

The Effects of Trigger Events on Changes in Children's Health Insurance Coverage

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The Effects of Trigger Events on Changes in Children's Health Insurance Coverage

EXECUTIVE SUMMARY

Changes in children's health insurance coverage occur with far greater frequency than the modest year-to-year changes in the proportion uninsured or the proportion with different types of coverage would suggest. We present evidence that in the one-year period from July 1993 through June 1994 there were more than 23 million instances of children changing their coverage among major types of insurance or between covered and uninsured--one change for every three children. Understanding the dynamics of health insurance coverage is important in designing effective strategies to cover the uninsured, and for this reason there is a need to look at the factors that may account for the frequent changes in children's coverage. This report uses data from the 1992 Survey of Income and Program Participation (SIPP) to investigate the role of one set of factors--"trigger events" or sudden changes in the economic situation or composition of the family--in bringing about changes in children's health insurance coverage.

How Often Do Children Change Coverage?

We examined changes among three sources of coverage--employer-sponsored insurance (ESI), Medicaid, and other, primarily private insurance--plus a fourth status: uninsured. Table 1 summarizes our findings. It shows how children were distributed by major source of coverage and how many changes in coverage, or transitions, were recorded among these major types of coverage over a 12-month period. Transitions out of uninsurance and transitions out of ESI were the most common at 7.8 million and 7.2 million, respectively, although the 5.9 million transitions out of Medicaid were not much fewer. What is particularly important to note is how the numbers of changes in coverage compare to the average numbers of children who were in these states at any one time. The total transitions out of uninsurance were 87 percent of the number who were uninsured at any one time, and the transitions out of other insurance were 87 percent of the average number covered by other insurance. Transitions out of Medicaid were about 45 percent of the average enrollment while transitions out of ESI were only 17 percent of the total covered.

Table 1

Changes in Children's Health Insurance Coverage, July 1993 to June 1994

Source of Coverage	Average Number of Children in Group	Number of Transitions Out of Source	Percent of Source	Number of Transitions Into Source	Percent of Source
Employer-sponsored	41,846,000	7,178,000	17.2	7,151,000	17.1
Medicaid	13,192,000	5,879,000	44.6	5,472,000	41.5

Other insurance	2,792,000	2,438,000	87.3	2,694,000	96.5
Source not reported	3,888,000	--	--	--	--
Uninsured	9,001,000	7,830,000	87.0	8,038,000	89.3
Total	70,719,000	23,325,000	33.0	23,325,000	33.0

SOURCE: Survey of Income and Program Participation, 1992 Panel.

Transitions *into* each of the coverage statuses were nearly identical to the exits, explaining why we see so little change in the aggregate distribution of coverage from year to year. The uninsured and those with other insurance grew by 200 to 300 thousand over the year while Medicaid declined by about 400 thousand.

Destination statuses were distributed very differently depending on the type of coverage that children were leaving. Just over half of the children who left ESI became uninsured--more than 3.6 million. The remainder were about equally likely to enroll in Medicaid or to obtain other insurance. The 7.8 million children who left uninsurance obtained ESI or Medicaid with about equal frequency whereas the 5.9 million who left Medicaid ended up uninsured more than two times out of three.

Do Children Return to Their Original Coverage?

The nearly equal numbers of transitions into and out of each coverage status raise questions about the source of this near-equilibrium. Do children return to their original source of coverage? Indeed, many do. Children who changed their health insurance coverage often changed it again in the next four months--the interval between SIPP interviews. About 40 percent of all changes were followed by a second change within this time span, and four out of five of these (or 32 percent overall) involved a return to the original source of coverage. What may be of more importance, however, is how this phenomenon varied across types of transitions. Depending on both the original source and the destination, the frequency with which an initial change was followed by a second change ranged from 23 to 64 percent. Children leaving ESI were the most likely to have a second transition and the most likely to return to their original source of coverage, whereas children who moved *into* ESI were the *least* likely to have a second transition, doing so only 23 to 24 percent of the time.

Movements between ESI and Medicaid are of particular interest to policymakers seeking to cover the uninsured without drawing children out of employer-based coverage. It is noteworthy, then, that the children who were most likely to change their coverage again and the most likely to return to their original coverage were those who moved from ESI to Medicaid. For these children, 64 percent changed their coverage again in the next four months, and 55 percent returned to ESI. At the same time, children who moved from Medicaid to ESI were the *least* likely to change their coverage again in the next four months. Only 23 percent of the children who moved from Medicaid to ESI changed their coverage again in the next four months, and less than 16 percent of those who left Medicaid returned to Medicaid in four months.

To What Extent Do Parents Change Coverage with Their Children?

Parents mirrored their children's changes in coverage more than half the time. When they did not, the children split about equally between those whose parents kept the coverage that the children exited and those whose parents did not share the same coverage that their children exited. For the most part these

patterns are explained by the way in which children obtain their coverage, with ESI and other insurance being obtained via a covered parent and Medicaid becoming increasingly available to children *without* their parents' participation. What perplexed us most was the finding that among children moving from ESI to Medicaid, two-thirds had parents who retained their ESI. Our earlier findings indicate that half of these transitions from ESI to Medicaid were reversed within four months. Nevertheless, the circumstances surrounding these transitions merit further research.

It was also noteworthy that about one-fifth of the 7.5 million children who lost ESI or Medicaid and became uninsured had parents who reportedly retained their own coverage. These transitions invite additional research as well.

What Potential Trigger Events Precede Changes in Coverage?

Events representing changes in the parents' employment status, jobs, or hours worked; family income; family headship or size; and participation in AFDC were shown to have occurred with greater frequency among children who experienced transitions in health insurance coverage than among children who did not. Depending on the type of transition, between 29 and 50 percent of transitions were accompanied by trigger events in the preceding month, and between 53 and 75 percent had trigger events in the preceding six months. The strongest association between potential trigger events and transitions appeared among children who lost ESI and became uninsured. Children who moved from ESI to Medicaid showed weaker evidence of employment or income-related events, which is consistent with the finding that two-thirds of their parents retained ESI, but we find no suggestion of what else may have helped to produce these changes in coverage. Parents' gains in employment and changes in family income appeared important in moving children out of other insurance, but this was as true of children who lost all coverage as it was of children who obtained ESI. Other than the loss of AFDC, possible trigger events were generally weakest in their influence and perhaps the most inconsistent among children who left Medicaid.

How Do Trigger Events Affect the Likelihood of Changes in Coverage?

Regression analysis of the effects of particular events on the likelihood that children who have a given type of insurance coverage (or none at all) will experience a transition to a specific other type of coverage indicates the following.

Children with ESI. Loss of employment, reduction in hours, and changes in jobs by either parent had a significant effect on children moving from ESI to uninsured--as did a marked drop in family income and a decline in family size. Only the parents' loss of employment or a parent leaving the family affected moves from ESI to Medicaid, however, while the father's reduction in hours and either a marked rise or fall in family income contributed to children leaving ESI for other insurance.

Children without Insurance. Events with a significant effect on the likelihood of uninsured children becoming covered by ESI were limited to an increase in the hours worked by either parent, a marked rise in family income, and a parent joining or rejoining the family. The mother's change in jobs or loss of employment and a parent joining or leaving the family had significant effects on the likelihood of an uninsured child gaining coverage through Medicaid. The mother's changing jobs also contributed to children becoming reinsured through other insurance, as did a marked rise or fall in family income. An increase in family size significantly *reduced* the likelihood of a child obtaining coverage through other insurance, however.

Children with Medicaid. The family's loss of AFDC, the father's gaining employment, and the mother

increasing her hours of work to 30 or more had significant effects on the likelihood that a child would leave Medicaid *either* by obtaining ESI or becoming uninsured. The loss of AFDC had a stronger effect on the odds of a child becoming uninsured than obtaining ESI. The mother's changing jobs also contributed to the likelihood that a child became reinsured by obtaining ESI while the father's loss of employment and either a marked rise or fall in family income contributed significantly to children leaving Medicaid and becoming uninsured, although the mechanisms behind the effects of job loss and falling income are not obvious.

Children with Other Insurance. The mother's changing jobs or the father's increasing his hours worked had significant effects on children changing their coverage from other insurance to ESI while the father's losing employment or the family's income falling markedly contributed to children moving from other insurance to uninsured. Either parent's gaining employment also increased the odds of children moving from other insurance to uninsured, which is difficult to understand unless it represents parents dropping expensive private coverage in anticipation of ESI that will be available following a brief waiting period.

What Does This Analysis Tell Us About Why Transitions Are So Numerous?

While we did not address this macro level question explicitly, trigger events provide a mechanism that is capable of accounting for the volume of transitions--and for changes that may develop over time. The events that we examined occurred with varying frequency in the different coverage groups, and when particular events occurred the children who experienced them often experienced changes in their health insurance coverage shortly thereafter. For children with ESI, 15 to 30 percent left ESI in the next four months. For uninsured children, 35 to 45 percent became insured in the next four months. Many of the events that we examined are potentially sensitive to changes in the economy. If particular events become more frequent or less frequent, will the transitions with which they are associated be affected as well? The question is important, but to answer it we need to observe changes in the frequency of events and then assess their impact on transitions. Comparison of the late 1990s with the earlier years included in this study may provide the material with which to answer this question.

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The Effects of Trigger Events on Changes in Children's Health Insurance Coverage

A. INTRODUCTION

Data from repeated cross-section surveys such as the Current Population Survey (CPS) or the National Health Interview Survey (NHIS) show little year-to-year change in the proportion of children who are without health insurance or the proportion who are covered by specific types of insurance, even when there are clear upward or downward trends. The modest year-to-year change in the aggregate distribution of health insurance coverage among children masks a substantial amount of movement among coverage statuses by children each year, however. We present evidence that in the one-year period from July 1993 through June 1994 there were more than 23 million instances of children changing their coverage among major types of insurance or between covered and uninsured--nearly one change for every three children. What accounts for these frequent changes in coverage? This report examines the role of "trigger events"--primarily changes in the family economic situation or family composition--in bringing about these changes in health insurance coverage. In short, we ask whether there are other changes in the family that may help to explain the occurrence of these changes in coverage or their timing. We examine a broad spectrum of changes in coverage rather than focusing on a small set of transitions so that we can better understand how particular changes fit into the big picture of health insurance dynamics and so that our findings with regard to particular transitions can be informed by what we observe for other types of transitions.

We focus on trigger events rather than personal characteristics that may predispose children to greater or lesser probabilities of change because of their potential to explain both the volatility of health insurance coverage for a segment of the population and perhaps the trends in aggregate coverage as well. The trigger events that we examine include changes in parents' employment status, jobs, and hours worked; changes in AFDC reciprocity; large swings in family income; and changes in family headship and family size. A notable exclusion from the types of events that we could examine is change in the availability and costs to employees of family coverage offered by employers. Data of this kind were not collected in the earlier SIPP panels, and the limited information that is being collected in one wave of the latest (1996) SIPP panel has not yet been released. Moreover, there are no nationally representative data that would allow us to look at *change* in the coverage offered by parents' employers as a factor in the gain or loss of employer-sponsored coverage for children.

