been uninsured for some of the time over which utilization is measured. To the extent that insurance status is not static, researchers correlating current status with past year utilization may be missing an important part of the relationship between insurance coverage and utilization.

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Recent research has shown that such changes in insurance status have become increasingly important, especially for children in lower income families (see, for example, Ham, Li, and Shore-Sheppard 2008). Because the vast majority of private health insurance is provided through the workplace, changes in parents' employment status may lead to changes in coverage. Children may also experience spells without insurance as they move between private and public coverage. Indeed, many states require children to be without insurance for three or more months before they can enroll in SCHIP. The evidence on whether these rules reduce public insurance coverage is mixed (LoSasso and Buchmueller 2004; Gruber and Simon 2008). High disenrollment rates from public programs are well-documented (see, for example, Sommers 2005). In many cases the reason is an increase in family income that causes a child to lose eligibility, though there are also cases where state procedures for determining program eligibility cause eligible children to lose Medicaid or SCHIP coverage, if only temporarily. Because of the predominance of managed care arrangements, even if children move directly between public and private insurance such transitions may disrupt relationships with providers, resulting in reduced access to care.

The tendency for children to move on and off public insurance rolls—a phenomenon often referred to as "churning"—raises administrative costs for states and the providers and private health plans with which they contract (Summer and Mann 2006). Two recent studies suggest that the stability of insurance coverage also has significant implications for utilization. Olson et al. (2005) compare outcomes for four groups of children differentiated by their insurance coverage over the prior year. They find that compared to children with full-year private or public coverage, those who were

uninsured part of the year are more likely to report having delayed seeking care for financial reasons and having unmet medical needs and less likely to have an office visit. For most outcomes, however, there was no significant difference between being uninsured for all or part of the year. Aiken et al. (2004) use a more detailed classification scheme that accounts for transitions between public and private insurance. They also find that children with partial year coverage are significantly more likely to report delaying care. Their results suggest that relative to children who are continuously insured, those with partial year coverage are less likely to have at least one physician visit over the year, though these results are less precisely estimated.

While these studies use richer measures of insurance coverage than most of the prior literature, they are limited by the fact that their information on prior insurance coverage comes from retrospective questions. Olson et al. (2005) use data from the 2000 and 2001 National Health Interview Survey (NHIS). While the main insurance variables in the NHIS are point-in-time measures, parents of children who are insured at the time of the survey are asked if the child was ever uninsured during the year and parents of uninsured children were asked how many months it had been since the child was last insured. These questions cannot capture direct transitions between public and private insurance or multiple changes in status, nor can they be used to calculate the number of months a child had each type of coverage. Aiken et al. use slightly different questions available in the 1999 National Survey of American Families (NSAF) that do identify transitions between public and private insurance. However, because of their retrospective nature, estimates based on these data are still subject to recall error.

In this paper we use data from the Survey of Income and Program Participation (SIPP) to analyze the relationship between health insurance coverage and access to medical care among children in the years immediately following the enactment of SCHIP. Because the SIPP is a longitudinal study in which respondents are surveyed every four months, it is a fundamentally superior data source for documenting and measuring transitions in insurance coverage. In each SIPP interview, respondents are asked about their current insurance coverage and their insurance coverage during each month since the last interview. With this rich longitudinal data, we can not only distinguish full year from part year insurance, but we can measure the number of months a child had each type of coverage. In addition, we can distinguish children who had either public or private insurance for the full year from children who were insured for the full year but moved between public and private coverage.

The SIPP also provides information on medical care utilization in special "topical modules" that are administered on approximately an annual basis. One utilization outcome that is especially relevant is whether or not a child had at least one visit to a physician or other medical care provider over the prior year. We examine how this measure varies with insurance coverage over that period.

We find that nearly one quarter of all children—and over one-third of the children in the lowest income quartile—experience a change in insurance status over a twelve month period. Often, these transitions involve a spell without any health insurance. As a result, while only 6.8 percent of children are uninsured for twelve continuous months, 25.7 percent are uninsured at some point in the year. Our analysis of utilization suggests that gaps in insurance coverage do result in lower access to care. Although children who

have partial year private or public coverage are more likely to have at least one physician visit than children who are uninsured all year, they are significantly less likely to have a visit than children who are insured for a full year.

Data and Methods

As previously mentioned, we use the Survey of Income and Program Participation (SIPP) in our examination of the relationship between coverage and utilization. The SIPP is collected in a series of panels lasting between 2 and 4 years each. As we are interested primarily in the post-SCHIP period, in this draft we use the 1996 and 2001 panels.[1] For ease of interviewing, the entire sample is randomly split into four "rotation groups", and one rotation group is interviewed each month. Each rotation group in a SIPP panel is interviewed once every four months (a "wave") to elicit information about the previous four months, including questions about family status, employment, program participation, and insurance coverage. In addition to these "core" questions that are asked every interview, additional questions covering a variety of topics (known as "topical module" questions) are asked on a rotating basis.