The report is organized as follows. In Section B we describe our data source and the methodology that we use to identify trigger events and estimate their relative influence. Section C presents estimates of the frequency of different types of transitions in health insurance coverage among children, and Section D examines how often parents exhibit the same transitions as their children. Section E provides estimates of the frequency of prior events that may help to trigger the transitions documented in Section C. Section F analyzes the effects of trigger events, and Section G discusses the implications of our findings and summarizes our key conclusions.

The Effects of Trigger Events on Changes in Children's Health Insurance Coverage

B. Data and Methods

1. Data

The data source for this analysis is the 1992 panel of the Survey of Income and Program Participation (SIPP), which interviewed a nationally representative sample of household residents every four months over a span of three years and collected monthly data on health insurance coverage, family composition, family and personal income by detailed source, and a variety of additional variables. SIPP is thus an excellent source with which to measure transitions in health insurance coverage and to identify potential trigger events.

The most recent SIPP panel was started in 1996 and ran through the end of 1999, but the first longitudinal data file from this panel, which will cover 1996 and 1997, is not scheduled for release until March 2001. The next most recent panels, which were started in 1992 and 1993, cover about three years each.⁽¹⁾ We selected the 1992 panel because we had worked with it previously and because comparisons with other data suggest that the 1993 panel overstates the number of families below poverty. We focus our analysis upon transitions occurring between July 1993 and June 1994 to give us a representative set of transitions occurring late in the life of the 1992 panel and to allow us to look forward several months past the last transitions (September 1994 is the final month for which all components of the health insurance measures are available for the full longitudinal sample). While these data are nearly six years old, they nevertheless provide a rich source of information on transitions in health insurance coverage and the events that may help to precipitate them. Undoubtedly, whatever these data can tell us about the events that trigger changes in health insurance coverage remains relevant as we enter the next decade.

A transition in health insurance coverage involves both an exit, from the first coverage or origin, and an entry, into the second coverage or destination. Each type of exit or entry may be associated with a different set of potential trigger events, which suggests that we examine different types of transitions separately. We elected to group the transitions by the coverage that precedes the transition--that is, the original coverage. We examined transitions among four distinct sources of coverage: employer-sponsored insurance (ESI), Medicaid, other insurance, and a lack of coverage. ESI includes all coverage obtained through a current or former employer, whether or not the employer pays any part of that coverage.⁽²⁾ "Other insurance" may include both privately purchased insurance and public insurance other than Medicaid or Medicare, which respondents identify directly, but from the survey questions we know only that such coverage was obtained in some way other than through a current employer or union, former employer, or the CHAMPUS or CHAMPVA programs.⁽³⁾ Children may also have coverage that is not described adequately enough to be assigned to one of the three general sources of coverage. This is particularly true of children whose coverage is provided by an adult who lives outside the household--a divorced parent in most cases. While most of this unknown coverage is ESI, we elected not to assign such coverage to ESI but to exclude it from our typology altogether. Thus, movements into or out of

unknown coverage are not counted among the transitions that we examine.⁽⁴⁾

While SIPP captures health insurance coverage on a monthly basis, the reporting of changes in health insurance coverage--as well as other types of transitions--is characterized by a substantial "seam bias." That is, reported transitions of many kinds fall disproportionately *between* rather than *within* the four-month reference periods for which the interviews collect data. If the timing of transitions were reported correctly, only one in four transitions would occur at the seams between reference periods. Instead, for the types of transitions in health insurance coverage that we examine in this report, between 66 and 99 percent were reported to have occurred at the seams (see Appendix Table A.1).⁽⁵⁾ The seam bias for potential trigger events was weaker, with 34 to 76 percent of these changes being reported between rather than within reference periods. The seam bias affects the reported data in several ways that are relevant to our research. Both the temporal proximity and the sequencing of events may be misstated. Short spells are almost certainly underreported, and spell durations show a substantial heaping at multiples of four months. To use these data to investigate the impact of trigger events on transitions in health insurance coverage requires a number of accommodations, which we will discuss as we review our methodology and findings.

2. Methodology

To perform the analyses reported herein, we constructed a dataset consisting of 11-month snapshots providing measures of health insurance coverage and a variety of parental and family characteristics. Each snapshot consisted of data from a focal month, m , plus the next four months and the preceding six months.⁽⁶⁾ Month m was any of the 12 months from July 1993 through June 1994. We aggregated these snapshots into a single database. A sample child who was in the universe of children under 19 for the entire period and was covered by ESI, Medicaid, other insurance or was uninsured is represented 12 times--once for each 11-month sequence. A child who was born into or who aged out of the universe of children during the year or was covered by an unknown source of insurance at any time is represented for only those months m in which the child was a member of the universe.⁽⁷⁾

Footnotes:

1. The 1992 panel collected calendar month data from January 1992 through December 1994 while the 1993 panel collected calendar month data from January 1993 through September 1995.
2. Thus coverage obtained under COBRA would be included under ESI. While it might have been useful to separate out such coverage in order to show transitions between coverage provided by the employer and coverage that a former employee was maintaining at his or her own expense, only about a quarter million children at any one time were reported to be insured with coverage that we interpret as COBRA, and there were too few sample observations of transitions between this coverage and broader ESI to support detailed analysis.
3. For the population of children, coverage under Medicare is exceedingly rare. In our SIPP sample there are only two children who were reported to have had Medicare coverage at any time between June 1993 and June 1994, and for one of these children the coverage changed to Medicaid. Rather than group Medicare with much more common forms of "other" coverage, or with Medicaid, we excluded it from our typology. Therefore, movements into or out of Medicare are not included among the transitions that we examine.

4. Many such movements may not involve actual transitions at all, or relevant trigger events may be unobserved (as is often true when the source of coverage is someone outside the survey household). Arguably, transitions between unknown coverage and a lack of coverage should be treated differently and counted among the transitions that we examine. Such transitions were rare, however, and may reflect excessive reporting error. Furthermore, when the coverage that preceded or followed a spell of uninsurance was provided by persons outside the household, we lack measures of key trigger events.

5. The types of reporting error that produce this seam bias are not peculiar to SIPP nor limited to longitudinal surveys. While some aspects of the seam bias in SIPP are unique to the SIPP design and may be accentuated by features of the SIPP questionnaires, misreporting of the starting and ending dates of spells and whether or not a spell occurred at all during a reference period is distressingly common (Moore et al. 1999; Mathiowetz forthcoming).

6. The asymmetry grows out of the two distinct analytical approaches that the dataset was designed to support and the different ways in which the SIPP seam bias was deemed relevant to either. These analytical approaches are discussed below.

7. For simplicity and based on what we knew of the SIPP seam effect, we captured most of our data items for only a subset of months (specifically, $m-6$, $m-1$, m , and $m+4$). We identified events and transitions by comparing selected pairs of months, as we will explain in the discussion of our findings. In so doing, we may have lost some events and transitions, but only if they were quickly reversed. It is a feature of this dataset that transitions measured between months $m-1$ and m will sum to the annual total of transitions occurring between July 1993 and June 1994.

We approached the analysis of trigger events in two ways. The first involved looking backwards from transitions observed between months $m-1$ and m to identify events that occurred with disproportionately high frequency among children with transitions compared to children without transitions. The second involved looking *forward* from *events* observed between these same two months to determine how often the events were followed by specific transitions. This second approach lent itself to the application of regression analysis to determine the extent to which alternative events predicted transitions and to generate estimates of the net effects of the impact of these alternative events.

With both approaches we had to contend with two general problems affecting the relative positioning of potential trigger events and the transitions with which they were associated. First, because of the seam bias in the reporting of change in the SIPP, events and transitions that occurred as much as a few months apart could be reported as occurring in the same month. This made it important to look for potential trigger events not only in prior months but in the same month as the transition. Second, as we detail in the next section, an additional transition often preceded or followed any transition that we observed. Events that were associated with the second transition could occur at the same time as or even prior to the first transition, creating spurious associations. The design of the regression analysis was intended to limit the effects of paired transitions.

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C. FREQUENCY OF TRANSITIONS

Table 1 reports the average number of children who reported each major source of coverage between July 1993 and June 1994, including the number who were uninsured and the number who were reported as insured but with missing information on the actual source of coverage. The number of transitions out of each category of coverage (except the one indicating source not reported) and the number of transitions *into* each category are presented as well.

Altogether there were 23 million transitions among the types of coverage listed in Table 1, excluding any that began or ended with an unknown source. With an average population size of 70.7 million children over this period this amounts to one transition for every three children. Transitions out of uninsurance and transitions out of ESI totaled 7.8 million and 7.2 million, respectively. In addition to these there were 5.9 million transitions out of Medicaid and 2.4 million transitions out of other insurance. The 7.8 million transitions out of uninsurance compare to an average monthly uninsured child population of about 9 million. While the nearly 8 million transitions may reflect some children becoming reinsured twice during the year, we have shown elsewhere that turnover among uninsured children is very high, with about half the children who were uninsured at the end of a year being a different group of children than those who were without insurance at the beginning of the year (Czajka 1999). Transitions out of other insurance represented 87 percent of the number covered by other insurance at any one time, whereas the exits from Medicaid were about 45 percent of the average monthly reported enrollment. Transitions out of ESI were only 17 percent of the total ESI coverage, but this is hardly an insignificant fraction.

Table 1
Changes in Children's Health Insurance Coverage, July 1993 to June 1994

Source of Coverage	Average Number of Children in Group	Number of Transitions Out of Source	Percent of Source	Number of Transitions Into Source	Percent of Source
Employer-sponsored	41,846,000	7,178,000	17.2	7,151,000	17.1
Medicaid	13,192,000	5,879,000	44.6	5,472,000	41.5
Other insurance	2,792,000	2,438,000	87.3	2,694,000	96.5
Source not reported	3,888,000	--	--	--	--
Uninsured	9,001,000	7,830,000	87.0	8,038,000	89.3
Total	70,719,000	23,325,000	33.0	23,325,000	33.0

SOURCE: Survey of Income and Program Participation, 1992 Panel.

Transitions *into* each category of coverage were very nearly equal to the transitions out of each category--consistent with the findings of cross-sectional surveys that the distribution of children among types of coverage (or lack of coverage) changes very little from year to year. Comparison of the transitions out from and into each category of coverage suggests minimal net change in the number of children with ESI, a decline of about 400,000 in the number with Medicaid, and increases of 200,000 to 300,000 in the numbers with other insurance or no insurance.

1. Transitions Between Types of Coverage

Sample counts and population estimates of the transitions that are the focus of this study are reported in Table 2A along with the percentage distribution of the total transitions. The transitions are grouped by the status of origin. In Table 2B the transitions are grouped by the destination status. For the 12-month period from July 1993 through June 1994 the SIPP provides 3,753 sample observations of the 12 types of transitions.

Just over half of the children who left ESI became uninsured--more than 3.6 million. Those who obtained coverage from another source instead were about equally likely to enroll in Medicaid or to obtain other insurance. The 7.8 million children who left uninsured obtained ESI or enrolled in Medicaid with about the same frequency whereas the 5.9 million who left Medicaid ended up uninsured more than two times out of three. Of those who obtained insurance from another source after leaving Medicaid, 90 percent or 1.8 million out of 2 million obtained ESI. Children who left other insurance tended to report ESI as their next source of coverage. Nearly three out of four or 1.8 million children who left other insurance did so while about half a million became uninsured and 100,000 enrolled in Medicaid.

Something else that is evident in Table 2A is that forward and backward transitions between a given pair of coverage statuses tended to occur with similar frequency. For example, 3.6 million children moved from ESI to uninsured during the year while 3.5 million moved from uninsured to ESI. Similarly, 3.6 million moved from uninsured to Medicaid while 3.9 million moved from Medicaid to uninsured; 1.7 million moved from ESI to Medicaid while 1.8 million moved from Medicaid to ESI; and 1.8 million moved from ESI to other insurance while 1.8 million also moved from other insurance to ESI.

These patterns of reciprocal movement help to explain why we see relatively little change in the distribution of children's health insurance coverage between one year and the next despite observing such a high volume of transitions. The near equivalence of forward and reverse transitions between almost any given pair of insurance types prompted us to ask whether a large part of this phenomenon could be attributed to behavior at the micro-level--that is, individual children moving from one type of coverage to another and then returning to their original coverage after a relatively short amount of time.⁽⁸⁾ We found that this was indeed the case but to differing degrees for different types of transitions.

TABLE 2A
SAMPLE COUNTS AND POPULATION ESTIMATES OF SELECTED TRANSITIONS IN
CHILDREN'S HEALTH INSURANCE COVERAGE: JULY 1993 TO JUNE 1994

Type of Transition	Sample Count	Population Estimate	Percent of All Transitions
All Children Under 19	11,666	70,719,000	
Total Number of Transitions	3,753	23,325,000	100.0
Transitions from ESI to:	1,203	7,178,000	30.8
Uninsured	605	3,619,000	15.5
Medicaid	278	1,720,000	7.4
Other Insurance	320	1,840,000	7.9
Transitions from Uninsured to:	1,237	7,830,000	33.6
ESI	584	3,546,000	15.2
Medicaid	549	3,640,000	15.6
Other Insurance	104	645,000	2.8
Transitions from Medicaid to:	897	5,879,000	25.2
Uninsured	578	3,872,000	16.6
ESI	285	1,798,000	7.7
Other Insurance	34	209,000	0.9

Transitions from Other Insurance to:	416	2,438,000	10.5
ESI	306	1,777,000	7.6
Uninsured	91	547,000	2.3
Medicaid	19	113,000	0.5

SOURCE: Survey of Income and Program Participation, 1992 Panel.

NOTE: The number of children reported in the first line refers to the average number under 19 at any one time, whereas the counts of transitions represent annual estimates.

TABLE 2B

SAMPLE COUNTS AND POPULATION ESTIMATES OF SELECTED TRANSITIONS IN CHILDREN'S HEALTH INSURANCE COVERAGE: JULY 1993 TO JUNE 1994

Type of Transition	Sample Count	Population Estimate	Percent of All Transitions
All Children Under 19	11,666	70,719,000	
Total Number of Transitions	3,753	23,325,000	100.0
Transitions to ESI from:	1,175	7,121,000	30.5
Uninsured	584	3,546,000	15.2
Medicaid	285	1,798,000	7.7
Other Insurance	306	1,777,000	7.6
Transitions to Uninsured from:	1,274	8,038,000	34.5
ESI	605	3,619,000	15.5
Medicaid	578	3,872,000	16.6
Other Insurance	91	547,000	2.3
Transitions to Medicaid from:	846	5,472,000	23.5
Uninsured	549	3,640,000	15.6
ESI	278	1,720,000	7.4
Other Insurance	19	113,000	0.5
Transitions to Other Insurance from:	458	2,694,000	11.5
ESI	320	1,840,000	7.9
Uninsured	104	645,000	2.8
Medicaid	34	209,000	0.9

SOURCE: Survey of Income and Program Participation, 1992 Panel.

NOTE: The number of children reported in the first line refers to the average number under 19 at any one time, whereas the counts of transitions represent annual estimates.

2. Secondary Transitions

Table 3 reports how often each of the 23 million transitions was followed by a second transition within the next four months--that is, by the next SIPP interview--and the frequency with which the initial transitions were reversed by these

second transitions. Altogether, 40 percent of the 23 million transitions were followed by a second transition within the next four months, and 33 percent were reversed.^{(9), (10)} Thus more than four-fifths of the second transitions (32.6 divided by 40.3) involved a reversal of the initial transition.

TABLE 3
OCCURRENCE OF A SECOND TRANSITION WITHIN FOUR MONTHS OF THE INITIAL TRANSITION

Type of Transition	Annual Number of Transitions	Percent with a Second Transition in Next 4 Months	Outcome of Second Transition				
			Original Coverage Restored	New Coverage Status			
				ESI	Uninsured	Medicaid	Other
Total Number of Transitions	23,325,000	40.3	32.6				
Transitions from ESI to:	7,178,000	54.2	45.5				
Uninsured	3,619,000	50.3	40.2			6.7	3.4
Medicaid	1,720,000	64.4	54.6		8.5		1.4
Other Insurance	1,840,000	52.2	47.6		3.4	1.2	
Transitions from Uninsured to:	7,830,000	32.7	26.2				
ESI	3,546,000	24.4	18.6			4.5	1.3
Medicaid	3,640,000	38.0	33.3	4.1			0.6
Other Insurance	645,000	48.6	28.2	15.3		5.1	
Transitions from Medicaid to:	5,879,000	37.9	28.2				
Uninsured	3,872,000	43.9	34.5	8.6			0.8
ESI	1,798,000	22.6	15.7		5.2		1.7
Other Insurance	209,000	59.4	17.6	18.7	23.1		
Transitions from Other Insurance to:	2,438,000	30.0	25.2				
ESI	1,777,000	24.4	22.6		0.9	0.9	
Uninsured	547,000	46.2	35.7	9.6		1.0	
Medicaid	113,000	40.1	15.5	0.0	24.6		

SOURCE: Survey of Income and Program Participation, 1992 Panel.

The frequency with which transitions were followed by second transitions varied with the type of transition. Children leaving ESI were the most likely to have a second transition--54 percent of the time--and the most likely to reverse the initial transition--about 46 percent. Children leaving any of the other three coverage statuses were much less likely to have second transitions--30 to 38 percent--and much less likely to reverse their initial transitions--25 to 28 percent. The frequency of second transitions showed marked variation depending on the *destination* of the initial transition, however. Children who moved into ESI were the least likely to have a second transition, with probabilities ranging from 23 to 24 percent. Children moving into other insurance, on the other hand, were as likely to have a second transition as children leaving ESI, with probabilities ranging from 49 to 59 percent. Children moving to Medicaid from other insurance or no insurance had intermediate probabilities of experiencing second transitions, but it is noteworthy that the single transition with the highest probability of being followed by a second transition and the highest probability of being reversed was the

transition from ESI to Medicaid. For these transitions, 64 percent were followed by a second transition within four months, and 55 percent were reversed. In short, transitions from ESI to Medicaid were exceedingly temporary. At the same time, transitions in the reverse direction--from Medicaid to ESI--were the most long-lived. Only 23 percent of the children who moved from Medicaid to ESI had a second transition in the next four months, and less than 16 percent returned to Medicaid within that time frame.

Only two types of initial transitions were more likely to be followed by a transition to a third coverage status than a return to the original status. Children who left Medicaid for other insurance had a 59 percent chance of having a second transition within four months, but less than 18 percent returned to Medicaid. Instead, nearly 19 percent obtained ESI, and 23 percent became uninsured. Children who made the reverse transition initially--that is, they moved from other insurance to Medicaid--had a 40 percent chance of making a second transition within four months, but less than 16 percent returned to other insurance. All of the remainder, or about 25 percent, became uninsured. Both types of transitions were quite rare, however, and the sample sizes on which these estimates are based are quite small (see Table 2A).

It is of particular interest how often children who became uninsured had a second transition and became covered again within four months. Depending on the original coverage (ESI, Medicaid, or other insurance), between 44 and 50 percent of the children who lost coverage regained some form of coverage within four months.⁽¹¹⁾ At least three-quarters of these children returned to the same coverage that they had prior to becoming uninsured.

If all initial transitions were ultimately reversed, we would expect to observe that about one-half of our sample transitions were reversed. The other half would be secondary transitions and, therefore, not followed by reversals. Looking only four months ahead, we find that nearly half of all transitions out of ESI were reversed but only somewhat more than a quarter of other transitions. Because of the seam bias, we would have to look an additional four months ahead to see appreciably more reversals--if indeed there are many more--and for much of our sample of transitions this would take us beyond the end of the 1992 panel. Nevertheless, from what we observe we can conclude that children's reversing their transitions does indeed help to explain why we see nearly equal flows backwards and forwards between any given pair of coverage statuses. Yet the differences in the rates at which particular transitions were reversed indicate that reversals alone cannot explain the near equivalence of most forward and backward transition rates. The dynamics of transitions between types of health insurance coverage are too complex to be summarized so simply.

3. Response Error

We also considered the possibility that the frequent reversals of transitions between one SIPP interview and the next could reflect error in the reporting of health insurance coverage. Specifically, if coverage during a reference period were misreported and then corrected in the next, this would give the appearance of an initial transition followed by a reversal. One way in which such error could occur is through changes in the respondent. While the intent in the SIPP is that each adult respondent answer his or her own questions, nearly a quarter of all SIPP interviews are conducted with proxies--that is, someone in the household other than the intended respondent answers the questions for that respondent.⁽¹²⁾ A change in respondent from self to proxy occurring between one wave and the next could result in the respondent's health insurance coverage being misreported for that reference period. If the respondent returned to answer the questions in the next wave, the earlier, correct coverage could be reported again, giving the appearance of a reversal of the "transition" recorded during the previous wave.

To assess whether changes in respondent may account for a disproportionate number of reported transitions and, in particular, transitions that were reversed by the next interview, we examined the frequency with which transitions coincided with changes in respondent for the father, mother, or child 15 and older. For all children, even those 15 and older, we identified changes in the proxy status of each parent. For children 15 and older we also identified changes in their own respondent status. Any of these respondents--or their proxies--could have been responsible for reporting a child's health insurance coverage.