For the purposes of this paper, we are primarily interested in the health insurance questions, which are part of the core, and the health care utilization and health status questions, which are topical module questions asked annually (in the topical modules for the third, sixth, ninth, and twelfth waves of the 1996 panel and the third, sixth, and ninth waves of the 2001 panel).

The health insurance questions in the core data ask about the type of coverage held in each of the four months since the last interview. Using these data, we construct

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[1] We are in the process of preparing the 2004 panel, and will add data from it in future drafts.

variables that describe each individual's health insurance coverage experience over the year corresponding to the reference period for the utilization questions of the topical module. One of these variables is the child's insurance status at the time of the interview when the topical module on medical care utilization was administered. We refer to this variable as a point-in-time measure of coverage as it is comparable to the variables available in cross-sectional data sets, such as the National Health Interview Survey (NHIS). Using data from prior wave interviews, we can also construct variables capturing whether the child had various types of insurance all year, whether the child ever had a particular type of insurance during the year, and the months of coverage for each type over the year. A key focus of our study is to better understand the value of these more detailed measures relative to a simple point-in-time variable.

For all these measures, we distinguish between three types of coverage: none (uninsured), public insurance and private insurance. The public insurance category consists mainly of Medicaid and SCHIP plus a very small number of children who qualify for Medicare or are covered by the Indian Health Service. The private insurance category includes employer-sponsored group insurance, which accounts for the vast majority of private coverage, and individually-purchased non-group insurance. CHAMPUS, the insurance program for dependents of military personnel is considered as private insurance because it is employment related.

The topical module we use includes several questions related to medical care use. In this draft we focus on one question in particular—the number of physician visits over a year—to construct a dummy variable for whether the child had at least one physician visit, as that variable provides a measure of access to care.

Control variables come from both the core survey and the topical module. In this draft, we report results stratified by family income quartiles. The quartiles are based on monthly income averaged over the 12 month period used to measure physician visits.[2] Other controls from the core survey include child age and gender, family structure and state of residence.[3] One control variable that comes from the topical module is the child's reported health status, measured on a standard five point scale.

As our focus is on children, we use only observations for individuals younger than 16. In addition, we drop observations that have fewer than twelve reported months, as in those cases we are unable to discern what the child's insurance status was when not observed in the data. An exception to this selection criterion is infants: for children under a year old, we use all available months since the child was born. The analysis based on an extract that consists of 72,646 observations on 25,973 children from the 1996 panel and 45,134 observations on 19,795 children from the 2001 panel.

Results

Insurance Coverage Over the Year

Table 1 summarizes the distribution of insurance coverage among children during the years 1996 to 2003. It is important to note that because we have information on broad coverage categories, rather than the specific insurance plan in which a child is enrolled, we do not observe changes from one private plan to another or movements between

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[2] It is more common in the literature to classify families according to their income relative to the FPL. There are advantages and disadvantages to each approach. An advantage of measuring income relative to the FPL is that program eligibility rules are defined in that way. A disadvantage is that the number of children in different categories based on percent of poverty cut-offs will vary in response to macroeconomic shocks. Income quartiles, in contrast, are more stable. In future drafts we will run the analysis using both methods.

[3] The current list of control variables is incomplete. Future drafts will include additional controls.

Medicaid and stand-alone SCHIP programs. Even with this limitation, the figures reveal that the health insurance coverage for children is very fluid. Nearly one-quarter of all children experienced a transition—either into or out of coverage or between public and private coverage—during the preceding 12 month period. Transitions are most common among lower income children, with over a third of children in the lowest income quartile and roughly 30 percent of those in the second quartile experiencing a coverage change. In contrast, coverage was more stable in the upper part of the income distribution: in the fourth quartile, 93 percent of children had the same coverage status for the full year.

As a result of these transitions, the percentage of children falling into one of the three coverage categories at some point in the year is substantially greater than the percentage who were in that category for the full 12 months. Previous studies have noted that the number of children who are uninsured at some point in the course of a year is significantly higher than the number uninsured at some point in the year. For example, using data from the NHIS, Olson et al. (2005) estimate that in 2000 and 2001 6.6 percent of children were uninsured for a full year and an additional 7.7 percent experienced a spell without insurance that lasted less than 12 months. In our data, the percent of children uninsured for the full year is roughly the same (6.8 percent) but the percentage uninsured at some point in the year is substantially higher: 25.7 percent.

Both measures of uninsurance decrease with income, though in each income category the percentage of children uninsured at some point in the year is three to four times the percentage uninsured for the full year. There is also a sizeable difference between the percentage of children who are enrolled in public insurance programs for a full year and the percentage that are covered at some point in the year. In the lowest income quartile,

where essentially all children meet income eligibility standards for Medicaid or SCHIP, 40.7 percent of children have public coverage for the full year and an additional 31.1 percent had it for part of the year.