Our findings, presented in Table 4, indicate very clearly that we can reject the possibility that the frequent reversals of transitions between one SIPP interview and the next can be explained by changes between self- and proxy respondent. The frequency with which transitions were reported and the frequency with which they were reversed were no more common among children with changes in respondent than among children with the same respondent over the interviews

in question. In all, 28.5 percent of the estimated 23 million transitions coincided with changes in respondent, and 16.5 percent coincided with changes in respondent that were reversed at the next interview. Of the estimated 9.4 million transitions that were followed within four months by second transitions, 28.0 percent were accompanied by changes in respondent and 14.6 percent by changes in respondent that were reversed. Clearly, then, respondent changes were no more common among transitions that were followed by second transitions than they were among all transitions. Likewise, of the 7.6 million transitions that were reversed within four months, 26.1 percent coincided with changes in respondent and 13.2 percent coincided with respondent changes that were themselves reversed at the next interview. Again, these respondent changes were no more frequent among transitions that were reversed in four months than they were among all transitions.

We will review additional but more indirect evidence relating to response error in Section E.

TABLE 4
FREQUENCY WITH WHICH CHANGES IN RESPONDENT COINCIDED
WITH REPORTED TRANSITIONS IN CHILDREN'S HEALTH INSURANCE COVERAGE

Type of Transition	Annual Number of Transitions	Percent with a Change in Respondent	Percent with a Change in Respondent Reversed	Number Followed by a Second Transition	Percent with a Change in Respondent	Percent with a Change in Respondent Revealed	Number of Initial Transitions Reversed	Percent with a Change in Respondent	Percent with a Change in Respondent Reversed
Total Number of Transitions	23,325,000	28.5	16.5	9,411,000	28.0	14.6	7,593,000	26.1	13.2
Transitions from ESI to:									
Uninsured	7,178,000	29.9	17.2	3,888,000	29.3	15.1	3,268,000	27.0	14.1
Medicaid	3,619,000	29.4	16.4	1,821,000	29.9	14.7	1,455,000	28.7	13.2
Other Insurance	1,720,000	32.7	18.9	1,107,000	29.8	15.1	938,000	24.7	14.1
Transitions from Uninsured to:									
ESI	1,840,000	28.2	17.2	960,000	27.4	15.8	875,000	26.7	15.8
Medicaid	7,830,000	28.4	17.6	2,561,000	28.7	16.2	2,055,000	26.6	15.3
Other Insurance	3,546,000	32	19.7	864,000	30.9	16.5	660,000	28.5	16.2
Medicaid	3,640,000	25.6	17.0	1,384,000	25	16.1	1,214,000	21.6	14.0
Other Insurance	645,000	24.6	9.5	314,000	38.8	15.6	182,000	52.6	20.5
Transitions from Medicaid to:									
Uninsured	5,879,000	25.9	12.3	2,230,000	26.7	11.9	1,656,000	24.6	8.2

Uninsured	3,872,000	25.5	11.0	1,700,000	23.9	10.2	1,337,000	22.6	7.8
ESI	1,798,000	26	13.8	406,000	33.6	13.9	283,000	33.3	11.5
Other									
Insurance	209,000	33.1	24.6	124,000	42.7	28.5	37,000	31.2	0.0
Transitions from Other Insurance									
to:	2,438,000	30.9	20.7	732,000	23.2	15.3	614,000	24.0	14.5
ESI	1,777,000	42.4	28.4	433,000	39.2	25.8	401,000	36.7	22.2
Uninsured	547,000	97.3	62.6	253,000	30.3	23.9	195,000	36.4	28.1
Medicaid	113,000	16.4	16.4	45,000	15.4	15.4	18,000	0.0	0.0

SOURCE: Survey of Income and Program Participation, 1992 Panel.

Footnotes:

8. If the time period over which such reversals occurred were much more than a few months, we would not observe many such reversals within a one-year window.

9. These second transitions are already counted among the 23 million when they occurred within the July 1993 to June 1994 window.

10. Because of the aforementioned seam bias in the reporting of transitions, "four months" undoubtedly includes a number of transitions that happened in five or six months. If we had looked ahead six months instead of four, however, we would have found relatively few additional transitions because so many five and six month spells are reported as only four months in length.

11. The frequency with which spells of uninsurance end in four months or less has been noted in other analyses of SIPP data (see, for example, Bennefield 1998, Copeland 1998, and Czajka 1999). Again, the seam bias in the reporting of transitions overstates very substantially the extent to which these durations were exactly four months instead of two, three, five, or six. By the same token, however, spells of only a month or two in length are almost certainly underreported.

12. Children under 15 are not interviewed. Information on their health insurance coverage and other characteristics is always provided by another household member, who can change from one interview to the next.

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D. CHANGES IN PARENTS' COVERAGE

We do not regard a parent's change in coverage as a trigger event for the child's change in coverage. Rather, we think of changes in the coverage of parent and child as often having a common set of trigger events. When examined in light of changes in children's coverage, changes--or the lack thereof--in the parents' health insurance coverage can be informative with respect to the factors that may have contributed to the observed changes in children's coverage.

It is important to keep in mind how children obtain different types of health insurance coverage because it affects the relationships that we are likely to observe between children's and parents' coverage. For insurance obtained through employers, a nonworking child will be covered only as a dependent on a parent's plan. This may be less true of private insurance purchased on the open market, but what is relevant for our analysis is how SIPP captures children's coverage. For children under 15, the SIPP identifies ESI and what we are defining as other insurance only after first establishing that a responsible adult had such coverage. Therefore, if a child under 15 is reported to have ESI or other insurance, at least one parent present in the household must be reported as having the same kind of insurance.⁽¹³⁾ Generally, this holds true for older children as well. If a child loses ESI or other insurance, the parent need not lose his or her coverage, but if the parent retains coverage the implication is that the parent either dropped dependent coverage altogether or suddenly failed to include the child among those who were reported as covered. Conversely, if a child gains ESI or other insurance, then a parent must have either gained it as well or added dependent coverage to existing individual coverage. Reporting error is also possible, but the findings we have just reviewed downplay its likely importance.

Medicaid works differently--both in practice and in how SIPP captures children's coverage. While Medicaid in 1994 was still heavily associated with Aid to Families with Dependent Children (AFDC), children in non-AFDC families could qualify under special eligibility provisions, and the proportion of children who were enrolled without their parents was growing. The SIPP asks about Medicaid coverage for children regardless of whether an adult is covered, but adults who report their own enrollment in Medicaid are asked if any children, and which, are covered. We expect to see children reported as enrolling in Medicaid without their parents and children reported as leaving Medicaid despite having no parent who was covered in the previous month.

Table 5 summarizes what we found with respect to how often parents replicate the transitions reported for their children. For 55 percent of the 23 million transitions, one or both parents made the same transition as the child (column 2). Predictably, this varies by type of transition, and it varies quite a lot. When a child moved from ESI to other insurance or vice versa, a parent made the same transition in 82 percent of the cases. Similarly, when a child made a transition--in either direction--between ESI and uninsured or between other insurance and uninsured, a parent made the same transition in 72 percent to 77 percent of the cases. When the transition involved Medicaid, however, parents were less than half as

likely to make the same transition. For children who moved between Medicaid and uninsured, parents repeated the transition only 36 to 38 percent of the time. For transitions between Medicaid and ESI, parents followed their children only 22 to 26 percent of the time. Finally, for transitions involving Medicaid and other insurance, only 20 to 28 percent of the time did a parent make the same transition as the child.

TABLE 5

**PERCENTAGE OF CHILDREN WHOSE PARENTS MADE THE SAME TRANSITION
VERSUS OTHER OUTCOMES**

Percentage Distribution of Children Who Made a Transition

Type of Transition	Number of Children with Transition	Parent Made the Same Transition	Parent Left the Same Initial Coverage	At Least One Parent Retained the Same Initial Coverage	No Parent Shared the Same Initial Coverage
Total Number of Transitions	23,325,000	54.9	3.4	18.4	23.3
Transitions from ESI to:					
Uninsured	3,619,000	72.1	3.6	17.9	6.4
Medicaid	1,720,000	22.4	6.5	61.6	9.5
Other Insurance	1,840,000	82.2	1.1	14.6	2.1
Transitions from Uninsured to:					
ESI	3,546,000	74.5	2.1	1.7	21.7
Medicaid	3,640,000	35.7	5.9	34	24.4
Other Insurance	645,000	72.2	0	10.7	17.1
Transitions from Medicaid to:					
Uninsured	3,872,000	38.5	3.7	16.5	41.3
ESI	1,798,000	25.7	2.2	7.1	65
Other Insurance	209,000	19.7	8.4	13.4	58.5
Transitions from Other Insurance to:					
ESI	1,777,000	81.7	0	3.1	15.2
Uninsured	547,000	76.6	2.1	9.9	11.4
Medicaid	113,000	28.5	24.6	31	15.9

SOURCE: Survey of Income and Program Participation, 1992 Panel.

We are surprised at how often children made transitions into or out of Medicaid independently of their

parents--much more than the share of children's Medicaid enrollment that was attributable to child-only provisions. And despite the 82 percent of transitions between ESI and other insurance that included the parent, the remaining 18 percent imply a higher incidence of parents dropping or adding dependent coverage than we would have anticipated.

It was possible that a parent might have made only part of the transition along with the child--specifically, the parent might have exited the initial coverage but not moved into the same final coverage. This would appear to be especially plausible for transitions from ESI to Medicaid. Our findings do not support this speculation, however. Overall, only 3 percent of the transitions involved parents who exited the original coverage along with their children but did not obtain the same new coverage. For transitions from ESI to Medicaid this fraction was only 6 percent, leaving 71 percent still unexplained.

Over all transitions, the remaining children were divided between those whose parents retained the initial coverage that the child exited and those with no parent who even shared the same initial coverage, but there are sharp differences by type of coverage before and after the transition. For children who moved from Medicaid to ESI only 7 percent of the children had parents who were themselves covered by Medicaid and retained it while 65 percent had parents with no Medicaid coverage at all. This is consistent with our expectations about the impact of child-only coverage on the likelihood of parents mirroring their children's transitions. For children who moved from ESI to Medicaid, however, the parents tended to retain ESI rather than not have it. Only 9 percent had no parent with ESI whereas 62 percent had parents with ESI who kept it. Whatever may explain this phenomenon, we recall that more than half of these transitions were reversed within four months.

For children who moved from ESI to uninsured, we have seen that nearly three-fourths of the parents did the same. But we also see that 18 percent of these children had at least one parent who remained covered by ESI. This is not as striking as the Medicaid example, but in some respects it is even more puzzling because the children in question are not replacing their coverage with free coverage but losing it altogether.

When children moved from Medicaid to ESI, Table 5 tells us that 65 percent of them had no parent covered by Medicaid. We can speculate, based on the evidence provided by the transitions from ESI to Medicaid, that many of these children must have had at least one parent covered by ESI prior to the transition. To confirm this conjecture, we compared the parents' ESI coverage before and after the child's transition. The results are summarized in Table 6, which shows the distribution of the parents' ESI coverage prior to the transition, cross-classified by the change in the parents' coverage that accompanied the child's transition from Medicaid to ESI.

Of the 1.75 million children with transitions from Medicaid to ESI and who lived with one or both parents, 74 percent had at least one parent covered by ESI prior to the transition. This included 45 percent with both parents covered by ESI, 15 percent with one parent covered and one parent not covered, and another 15 percent who were living with only one parent, who was covered by ESI. When both parents or the sole parent was already covered by ESI, there was essentially no change in the parents' coverage when the child moved from Medicaid to ESI. The only exception was an inexplicable (but negligible) 3 percent of single parents who lost ESI just as the child was gaining it. Altogether, children whose parents were already fully covered by ESI prior to the child's transition and who reported no change in their own coverage accounted for nearly 60 percent of the children who moved from

Medicaid to ESI. The remaining 40 percent of children's transitions were accompanied by transitions to ESI by one or both parents. Specifically, 80 percent of the children

whose parents were not covered by ESI prior to the transition had at least one parent gain ESI, and 66 percent of the children who had one parent covered and the other parent *not* covered saw this other parent become covered as well.

TABLE 6
CHILDREN MOVING FROM MEDICAID TO ESI:
PARENTS' ESI COVERAGE BEFORE AND AFTER TRANSITION

Child's Outcome and Parents' ESI Coverage Prior to Child's Transition*	Distribution of Children in Month Prior to Transition		Change in Parents' ESI Coverage				
	Number	Percent	Total	No	One	Both	One
				Change in Parents' Coverage	Parent Obtains ESI	Parents Obtain ESI	Parent Loses ESI
All Children Obtaining ESI	1,751,000	100.0	100.0	69.3	24.6	5.7	0.5
Both Parents Covered by ESI	787,000	44.9	100.0	100.0	0.0	0.0	0.0
One Covered by ESI, One Not	256,000	14.6	100.0	33.9	66.1	0.0	0.0
Sole Parent Covered by ESI	255,000	14.6	100.0	96.7	0.0	0.0	3.3
No Parent Covered by ESI	454,000	25.9	100.0	20.5	57.5	21.9	0.0

SOURCE: Survey of Income and Program Participation, 1992 Panel.

* Children with no parent present in the household are excluded from this table.

Footnotes:

13. In assigning the source of coverage to children, we had to extract this information from the record of the parent or other adult in whose name the plan was held.

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E. PRIOR EVENTS

Our principal findings with respect to the importance of individual trigger events in predicting changes in coverage are obtained from a logistic regression analysis that we present in the next section. The regression results are particularly useful in describing the relative strengths of individual events as predictors of changes in coverage, but they do not convey an intuitive sense of the overall importance of trigger events. To provide a context for viewing the regression results, we have prepared estimates of the frequency with which individual events and sets of events were found to have occurred in the months preceding recorded changes in health insurance coverage. After listing the events that we examined, we present these findings here. The results also give us additional information with which to assess the plausibility of some of the more surprising aspects of the transitions documented earlier.

1. Types of Events

We defined the following as potential trigger events for the transitions that we examined:

- Father's loss of employment
- Mother's loss of employment
- Fathers reduction in hours worked to less than 30 [\(14\)](#)
- Mother's reduction in hours worked to less than 30
- Father's change in jobs (excluding re-employment or loss of employment)
- Mother's change in jobs
- Father's gaining employment
- Mother's gaining employment
- Father's increase in hours worked to 30 or more
- Mother's increase in hours worked to 30 or more
- Marked decline in family income (by one-third and at least \$500)
- Marked rise in family income (by one-half and at least \$500) [\(15\)](#)
- Change in family headship (loss or addition of a parent)
- Reduction in family size
- Increase in family size
- Family's loss of AFDC

Family's enrollment in AFDC

All of these variables are measured as dichotomies, consistent with their use as events. The set covers a

range of major family economic and demographic events that could be associated with changes in health insurance coverage.

2. Frequency of Prior Events

For each of the four sets of transitions--consisting of exits from (1) ESI, (2) uninsurance, (3) Medicaid, and (4) other insurance--we examined the frequency of alternative events occurring in conjunction with transitions into each of the three alternative destination statuses. We also examined the frequency of events occurring over the same time period among children who made no transition --that is, children who remained (1) covered by ESI, (2) uninsured, (3) covered by Medicaid, or (4) covered by other insurance. Comparing the frequency of individual events among children who made one of three transitions and children who made *no* transition provides a way of gauging the strength of the association between individual events and the transitions they preceded. An event that occurred with equal frequency among children who made a transition and those who did not is unlikely to have had a role in triggering the transition--no matter how often the event occurred among children who made the transition. On the other hand, an event that occurred ten times as often among children who made a transition as it did among children who did not make the transition has at least a strong association with the transition and may have had a role as a trigger as well.

For each of the four categories of coverage, the first column of Table 7 displays the average monthly number of children who were in that category prior to the transition month, the number who made each of three possible transitions, and the number who remained in that category through the transition month (that is, did not change coverage).⁽¹⁶⁾ In the tables that follow, we show how often each of these outcomes was preceded or accompanied by a potential trigger event. The second column reports the one-month transition rates from each of the four initial categories of coverage to each of the four possible outcomes: transitions to any of three alternative categories versus no change in coverage. These transition rates were calculated by dividing the average number of transitions to each outcome by the average number of children who shared the same initial coverage in the prior month, and then multiplying the result by 100 percent. Children with ESI had the lowest exit rate, with only 1.4 percent moving to another coverage in the next month. By contrast, uninsured children and children with other insurance had exit rates in excess of 7 percent while children with Medicaid had an intermediate exit rate of 3.7 percent.

TABLE 7

AVERAGE MONTHLY NUMBER OF TRANSITIONS AND TRANSITION RATES, BY TYPE

Coverage in Prior Month and Type of Transition	Average Monthly Number	Percent of Prior Month Total
Children with ESI in Prior Month	41,846,400	100.00
Transitions from ESI to:		
Uninsured	301,600	0.72
Medicaid	143,300	0.34
Other Insurance	153,300	0.37
Children Retaining ESI*	41,248,200	98.57

Children Uninsured in Prior Month	9,000,700	100.00
Transitions from Uninsured to:		
ESI	295,500	3.28
Medicaid	303,300	3.37
Other Insurance	53,700	0.60
Children Remaining Uninsured*	8,348,200	92.75
Children with Medicaid in Prior Month	13,191,600	100.00
Transitions from Medicaid to:		
Uninsured	322,700	2.45
ESI	149,800	1.14
Other Insurance	17,400	0.13
Children Retaining Medicaid*	12,701,700	96.29
Children with Other Insurance in Prior Month	2,791,800	100.00
Transitions from Other Insurance to:		
ESI	148,100	5.30
Uninsured	45,600	1.63
Medicaid	9,400	0.34
Children Retaining Other Insurance*	2,588,700	92.73

* Children with no transition in next month.

SOURCE: Survey of Income and Program Participation, 1992 Panel.

We looked at events over two time periods: one month and six months preceding the transition. Our findings are summarized in Table 8, which reports the percentage of children who experienced one or more events out of a set of possible events among children who experienced a particular transition. In each case the frequency of events among children who experienced a transition is contrasted with the percentage who encountered any of the same events among children who did not change coverage. For example, in the first row we find that 46.7 percent of the children who moved from ESI to uninsured experienced a possible trigger event in the prior month compared to only 8.8 percent of those who remained covered by ESI. If we look back six months instead of just one, the fraction of children who experienced a possible trigger event rises to 71.0 percent among children who moved from ESI to uninsured and 34.7 percent among children who remained covered by ESI. Generally, the set of events that we defined as relevant varied with the type of transition--even among children who shared the same coverage in the prior month.⁽¹⁷⁾ Therefore, even though the comparison group of children without transitions is the same for all children who exited the same coverage, the frequency of prior events among children with no transition need not be the same in each case, and indeed it is not.

TABLE 8**FREQUENCY OF TRIGGER EVENTS AMONG CHILDREN WITH AND WITHOUT A TRANSITION, BY TYPE OF TRANSITION**

Type of Transition	Children With a Transition Percent of Children with a Trigger Event in Prior Month	Children With No Transition	Children With a Transition Percent of Children with a Trigger Event in Previous Six Months	Children With No Transition
Transitions from ESI to:				
Uninsured	46.7	8.8	71.0	34.7
Medicaid	29.3	6.6	53.2	25.2
Other Insurance	46.6	12.5	66.8	45.3
Transitions from Uninsured to:				
ESI	38.6	13.9	70.8	49.9
Medicaid	41.2	12.8	67.5	49.2
Other Insurance	49.7	17.3	74.6	59.7
Transitions from Medicaid to:				
Uninsured	41.6	11.4	74.9	40.1
ESI	34.1	11.4	64.6	40.1
Transitions from Other Insurance to:				
ESI	44.3	12.0	67.2	43.8
Uninsured	48.1	18.8	74.0	58.8

SOURCE: Survey of Income and Program Participation, 1992 Panel.

NOTE: Children with no transition are children who remained covered by ESI (panel 1), remained uninsured (Panel 2), remained covered by Medicaid (panel 3), or remained covered by other insurance (panel 4). Because of the small sample sizes of children leaving Medicaid and obtaining other insurance, and vice versa, we did not calculate the frequency of trigger events for these transitions. See Tables 10 through 13 for identification of the trigger events that are included for each type of transition.

TABLE 9**NUMBER OF TRANSITIONS AND FREQUENCY OF TRIGGER EVENTS BY WHETHER TRANSITION WAS REVERSED AND TYPE OF TRANSITION**

Type of Transition	Transitions That Were Reversed in Four Months Average Monthly Number	Transitions That Were Not Reversed	Transitions That Were Reversed in Four Months Percentage of Children with a Trigger Event in Prior Month	Transitions That Were Not Reversed
Transitions from ESI to:				
Uninsured	95,800	204,800	40.5	49.3
Medicaid	67,500	75,800	22.1	35.8
Other Insurance	52,100	101,200	44.1	47.8
Transitions from Uninsured to:				
ESI	55,000	240,100	27.0	41.3
Medicaid	101,100	200,500	29.2	47.6
Other Insurance	15,100	38,600	44.4	51.8
Transitions from Medicaid to:				
Uninsured	111,400	206,900	38.6	42.2
ESI	23,500	123,700	51.1	30.6
Transitions from Other Insurance to:				
ESI	16,300	29,300	59.8	35.8
Uninsured	33,400	114,700	39.0	50.8

SOURCE: Survey of Income and Program Participation, 1992 Panel.

The comparative frequencies of events in the prior month show a clear association between the occurrence of possible trigger events and the occurrence of a change in coverage. In the prior month, possible trigger events occurred three to five times more often among children who experienced a transition than among children who did not. Depending on the type of transition, between 29 to 48 percent of transitions had at least one possible trigger event in the prior month, with most of the rates being above 40 percent. Possible trigger events occurred least often among children who moved between ESI and Medicaid (in either direction) and most often among children who moved between uninsured and other insurance (also in either direction).