Table 1 also reports the mean number of months in each insurance category over the 12 month period.[4] The distributions of these variables (conditional on having been in the category for at least one month) are displayed in Figures 1 to 3. The first thing to notice about the figures is they illustrate the well-known issue of "seam bias" in the SIPP. The disproportionate mass at values of 4, 8 and 12 reflects the tendency of respondents to report the same values of a variable like health insurance for all months within a survey wave and to report that transitions occurred at the "seam" between interview periods. Not only will this type of respondent behavior cause the timing of transitions to be measured inaccurately, but it will lead to an under-counting of spells that began and ended within the same survey wave. This may explain why our estimate of the number of children experiencing insurance transitions is greater than estimates from prior studies using survey questions with a 12 month recall period (Olson et al. 2005; Aiken et al. 2004).

Abstracting from the issue of response bias, the data in Figure 1 suggest that for most children, periods without insurance are relatively short. Roughly half of all spells without insurance are between 1 and 4 months. The data in Table 1 show that the probability a child is uninsured at some point in the year decreases monotonically with income. Conditional on having a spell, however, it is children in the second quartile who are most likely to be uninsured for the full year. One possible explanation for this is

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[4] The mean months in each category may sum to less than 12 because the sample includes infants less than one year old, or they may sum to more than 12 because some children are reported receiving both private and public insurance at the same time.

pattern that among the poorest children spells without insurance tend to occur between periods of Medicaid or SCHIP enrollment. In particular, in the later years of our analysis many states sought to reduce program costs by reversing earlier administrative reforms designed to increase continuity in enrollments. Many children who were disenrolled as a result of these policy changes were actually eligible and later could re-enroll. In contrast, it could be that a greater number of children in the second income quartile were ineligible for public insurance (or at least their parents thought so) for the full period.

Together, Figures 1-3 show a positive relationship between income and coverage stability. Ninety percent of fourth quartile children who have private health insurance at some point in the year had that coverage for the entire year. In contrast, when lower income children obtain private insurance it tends to be for shorter periods. For the first income quartile, spells with public insurance tend to be longer than spells with private insurance, but even in this group fewer than half the children who ever obtain public coverage have it for 12 consecutive months.

Because insurance coverage is so dynamic, any categorization based on coverage at a point in time will obscure considerable heterogeneity in the extent to which children face financial barriers to obtaining health care. To illustrate this directly, we create an insurance variable that is comparable to measures available in an annual survey like the NHIS. Specifically, we treat the month when the topical module on medical care was administered as the "survey month" and categorized children according to their coverage at that point in time. Table 2 relates this categorization to measures that capture how insurance coverage changed over the 12 months immediately preceding that survey. In the full sample (top panel) we see that only 46 percent of children who were uninsured at

the time of the survey had been continuously uninsured for at least 12 months up to that point. Slightly more than a quarter of this group had public insurance at some point in the year and over 30 percent had private insurance for part of the year.[5] As would be expected, among lower income children (second) panel, it is more common to have had public insurance over the year—41 percent of low-income "uninsured" children had been enrolled in a public program in the preceding year—and less common to have had private insurance (21.5 percent). In the top income quartile (bottom panel), public insurance is much less common, though over 60 percent of the children recorded as uninsured at the time of the topical module survey had held private insurance at some time in the prior year.

Insurance Coverage and Utilization

Comparisons between people with and without insurance are commonly used to estimate how extending coverage to the uninsured would increase utilization. It is important to understand how such comparisons are affected by the fact that many children who are classified as uninsured using a point-in-time measure actually had spells with insurance during the year, and vice versa. An important policy-related question is: if a child goes from being uninsured for a full year to being insured for a full year, how much will his or her medical care utilization increase? We would expect that comparisons based on point-in-time estimates will understate this effect, though it is not clear by how much. To the extent that parents have some discretion in timing provider

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[5] The percent with each type may sum to more than 100 percent because some children are reported having both public and private insurance at the same time.

visits to coincide with periods of insurance coverage, differences between children with part-year and full-year coverage may not be large.

Cross-tabulations presented in Table 3 show how one measure of utilization varies with insurance when coverage is categorized in several different ways. The outcome is a binary variable for whether or not a child had at least one visit to a physician or other medical provider in the 12 months prior to the survey. This measure is commonly used as an indicator of access to primary and preventive care. We prefer it to the total number of visits in a year because that variable will be more strongly correlated with health status. Overall, 68 percent of children in our data had at least one visit. There is a positive income gradient, with the probability of at least one visit ranging from 62 percent in the first income quartile to 76 percent in the top quartile.

Consistent with many prior studies, the figures in the first panel of Table 3 show large differences in utilization related to point in time measures of insurance coverage. Fewer than half (46.7 percent) of the children who were uninsured at the time of the survey had a visit in the prior year, compared to 67.5 percent of those with public insurance and 73.0 percent of children with private insurance. For all three insurance categories the probability of having at least one visit increases modestly with income, though the coverage gap persists. Even in the top income quartile, where financial considerations should be less of a constraint, the utilization rate is 28 percentage points higher for children with private insurance than for children who are classified as uninsured. (Recall that in this income group, very few children are reported to have public insurance coverage. Therefore, results for that category should be interpreted cautiously.)