Lengthening the reference period by five months increased the number of events, of course, but equally if not somewhat more so among children with *no* transitions than among children *with* transitions. [\(18\)](#) The net result is that the differentials between children with and without transitions are generally weaker when events as far back as six months as opposed to just one month are included. Why do the differentials become less pronounced over time? One possibility, of course, is that trigger events generate transitions relatively quickly rather than over a period of several months. A parent's losing employment

may have an immediate impact on the ESI coverage of parent and child. Another factor contributing to this phenomenon is the seam bias in the reporting of transitions in the SIPP. With most transitions in coverage and many trigger events being "moved" to the nearest seam between interview reference periods, events that occurred as far apart as three or four months may be reported in the same month. In the tables discussed below, we report events occurring in the prior month. Six-month tables are included in the Appendix.

The incidence of prior events also provides additional information with which to assess the plausibility of different types of transitions. Earlier we presented evidence that changes in respondent--a potential source of reporting error--were no more common when transitions were reported to have been reversed within four months than when they were not reversed. Changes in respondent are only one source of response error. Here we ask whether transitions that were reversed within four months were less likely to have been preceded by possible trigger events than transitions that were not reversed. Table 9 summarizes our findings. Comparing the final two columns, we see that for eight of the ten transition types, potential trigger events were less common among transitions that were reversed than among transitions that were not reversed, but in every case these events were still much more common than they were among children with no transitions. Moreover, the transitions that seemed most likely to reflect respondent confusion--those between ESI and other insurance (in both directions)--are the most strongly supported by Table 9. We interpret these findings as suggesting that, at worst, transitions that were reversed were somewhat more likely to have been misreported than transitions that were not reversed. (19) Alternatively, it may be that trigger events of the kind we have examined here simply play a less important role in explaining transitions that are quickly reversed than they do in accounting for other transitions. (20)

3. Results by Type of Event

Having reviewed our findings with regard to the overall frequency of possible trigger events, we now examine the frequency of individual types of events for each type of transition and for children whose coverage did not change.

Children Losing ESI. Table 10 presents estimates of the frequency of alternative events occurring in the past month among children who lost ESI--and became uninsured, obtained Medicaid, or obtained other insurance--and children who *retained* ESI. The cell entries indicate the percentage of children who experienced each event, where the base of the percentage is the total children in that column. (21) For example, in the first row we see that the proportion of children whose fathers lost employment in the past month was 9.2 percent among children who lost ESI and became uninsured, 2.5 percent among children who lost ESI and obtained Medicaid, 3.2 percent among children who lost ESI and obtained other insurance, and only .4 percent among children who remained covered by ESI. At the bottom of the table we have repeated from the first column of Table 8 the percentage of children who experienced any one of a set of events that we defined as relevant to each transition. These events are denoted by asterisks beside the individual event frequencies in the column corresponding to each type of transition. By repeating the summary frequencies here we underscore how the results presented in Table 10 are related to those presented in Table 8. In Table 8 we also reported how often any event from each of the sets identified in the first three columns occurred among children who remained covered by ESI, but those three frequencies are not repeated here.

TABLE 10

CHILDREN LOSING ESI VERSUS CHILDREN REMAINING COVERED BY ESI:
PERCENTAGE OF CHILDREN EXPERIENCING SELECTED EVENTS IN PAST
MONTH

Event	Coverage After Losing ESI						Children Remaining Covered by ESI
	Uninsured	Medicaid	Other Insurance				
Father Lost Employment	9.2	*	2.5	*	3.2	*	0.4
Mother Lost Employment	7.9	*	9.3	*	5.0	*	0.9
Father Reduced Hours below 30	14.5	*	3.0	*	6.6	*	0.7
Mother Reduced Hours below 30	10.9	*	6.4	*	5.4	*	0.9
Father Changed Jobs	7.6	*	1.5		4.6	*	1.3
Mother Changed Jobs	5.1	*	1.6		0.9	*	1.3
Father Gained Employment	1.8		0.8		1.8		0.3
Mother Gained Employment	5.2		2.6		1.5		1
Father Increased Hours to 30 or More	4.1		0.8		2.6		0.8
Mother Increased Hours to 30 or More	3.6		3.1		2.0		1.3
Family Income Fell Markedly	23.1	*	13.6	*	20.9	*	4.2
Family Income Rose Markedly	9.7		11.4		16.7	*	4.3
Family Headship Changed	3.3	*	2.9	*	0.0		0.2
Family Size Increased	1.1		3.4		1.8		1.4
Family Size Decreased	6.1	*	4.1	*	3.5	*	0.9
Family Obtained AFDC	0.0		13.1	*	0.0		0.0
Any Relevant Event (Denoted by *)	46.7		29.3		46.6		--

SOURCE: Survey of Income and Program Participation, 1992 Panel.

Nearly all of the event variables occurred with substantially greater frequency among children who made one of the three transitions than among children who remained covered by ESI. Generally, the employment-related events occurred with the greatest frequency among children who moved from ESI to uninsured. This was true of job changes and reductions in the number of hours worked for either parent and a loss of employment for the father. The mother's loss of employment was as common among

children who moved from ESI to Medicaid as it was among children who moved from ESI to uninsured.

Table 10 includes not only events that involved a reduction in employment but events that represented either a *gain* in employment (from unemployed or out of the labor force) or an increase in the hours worked to 30 or more. While it runs counter to expectation that increased employment should be associated with the loss of a child's ESI, employment gains nevertheless did occur more often among children who lost ESI than among children who remained covered by ESI--but not as often as employment losses. In the regression analysis reported later, however, where we looked at the impact of trigger events on changes in children's insurance coverage, we found no significant impact of the employment gains on transitions out of ESI.

The occurrence of marked declines in income among children losing ESI is consistent with the parents' changes in employment, but compared to children who remained covered by ESI the relative frequency of these events is lower than that of losses in employment or reductions in hours worked. Only 4 percent of the children who remained covered by ESI had a marked decline in family income over the preceding month while another 4 percent had a marked *rise* in income. Between 14 and 23 percent of the children who lost ESI showed marked declines in income while 10 to 17 percent showed marked increases. Again, the occurrence of a marked rise in income appears inconsistent with a loss of ESI, but in the regression analysis we will show that declines in income did not have a significant effect on the likelihood of a child's losing ESI.

Changes in the headship of the family (among one parent, two parents, or no parents) occurred much more often among children who lost ESI and became uninsured or enrolled in Medicaid than they did among children who remained covered by ESI.⁽²²⁾ Reductions in family size also occurred more often among children who became uninsured, enrolled in Medicaid, or obtained other insurance than among children who retained ESI.

Finally, near the bottom of Table 10 we report how often children's families obtained AFDC. To properly interpret these estimates, it is important to understand how the possible occurrence of a change in AFDC coverage is constrained by our limiting the observations to children with particular transitions in health insurance coverage and by the way we simplified the measurement of change over time, described earlier. Theoretically, all children covered by AFDC are covered by Medicaid as well. In the SIPP (and in the CPS), this relationship is forced by the Census Bureau's editing practices, which assign Medicaid coverage to all children who are reported to be receiving AFDC. A child who loses AFDC will not necessarily lose Medicaid, which does not require AFDC, but a child who obtains AFDC and was not already covered by Medicaid will always gain Medicaid coverage along with the AFDC. To be identified in Table 10 as obtaining AFDC, a child had to have had AFDC in month *m*. The only group for which this can be true is the group that left ESI for Medicaid.⁽²³⁾ We found that 13 percent of the children who made the transition from ESI to Medicaid obtained AFDC at the same time, and for these children it is correct to infer that their enrollment in AFDC explains their transition in insurance coverage. The remaining 87 percent of children who enrolled in Medicaid acquired Medicaid without AFDC. The loss of AFDC, on the other hand, could not have occurred in any of the four groups, since coverage in the prior month was always ESI.

Children Becoming Insured. For children who become insured after a period without insurance, we would expect that the role of parents' employment changes in helping to trigger such transitions would depend on the type of insurance that children acquired. Gains in employment or hours worked may

provide access to ESI that did not exist previously, so we would expect to see evidence of recent gains in employment among children who obtained ESI. For children who obtained Medicaid, however, it seems unlikely that we would see much incidence of parents becoming re-employed or increasing their hours. Rather, transitions from uninsured to enrolled in Medicaid would be more likely to be preceded by a loss of employment than a gain--or a reduction in hours rather than an increase. The scenario we imagine is that of a parent whose employer does not offer affordable coverage but pays the parent well enough to make the child ineligible for Medicaid. The parent's subsequent loss of employment or reduction in hours may qualify the child for Medicaid.

The findings presented in Table 11 are generally consistent with these expectations. Among children who made the transition from uninsured to ESI, parents' gains in employment clearly dominated losses. For example, 7 percent of fathers gained employment, and 11 percent increased their hours to 30 or more while only 1 percent lost employment and 1 percent reduced their hours below 30. For children who became covered by Medicaid rather than ESI, gains in employment or hours worked--by either parent--appear to have occurred with somewhat less frequency than among children who obtained ESI. But employment *losses* or reductions in hours--particularly for the mother--were actually *more* common than they were among children who obtained ESI, and this is consistent with our speculation that among children who are without insurance, parents' employment losses may help to qualify their children for Medicaid.

Transitions from uninsured to other insurance present something of a puzzle. In this group employment *losses* by both parents occurred about as often as they did among children who enrolled in Medicaid and much more often than among those who remained uninsured. In these respects, the transitions from uninsured to other insurance resemble what we found for the Medicaid transitions and not what we would expect to find for transitions into privately purchased insurance.

TABLE 11
CHILDREN BECOMING INSURED VERSUS CHILDREN REMAINING UNINSURED:
PERCENTAGE OF CHILDREN EXPERIENCING SELECTED EVENTS IN PAST
MONTH

Event	Coverage After Becoming Insured					
	ESI	Medicaid	Other Insurance	Children Remaining Uninsured		
Father Lost Employment	1.4	2.4 *	7.9 *			1.1
Mother Lost Employment	1.4	8.1 *	6.0 *			1.5
Father Reduced Hours below 30	0.8	4.6 *	4.6 *			1.3
Mother Reduced Hours below 30	4.0	7.2 *	3.2 *			1.4
Father Changed Jobs	6.1 *	3.7 *	3.9 *			2.0
Mother Changed Jobs	2.8 *	4.9 *	4.3 *			2.0
Father Gained Employment	6.8 *	4.2	0.9			1.1
Mother Gained Employment	5.9 *	4.8	0.9			1.7

Father Increased Hours to 30 or More	11.2	4.3	3.8	1.7
Mother Increased Hours to 30 or More	7.2	5.9	2.2	1.9
Family Income Fell Markedly	5.8	13.7 *	30.3 *	6.0
Family Income Rose Markedly	22.4 *	13.5	10.4 *	6.6
Family Headship Changed	3.2 *	4.8 *	0.7	0.6
Family Size Increased	3.7 *	4.3	0.0	2.1
Family Size Decreased	0.3	5.0 *	0.7	1.8
Family Obtained AFDC	0.0	16.6 *	0.0	0.0
Any Relevant Event (Denoted by *)	38.6	41.2	49.7	--

SOURCE: Survey of Income and Program Participation, 1992 Panel.

Changes in family income differentiate among the transition groups more clearly than changes in parents' employment. Marked increases and decreases in income occurred with about the same frequency among children who remained uninsured--each about 6 percent. But among children who became insured we find distinctly different patterns. Children who obtained ESI were much more likely to show a rise in income (22 percent) than a decline (6 percent) while reductions occurred with the same frequency as increases (about 14 percent) among children who obtained Medicaid. Children who obtained other insurance, however, were three times as likely (30 percent) to have had a marked decline in income as a significant rise (10 percent). Since other insurance presumably costs the purchaser a substantial amount, it is counter-intuitive that a marked reduction in income should trigger exits from uninsured to other insurance.

Changes in family composition occurred more often among uninsured children who gained coverage through ESI or Medicaid than among children who obtained other insurance or remained uninsured. Changes in family headship and increases in family size occurred disproportionately among children who obtained ESI or Medicaid. Reductions in family size occurred with the same frequency as these other events among children who enrolled in Medicaid but not those who enrolled in ESI. Finally, the frequency with which uninsured families obtained AFDC indicates that this path accounted for about 17 percent of the children who enrolled in Medicaid.

Children Leaving Medicaid. The wish to understand why children leave Medicaid--frequently without other coverage--was one of the objectives motivating this research, but the findings presented in Table 12 do little to advance our understanding. About 17 percent of those who became uninsured and 12 percent of those who obtained ESI had left AFDC in the past month, compared to only 1 percent of those who remained covered by Medicaid. We might have expected gains in parents' employment to emerge prominently among children who left Medicaid for ESI, but while such gains were certainly more common among children who made transitions out of Medicaid than among children who remained in Medicaid, employment gains, increased hours, and job changes were no more common among the parents of children who moved from Medicaid to ESI than among those who moved from Medicaid to uninsured. Reflecting the composition of Medicaid families, gains among mothers were more important

than gains among fathers, with 6 to 9 percent of the children who left Medicaid for any destination having a mother who gained employment or increased her hours. Job changes by either parent occurred in 3 to 5 percent of the cases. Among children who left Medicaid for ESI, fathers were as likely to have lost employment or reduced hours as to have gained employment or increased hours.

TABLE 12
CHILDREN LEAVING MEDICAID VERSUS CHILDREN REMAINING COVERED BY
MEDICAID:
PERCENTAGE OF CHILDREN EXPERIENCING SELECTED EVENTS IN PAST
MONTH

Event	Coverage After Leaving Medicaid				Children Remaining Covered by Medicaid
	Uninsured	ESI	Other Insurance		
Father Lost Employment	3.3	1.9	--		0.6
Mother Lost Employment	3.8	3.4	--		1.5
Father Reduced Hours below 30	3.5	1.4	--		0.7
Mother Reduced Hours below 30	6.4	3.6	--		1.1
Father Changed Jobs	5.0	* 4.8	* --		1.2
Mother Changed Jobs	3.1	* 5.3	* --		1.5
Father Gained Employment	3.6	* 2.1	* --		0.7
Mother Gained Employment	6.6	* 6.5	* --		1.9
Father Increased Hours to 30 or More	6.6	* 1.9	* --		1.1
Mother Increased Hours to 30 or More	7.2	* 8.7	* --		1.5
Family Income Fell Markedly	13.4	9.9	--		4.0
Family Income Rose Markedly	12.7	* 18.0	* --		4.4
Family Headship Changed	1.6	* 0.5	* --		0.5

Family Size Increased	4.0	*	3.5	*	--	1.8
Family Size Decreased	1.9		1.7		--	1.4
Family Lost AFDC	16.7	*	11.7	*	--	1.4
Family Obtained AFDC	0.0		0.0		--	1.3
Any Relevant Event (Denoted by *)	41.6		34.1		--	--

SOURCE: Survey of Income and Program Participation, 1992 Panel.

NOTE: The sample size for children leaving Medicaid and obtaining other insurance (see Table 2A) is too small to support these tabulations.

Changes in family income reflected the mixed results of families losing AFDC and families gaining employment. Both losses and gains in income occurred more often among children who left Medicaid than among children who remained, with income gains outpacing losses by 18 to 10 percent among children who obtained ESI while gains and losses occurred with equal frequency--about 13 percent each--among those who became uninsured. Changes in family composition were little more likely among children leaving Medicaid than among those who remained.

Children Leaving Other Insurance. On the assumption that other insurance is generally privately purchased insurance, we would expect that children who leave such coverage tend to do so when their parents gain employment or change jobs, giving them access to ESI, or when their family income falls, making it difficult to sustain the costs of private insurance. The findings presented in Table 13 generally support these expectations, but we see less differentiation than we would have anticipated between children who left other insurance for ESI and those who simply became uninsured. The fathers of children who became uninsured were much more likely to lose employment or reduce their hours of work than the fathers of those who remained covered by other insurance or obtained ESI, but the fathers and especially the mothers of children who became uninsured were also more likely to *gain* employment than the parents of the other two groups of children. More consistent with our expectations, children who moved from other insurance to ESI were the most likely to have parents who changed jobs or increased their hours of work to 30 or more.

Both increases and reductions in family income were more common among children who left other insurance than those who remained. Children who became uninsured were somewhat more likely to have had marked reductions in income than those who obtained ESI (22 percent versus 15 percent) or retained other insurance (6 percent), but gains were about equally common among children who became uninsured (25 percent) or obtained ESI (22 percent) and much higher than for those who remained covered by other insurance (7 percent). It is difficult to interpret the complete loss of coverage among children who left other insurance despite rising family income. Table 3 showed that 10 percent of the children who made the transition from other insurance to uninsured were covered by ESI shortly thereafter; for these children the loss of coverage was merely transitional and may reflect waiting periods for ESI to become effective. For the others it is simply not clear what may have happened, but understanding such transitions is important to understanding and addressing the problem of uninsurance

among children in the United States.

Increases in family size and changes in family headship were marginally more common among children who became uninsured than among those who obtained ESI or retained other insurance. Oddly, when we look back six months (Table A.5) we find that 20 percent of the children who became uninsured had experienced a *reduction* in family size compared to only 3 percent of those who remained covered by other insurance and less than 1 percent among those who obtained ESI. There is no hint of this in Table 13, which adds to the general ambiguity surrounding the impact of changes in family composition on transitions in children's health insurance coverage.

TABLE 13

CHILDREN LEAVING OTHER INSURANCE VERSUS CHILDREN REMAINING COVERED: PERCENTAGE OF CHILDREN EXPERIENCING SELECTED EVENTS IN PAST MONTH

Event	Coverage After Leaving Other Insurance				Children Remaining Covered by Other Insurance
	ESI	Uninsured	Medicaid		
Father Lost Employment	1.0	5.5 *	--		0.4
Mother Lost Employment	0.9	0.0 *	--		1.0
Father Reduced Hours below 30	0.9	7.5 *	--		0.7
Mother Reduced Hours below 30	2.3	3.5 *	--		0.6
Father Changed Jobs	6.0 *	2.2 *	--		1.6
Mother Changed Jobs	5.2 *	3.0 *	--		1.0
Father Gained Employment	2.7 *	7.2 *	--		0.3
Mother Gained Employment	3.2 *	14.0 *	--		1.1
Father Increased Hours to 30 or More	9.7 *	4.8	--		0.9
Mother Increased Hours to 30 or More	6.8 *	1.2	--		1.0
Family Income Fell Markedly	14.9	22.4 *	--		6.2
Family Income Rose Markedly	22.4 *	24.7 *	--		7.0
Family Headship Changed	0.7 *	3.1 *	--		0.3
Family Size Increased	2.8 *	4.0 *	--		1.6
Family Size Decreased	0.4	2.0	--		1.2

Any Relevant Event (Denoted by *)	44.3	48.1	--	--
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SOURCE: Survey of Income and Program Participation, 1992 Panel.

NOTE: The sample size for children leaving other insurance and enrolling in Medicaid (see Table 2A) is too small to support these tabulations.

Footnotes:

14. We measured the change in hours worked in terms of movement across a threshold because employers generally base their offer of insurance coverage--or whether they contribute to premiums--on a specific number of hours worked. Whether the parent moved across this threshold is likely to be more important than the change in the number of hours worked in determining the implications for access to coverage. The number 30 is an industry standard used widely in the plans drafted by insurers. Individual employers may set their own thresholds, of course, but SIPP does not collect that information. Using the value 30 seemed appropriate under these circumstances, and the findings that we will present shortly seem to bear this out.

15. Despite the differing proportions the upward and downward changes in income can be viewed as equal but opposite in the following sense. If we start with X dollars, a 50 percent increase will raise the amount to 1.5X while a one-third reduction in 1.5X dollars will reduce the amount back down to X. In our sample these two types of change occurred with roughly equal frequency.

16. Recall that transitions were measured over the 12-month period from July 1993 through June 1994. The "prior" month, therefore, refers to the 12 months from June 1993 through May 1994.

17. We defined an event as relevant to a particular transition if there was a theoretically based reason for expecting the event to serve as a trigger or if there was empirical evidence of an association between the event and the transition that we could not dismiss as spurious. We erred on the side of being overly inclusive on the grounds that events with no net association would either add nothing to the count of children with one or more events or would add equally to the counts of children with and without transitions.

18. Using the 1984 SIPP panel, Short et al. (1988) estimated the frequency of selected events in the eight months preceding the interview in which Medicaid enrollment or disenrollment was first reported. They found that 83 percent of enrollments and 68 percent of disenrollments were associated with one or more events, but they did not compare the incidence of the same events among persons who made no transitions.

19. We must be careful not to ascribe a validating role to trigger events. That is, we must not take the view that a reported transition that was not preceded by a plausible trigger event did not occur. After all, past research has not assigned much importance at all to trigger events in explaining transitions (see the discussion below in Section F).