In the full sample, privately insured children have higher rates of utilization than those with public coverage. The income-stratified results suggest that this difference is driven, at least in part, by unmeasured heterogeneity. Not only do privately insured children come from higher income families, but recall from Table 2 that they are less likely to have been uninsured in the prior year than children who have public insurance at the time of the survey. Therefore, stratifying the sample into income quartiles not only reduces the income heterogeneity, but children classified as having public or private insurance are more similar in terms of their coverage over the prior year. In the first and second income quartiles, the utilization rates for publicly insured children are slightly higher, though the differences are small.

In the second panel of Table 3 we compare children who were uninsured for the full year to children who had either full- or part-year private or public coverage. The part-year categories are not mutually exclusive as children who transitioned between public and private insurance during the year will show up in both part-year categories. For both types of insurance, the utilization rates of children with part-year coverage are only slightly lower than the rates for children who were covered for the full year. This is not surprising. Because of the overlap in the part-year categories and the fact that spells without insurance tend to be short, the majority of children classified as having part-year public or private insurance had some type of insurance for most or all of the year.

In the bottom panel we drop the distinction between public and private coverage and categorize children based on the number of months they had insurance over the prior year. Because of the way respondents tend to report the same coverage for an entire 4 month survey recall period, we use 4 month periods to classify partial year coverage.

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The tabulations indicate that the probability of having at least one visit increases monotonically with the length of coverage.

To control for other factors that affect utilization and that may be correlated with insurance coverage, we estimate a set of basic linear regressions, the results of which are reported in Table 4.[6] In general, the implied effect of insurance is slightly smaller than in the cross-tabs, though the adjusted differences across insurance categories remain statistically and economically significant. For example, when we use point-in-time measures of insurance status, the regression-adjusted difference between publicly insured and uninsured children is 14 percentage points in the full sample, compared to an unadjusted difference of 21 percentage points.

In the last two panels of Table 4 we report models where the insurance variable is the number of months a child was covered during the prior year. The advantage of this model relative to the other specifications is that it better accounts for differences in length of coverage. The potential weakness is that it imposes a linear relationship between the amount of time a child is covered and utilization. However, an inspection of the data suggests that this is not a bad approximation. The coefficient estimates indicate that each additional month of insurance coverage is associated with a 2 percentage point increase in the probability of having at least one physician visit during the year.

Table 5 reports regression results stratified by age (but not income). Because a greater number of well-child visits are recommended for infants and toddlers than for older children, the percentage of children with at least one visit decreases with age.

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[6] The covariates include indicator variables for age (15 categories), health status (4), year (9), state of residence (48) gender, family headed by single mother and continuous measures of family income at time of survey, average family income over preceding 12 months, and the range of monthly income normalized by the mean.

However, the differences among the different insurance categories are quite similar across age groups. Like the models estimated for samples pooled by age, these results strongly suggest that even short periods without insurance are associated with reduced access to care.

The results in Tables 3-5, though not establishing causality, do provide support for the argument that going without insurance, even for relatively short periods of time, significantly reduces children's contacts with medical providers. These results cannot tell us, however, whether transitions between public and private insurance affect utilization. To test for such an effect, we take a sample of children who were insured for the full 12 months of the analysis period and compare those who had the same type of coverage for the full year to those who had mixed coverage. The results, which are reported in Table 6, suggest that even insurance transitions that don't involve a spell without any coverage are associated with a significant reduction in utilization. Overall, children who have the same broad type of insurance coverage for a full year are 5.6 to 7.6 percentage points more likely to have at least one physician visit than children who were insured for the full 12 months but moved at some point in the year between public and private coverage. It is important to note, however, that insurance coverage transitions may not be exogenous, so once again while these results are consistent with transitions leading to reductions in access to care, we cannot interpret this estimated relationship as necessarily causal.

Concluding Comments

Preliminary Results

Panel data from the SIPP are uniquely well suited for analyzing the stability of children's health insurance and the implications of coverage stability for access to care. Our analysis uses data from the 1996 and 2001 panels, which span the years 1996 to 2003. There are several important findings.

First, we find that in a given year nearly one quarter of all children, either into or out of coverage or between public and private coverage. While only 6.8 percent of children were uninsured for a full year, over one-quarter were uninsured for part of the year. Similarly, roughly as many children were enrolled in Medicaid or SCHIP for part of the year as were enrolled for the full year.

Second, coverage stability is positively related to income. Over one-third of the children in the first income quartile experienced a transition among the three broad insurance categories. One in five children in this income category had public and private insurance at some point in the same year. In contrast, only 14 percent of children in the third income quartile and 7 percent of those in the top quartile experienced a change in coverage.

Third, because insurance transitions are so common, categorizing children based on their insurance coverage at a single point in time produces groups that are internally heterogeneous in terms of their coverage history. In our data, fewer than half of the children who were uninsured in a particular month had been uninsured for the entire prior year.

A fourth key result is that coverage transitions are significantly correlated with the probability of having at least one physician visit over the course of a year. Children with part-year public or private insurance are more likely than children who were uninsured all year to have a visit, but they have significantly lower rates of utilization than children with full-year coverage. Even among children who were insured for an entire year, we find that children who had either public or private insurance for the full 12 months are significantly more likely to have one or more visits than children who moved between public and private coverage. It is important to note that because we cannot observe changes between different health plans or between Medicaid and a stand-alone SCHIP plan, our analysis likely understates the importance of the coverage continuity for access to care.

Next Steps

This research is preliminary and we plan to extend it in several directions. The first and most basic extension is to add data from the 2004 SIPP panel. The additional data will not only provide more observations but will extend the analysis to a period when some states were modifying SCHIP policies related to eligibility and others were directly limiting the number of children enrolled. We can directly examine how these state policies affected insurance coverage and utilization.

Another basic extension is to analyze additional outcomes. The topical module question on physician visits asks the number of total visits over the course of the prior year. As we have discussed, since all children, regardless of their health status, should receive an annual check up a binary variable based on this question can be interpreted as a measure of access. However, an additional related outcome that we can construct from

this question is whether or not a child receives the number of visits recommended by the American Academy of Pediatrics. A count of the total number of visits is somewhat more difficult to interpret as it will be more strongly related to child health status. Nonetheless, this outcome is still of interest.

Of course, focusing on the probability of having at least one visit does not eliminate the potential bias from unobserved heterogeneity. This is why in discussing our preliminary results we have been careful not to characterize the estimated differences across the various coverage categories as causal effects. As the research proceeds a major goal will be to estimate such effects. We will pursue two strategies. One is to estimate instrumental variables models. Prior studies on Medicaid and SCHIP take-up have shown that "simulated eligibility" variables that summarize the eligibility rules in each state in each year are good instruments for predicting public insurance coverage (Gruber and Simon 2008). Prior studies have used this type of instrument in models of medical care utilization (Currie and Gruber 1996a, 1996b; Currie 1998). A possible instrument for private coverage is the "tax price" of employer-sponsored health insurance, which is a significant determinant of the employer offers and worker take-up of employer-sponsored health insurance (Royalty 2000; Gruber and Lettau 2004). The second strategy is to exploit the longitudinal nature of the SIPP data. In the 1996 Panel, the topical module on medical care utilization was administered four times, while it was administered three times in the 2001 Panel. This should allow us to estimate fixed effect models that condition on time-invariant child characteristics. Models with family fixed effects, in which parameters are estimated using additional within-family variation, are also possible.

Another substantive way we plan to improve the research is by making stronger connections to public policy. The first way to do this is to include eligibility for public coverage in the analysis. For instance, it is important to understand how coverage stability is related to eligibility for public insurance. In addition to the income eligibility limits for SCHIP and Medicaid, other features of those programs can influence the continuity of coverage. For example, while the requirement that children be uninsured for a minimum period of time before enrolling in SCHIP may reduce transitions out of private insurance, they may also increase spells without insurance for some children. And administrative rules pertaining to the redetermination of eligibility are likely to affect the extent of churning. We plan to examine how these different policy parameters affect the continuity of coverage and measures of access to care.

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Figure 1. Months Uninsured Among Children with at Least One Spell, by Income Quartile
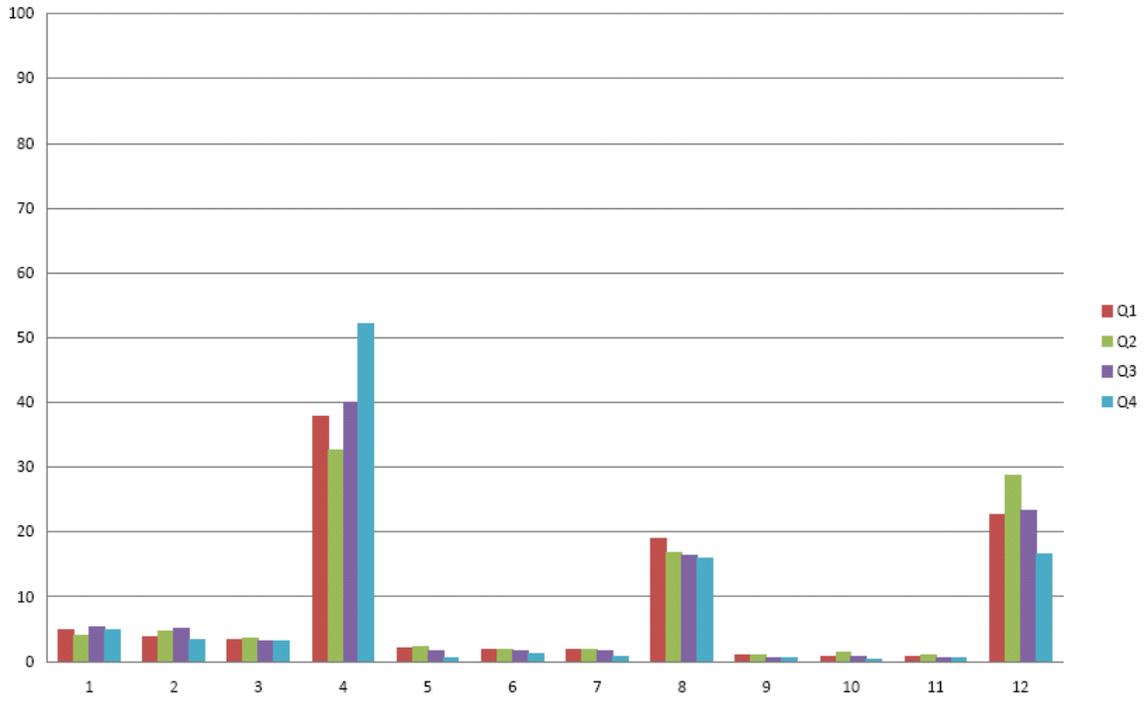
Figure 2. Months with Public Insurance Among Children with at Least 1 Spell, by Income Quartile
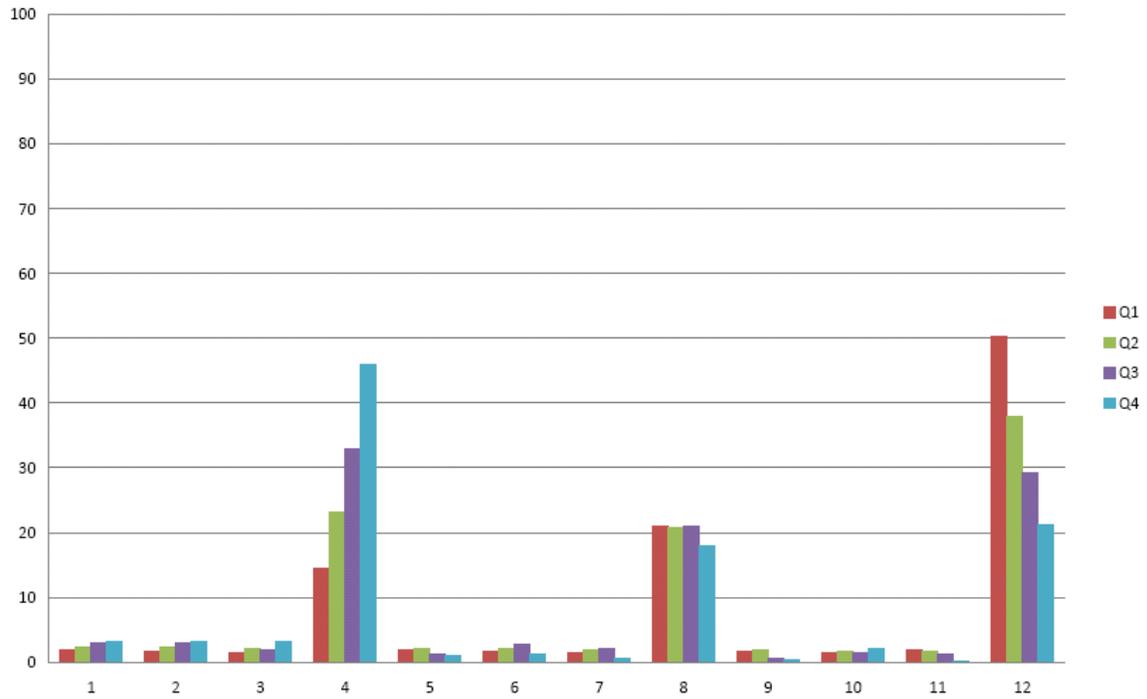
Figure 3. Months with Private Insurance Among Children with at Least 1 Spell, by Income Quartile
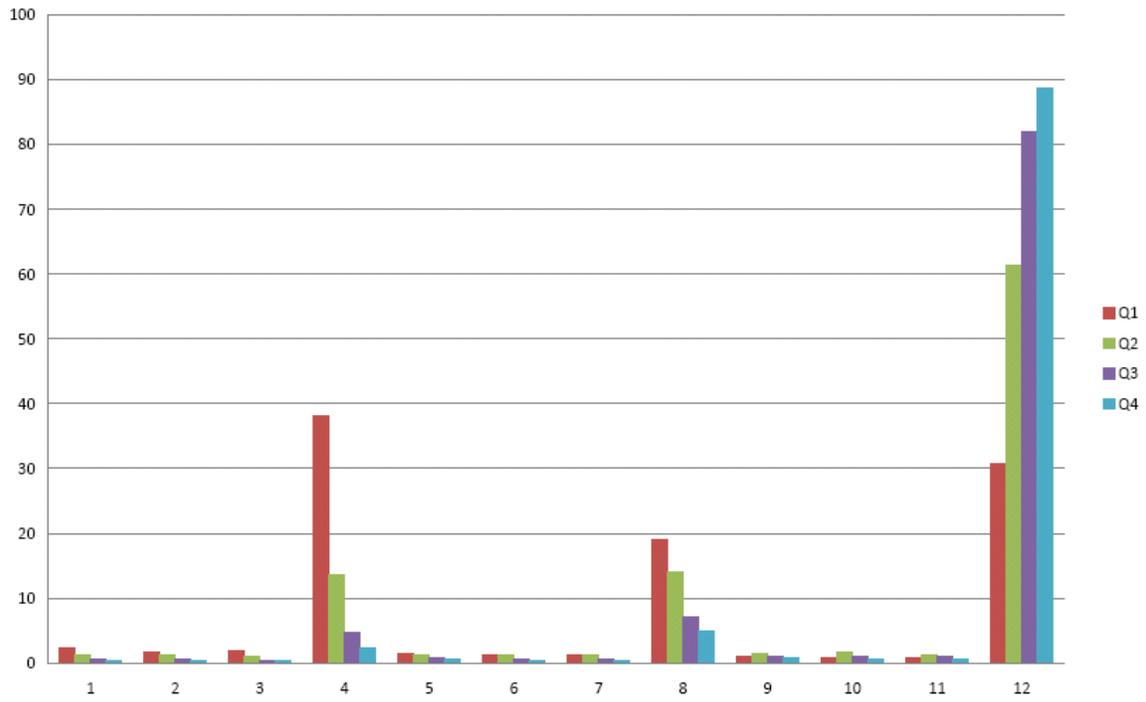
Table 1. Insurance Coverage over the Prior Twelve Months

	Full Sample	First	By Income Quartile Second	Third	Fourth
% same insurance all year	78.6%	63.8%	70.6%	86.3%	92.8%
% uninsured at some point	25.7	42.5	36.4	16.6	8.3
% uninsured full year	6.8	10.9	10.9	4.1	1.5
Mean months uninsured	1.72	2.80	2.57	1.07	0.48
	(3.45)	(4.00)	(4.07)	(2.82)	(1.87)
% public at some point	28.5	71.8	32.6	8.7	2.6
% public full year	14.2	40.7	13.6	2.7	0.6
Mean months public	2.47	6.57	2.66	0.64	0.16
	(4.33)	(5.00)	(4.34)	(2.32)	(1.15)
% private at some point	75.6	38.2	72.2	92.8	97.9
% private full year	48.5	13.3	47.2	79.9	91.0
Mean months private	7.86	2.80	7.02	10.23	11.17
	(5.14)	(4.20)	(5.16)	(3.63)	(2.47)
% both private and public at some point	10.9	20.9	15.7	5.6	1.9
Number of observations	117,780	28,661	29,469	29,844	29,806

Table 2. Coverage over the Prior 12 Months by Insurance Status at Time of Interview

	By Point in Time Insurance Status		
	Uninsured	**Public**	**Private**
All Children			
% with same coverage all year	46.4%	67.9%	88.4%
% uninsured at all during year	100.0	25.9	9.5
Mean months uninsured	8.34	1.18	0.42
	(3.62)	(2.29)	(1.45)
% with public at all during year	27.2	100.0	9.5
Mean months with public	1.54	9.85	0.68
	(2.79)	(3.11)	(2.36)
% with priv. insurance during year	32.7	19.7	100
Mean months private insurance	1.94	0.95	11.00
	(3.09)	(2.09)	(2.39)
Number of observations	17,239	21,316	79,225
[percent of sample]	[14.6]	[18.1]	[67.3]
First Income Quartile			
% with same coverage all year	45.4%	71.8%	65.1%
% uninsured at all during year	100.0	23.9	25.2
Mean months uninsured	8.19	1.06	1.18
	(3.59)	(2.17)	(2.31)
% with public at all during year	41.0	100.0	43.5
Mean months with public	2.39	10.06	3.40
	(3.21)	(2.99)	(4.51)
% with priv. insurance during year	21.5	16.0	100
Mean months private insurance	1.10	0.73	8.69
	(2.32)	(1.82)	(3.58)
Number of observations	6,874	14,660	7,127
[percent of sample]	[5.8]	[12.4]	[6.1]
Fourth Income Quartile			
% with same coverage all year	35.0%	46.7%	95.8%
% uninsured at all during year	100.0	39.4	4.0
Mean months uninsured	7.44	2.00	0.17
	(3.67)	(2.78)	(0.89)
% with public at all during year	5.5	100.0	1.6
Mean months with public	0.26	8.04	0.09
	(1.21)	(3.63)	(0.82)
% with priv. insurance during year	61.9	35.7	100
Mean months private insurance	4.17	1.98	11.56
	(3.69)	(3.05)	(1.64)
Number of observations	1,244	246	28,316
[percent of sample]	[1.1]	[0.2]	[24.0]

Table 3. The Probability of at Least One Physician Visit by Insurance Status and Income

| | All Children | By Income Quartile | | | |
		First	Second	Third	Fourth
All Children	.681	.623	.630	.705	.764
By Coverage at Time of Survey					
Uninsured at survey	.467	.472	.444	.487	.513
Public insurance at survey	.675	.676	.671	.673	.646
Private insurance at survey	.730	.658	.685	.730	.776
By Full-Year/Part-Year Status					
Uninsured full year	.412	.446	.372	.440	.389
Public insurance part year	.601	.583	.615	.620	.674
Public insurance full year	.704	.699	.705	.755	.735
Private insurance part year	.612	.597	.616	.623	.633
Private insurance full year	.743	.692	.696	.734	.781
By Months Uninsured					
Insured full year	.731	.691	.694	.733	.780
1 to 4 months uninsured	.604	.587	.602	.619	.650
5 to 8 months uninsured	.539	.518	.546	.565	.587
9 to 12 months uninsured	.413	.438	.384	.444	.399

Table 4. Regression Results: Insurance Coverage and the Probability of at Least One Physician Visit

	Full Sample	By Income Quartile			
		First	Second	Third	Fourth
Insurance at Time of Survey					
Public as of Survey	.142	.152	.152	.114	.045
	(.005)	(.007)	(.008)	(.014)	(.023)
Private as of Survey	.185	.119	.185	.210	.239
	(.004)	(.007)	(.007)	(.010)	(.015)
Insurance CoveragePast Year—Categorical					
Public Part-Year	.057	.079	.075	.005	.008
	(.005)	(.008)	(.008)	(.013)	(.020)
Public Full-Year	.179	.190	.193	.176	.115
	(.006)	(.009)	(.010)	(.018)	(.040)
Private Part-Year	.077	.026	.117	.128	.168
	(.005)	(.007)	(.008)	(.014)	(.024)
Private Full-Year	.223	.184	.232	.243	.310
	(.005)	(.010)	(.008)	(.013)	(.023)
Insurance Coverage Past Year—Months by Type					
Months Public	.016	.017	.016	.011	.008
	(.000)	(.001)	(.001)	(.001)	(.003)
Months Private	.020	.015	.020	.020	.026
	(.000)	(.001)	(.001)	(.001)	(.001)
Insurance Coverage Past Year—Months Insured					
Months Insured	.024	.021	.023	.023	.030
	(.0005)	(.001)	(.001)	(.001)	(.002)
Number of Observations	117,780	28,661	29,469	29,844	29,806

Notes: Covariates include indicator variables for age (15 categories), health status (4), year (9), state of residence (48), gender, family headed by single mother and continuous measures of family income at time of survey, average family income over preceding 12 months, and the range of monthly income normalized by the mean.

Table 5. Regression Results: Insurance Coverage and the Probability of At Least One Physician Visit, Alternative Samples

	Age 0-4	Age 5-9	Age 10-12	Age 13-15
Coverage Point-in-Time				
Public as of survey	.121	.147	.160	.152
	(.008)	(.008)	(.001)	(.011)
Private as of survey	.166	.189	.187	.207
	(.008)	(.008)	(.009)	(.010)
Coverage Past Year				
Public Part-Year	.046	.053	.077	.047
	(.009)	(.009)	(.012)	(.012)
Public Full-Year	.141	.188	.217	.189
	(.010)	(.010)	(.013)	(.013)
Private Part-Year	.063	.076	.080	.094
	(.009)	(.009)	(.011)	(.011)
Private Full-Year	.200	.230	.230	.236
	(.009)	(.009)	(.011)	(.011)
Coverage Past Year				
Months Public	.012	.016	.019	.016
	(.001)	(.001)	(.001)	(.001)
Months Private	.018	.021	.021	.021
	(.001)	(.001)	(.001)	(.001)
Coverage Past Year				
Months Insured	.023	.024	.023	.023
	(.001)	(.001)	(.001)	(.001)
Number of observations	34,376	37,931	23,071	22,402

Notes: Covariates include indicator variables for age (15 categories), health status (4), year (9), state of residence (48), gender, family headed by single mother and continuous measures of family income at time of survey, average family income over preceding 12 months, and the range of monthly income normalized by the mean.

Table 6. The Effect of Public-Private Transitions on Utilization

| | Full Sample | By Income Quartile | | | |
		First	Second	Third	Fourth
Full Year Public	.056	.056	.047	.098	.053
	(.008)	(.012)	(.013)	(.022)	(.046)
Full Year Private	.076	.063	.048	.108	.169
	(.008)	(.013)	(.013)	(.021)	(.041)
Number of observations	87,456	16,481	18,746	24,890	27,339

Notes: The sample is limited to children who are reported to have some type of health insurance for all 12 months. Covariates include indicator variables for age (15 categories), health status (4), year (9), state of residence (48), gender, family headed by single mother and continuous measures of family income at time of survey, average family income over preceding 12 months, and the range of monthly income normalized by the mean.