20. We also broke out the incidence of possible trigger events among children who moved from ESI to Medicaid by the parents' change in coverage and whether the child's transition was reversed in the next four months. Recall from the previous section that 71 percent of children's transitions from ESI to Medicaid occurred without either parent losing ESI. When the father lost ESI along with the child, a

possible trigger event was observed in 79 percent of the cases, and it made no difference whether or not the transition was reversed in the next four months. When the father retained ESI (which happened with more than half the transitions), possible trigger events were observed less than 20 percent of the time, but this was still much larger than the 7 percent reported in Table 8 for children who remained covered by ESI. Moreover, possible trigger events were actually more common rather than less common when children returned to ESI within four months. When the father was either absent or had no ESI coverage before the child's transition, but the mother did have ESI, the incidence of possible trigger events depended on both the mother's loss or retention of ESI and whether or not the child's transition was reversed. When the mother lost ESI, possible trigger events occurred in 66 percent of the cases when the child's transition was not reversed but only 16 percent of the cases when the child's transition was reversed. When the mother retained ESI, possible trigger events were observed in only 16 percent of the cases when the child's transition was not reversed and in none of the cases when the child's transition was reversed. Perhaps these findings suggest that a significant number of the reported transitions from ESI to Medicaid may not have occurred at all, but that is not the only interpretation. Our selection of possible trigger events focused on employment-related changes and relatively rare demographic changes, so it should not surprise us that when children moved from ESI to Medicaid without their parents losing ESI, the incidence of possible trigger events was rather low. It may be that other types of trigger events dominate such cases or that trigger events play a less prominent role than other types of influences. Because of the policy interest in transitions between ESI and Medicaid, however, further research into the circumstances surrounding such transitions is clearly warranted.

21. The average monthly numbers of children to which the percentages reported in Table 10 apply were reported in Table 7.

22. Later, when we examine the effectiveness of these events in predicting transitions in coverage, we separate changes in family headship into gains and losses of parents, as we might expect these to have quite opposite effects. Here, where we condition on the transitions and look for prior events, we can ask simply whether any changes at all in family headship occurred.

23. Theoretically, a child could have had more than one source of insurance in a given month--the most likely scenario being one in which the child made the transition from one source to the other during the course of the month. Such transitions are reported only rarely in the SIPP, however, and to simplify our analysis of transitions in health insurance coverage we elected to assign only one source of coverage in any given month. Because Medicaid coverage is underreported in household surveys, we assigned a child to Medicaid if a child was reported to have had Medicaid coverage in that month--regardless of whether any other coverage was reported. We also favored ESI over other insurance coverage.

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The Effects of Trigger Events on Changes in Children's Health Insurance Coverage

F. EFFECTS OF TRIGGER EVENTS

We have seen that transitions in health insurance coverage among children are often preceded by changes in their parents' employment, AFDC participation, family income, or family composition, although the frequency of these events varies by the type of transition. While this gives us a measure of the potential role of these events in effecting the transitions that we observe, it is quite possible for transitions to be frequently preceded by particular events but for these same events to be followed only infrequently by transitions. It might be the case, for example, that there are important mediating factors that must be present if a transition in health insurance coverage is to be produced by a particular trigger event. If these factors are not captured in our survey data, we cannot identify them and measure their impact, but the nature of the relationship between possible trigger events and transitions may suggest their presence.

To provide a measure of the effects of possible trigger events on the occurrence of transitions we examined the frequency of transitions as a function of the prior occurrence of these events. To do so, we defined selected changes occurring between months $m-1$ and m as potential trigger events and then estimated the relationship between these events and the likelihood that a transition in health insurance coverage was recorded over the next four months. We did this separately for each of the four types of coverage, with the outcomes of interest in each case being transitions to any of the other three types of coverage versus no transition. We present our findings in two forms: first, as the results of a logistic regression of transition outcomes on the full set of possible trigger events and, second, as estimates of the frequency of each type of transition among the subset of children experiencing a given event. The regression results give us a measure of the relative importance of individual events in predicting transitions while the conditional frequencies tell us in a more intuitive form how often transitions actually occurred after events that the regression analysis identified as the strongest predictors.

1. Regression Results

In this section we present the findings from an application of logistic regression analysis to estimate the impact of a child's experiencing a possible trigger event on the likelihood that the child will make a transition from his current coverage. As in the preceding section, we present separate analyses of children whose initial coverage is ESI, uninsured, Medicaid, or other insurance.

Methodology. Analyses of transitions in health insurance coverage often focus on spell length and use proportionate hazard models to estimate the impact of fixed or time-varying characteristics on the exit rate from a particular coverage status. Typically, events have a limited role--if any--as predictors. [\(24\)](#) Given our interest in trigger events, we have approached the problem differently. Trigger events can occur at any point in the history of a spell, and by definition their impact is relatively quick. Rather than asking how the occurrence of such events affects the length of a spell or how it affects the monthly exit probability, we want to know how the occurrence of such an event affects the probability that a child will

exit one state or enter another in the next few months. This is fundamentally different than wanting to know the impact of personal characteristics on spell length (or exit rates), and it requires a different approach. Our basic model utilizes a four-category "multinomial" dependent variable identifying exits from one of our four types of coverage into each of the other three versus a fourth category indicating no exit during the four-month time span. We estimated a separate model for each of the four original sources of coverage. The predictors are potential trigger events. Except for one additional variable added to adjust for the SIPP seam bias, the models include no other predictors. We opted for this reduced form rather than estimating structural equations in which we attempted to include all of the characteristics that may affect exits from particular types of coverage and transitions into others because our research is exploratory and we wanted to focus on the role of events as predictors of change in coverage.

Children with ESI. Table 14 presents the results of a logistic regression analysis of children's loss of employer-sponsored insurance. The regression model was estimated with a multinomial dependent variable indicating whether the child made a transition into uninsured, Medicaid, or other insurance or remained covered by ESI.⁽²⁵⁾ The predictors are the several trigger events, expressed as binary variables (coded 1 or 0 to indicate whether or not the event occurred in the reference month).⁽²⁶⁾

TABLE 14
LOGISTIC REGRESSION ESTIMATES OF THE EFFECTS (ODDS RATIOS) OF
TRIGGER EVENTS ON THE ODDS OF CHILDREN LOSING ESI
Child's Coverage After Losing ESI

Trigger Event	Uninsured		Medicaid		Other Insurance	
Father Lost Employment	2.68	**	4.58	**	0.43	
Mother Lost Employment	1.94	**	3.58	**	1.62	
Father Reduced Hours below 30	3.60	**	0.52		5.24	**
Mother Reduced Hours below 30	2.22	**	1.17		1.23	
Father Changed Jobs	3.39	**	0.97		1.54	
Mother Changed Jobs	2.78	**	1.45		0.67	
Family Income Rose Markedly	1.16		1.13		2.12	**
Family Income Fell Markedly	1.55	**	1.34		2.22	**
Parent Joined Family	1.51		3.84		0.33	
Parent Left Family	1.18		5.32	**	0.06	*
Family Size Increased	1.42		1.72		1.58	
Family Size Decreased	1.71	**	1.70		1.59	
Event Occurred in First Reference Month	1.22	**	1.56	**	1.41	**

SOURCE: Survey of Income and Program Participation, 1992 Panel.

* Statistically significant at the .05 level.

** Statistically significant at the .01 level.

NOTE: Coefficients were estimated from a multinomial logistic regression in which the dependent variable contrasted each of the three transitions with the alternative, no loss of ESI. The coefficients in the first row indicate that a child whose father lost employment was 2.68 times as likely to become uninsured as a child whose father did not lose employment. Similarly, a child whose father lost employment was 4.58 times as likely to enroll in Medicaid and .43 times as likely (that is, less likely) to obtain other insurance as a child whose father did not lose employment.

The logistic regression model necessitated by the nature of the dependent variable is non-linear, so the effects of the trigger events cannot be expressed simply as net changes in the probability of observing a transition.⁽²⁷⁾ We have elected to express the effects of the individual trigger events as odds ratios. An odds ratio indicates how much the likelihood or "odds" of a child losing employer-sponsored insurance is increased by the occurrence of a particular event.⁽²⁸⁾ With the multinomial dependent variable the odds ratios express the effects of the trigger event in terms of the likelihood of a child making the indicated transition versus remaining covered by ESI. For example, in the first row of Table 14 the coefficient of 2.68 in the uninsured column implies that the odds of a child becoming uninsured in the next four months are increased nearly 3 times by the father's losing employment.⁽²⁹⁾ The coefficient of 4.58 in the Medicaid column implies that the odds of a child enrolling in Medicaid in the next four months are increased between 4 and 5 times by the father's losing employment whereas the coefficient of .43 in the other insured column indicates that the odds of a child moving from ESI to other insurance are actually *reduced* by 57 percent (1 minus .43) by the father's loss of employment, although this particular effect is not statistically significant.⁽³⁰⁾

All six of the variables that represent actual or potential reductions in employment have significant and positive effects on the likelihood of a child's leaving ESI to become uninsured. The strongest effects are associated with the father's reducing his hours of work below 30 or changing jobs. The effects of changes in the mother's employment are consistently weaker than the corresponding changes in the father's employment, but they are still relatively strong. The only other events with significant effects on the likelihood of a child losing ESI and becoming uninsured are a drop in family income and a reduction in family size--both of which increase the likelihood of a transition to uninsured. These effects are weaker than the effects of employment changes. That the reduction in income continues to increase the likelihood of a loss of insurance after controlling for employment changes underscores the importance of the parents' ability or willingness to pay for coverage when free or heavily subsidized coverage is not available.

We have no explanation for the significant effect of a reduction in family size. We observed the appearance of this variable earlier as a prior event in transitions from ESI to uninsured, but we counted it as a relevant event solely on the strength of its empirical association with these transitions --that is, without a clear theoretical justification.

Turning to the next two columns of Table 14 we find, first, that only the parents' loss of employment and

a parent's leaving the family affect the likelihood of a child's leaving ESI and enrolling in Medicaid. The parent's leaving the family may not only take away employer-sponsored coverage but place the family in a position where the child, at least, can qualify for Medicaid. This same event has a significant but negative effect on the child's moving from ESI to other insurance, and our interpretation is that the father's departure and associated loss of income may eliminate other insurance as a potential source of coverage. It is consistent with this interpretation that a marked increase in family income should also have a positive and significant effect on the likelihood of a child's obtaining other insurance, but we are at a loss to explain why a *reduction* in family income should have the same effect. Finally, the father's reducing his hours below 30 has a very strong positive effect on the likelihood of a child's replacing ESI with other insurance. It is not clear why the reduction in hours should so often result in an exit from ESI rather than the parent's assumption of the full costs of maintaining coverage, which we would continue to count as ESI. Further research is needed to understand the rationale behind such choices.

It is intuitively understandable that all six employment variables should have independent effects on the likelihood of transitions from ESI to uninsured, because each of these changes in employment carries the potential to change the employee's access to employer-sponsored coverage or the cost of maintaining that coverage. At the same time, children who enroll immediately in Medicaid rather than becoming uninsured must not only lose their ESI but qualify for Medicaid. Our results suggest that children whose parents lose their employment have some increased likelihood of qualifying for Medicaid whereas children whose parents change jobs or reduce their hours do not.

The strength of the coefficients on parents' employment loss may help to explain why the same two variables do not have a stronger effect on transitions from ESI to uninsured: rather than becoming uninsured, the children of parents who lose their employment may become covered by Medicaid. The results for other insurance, on the other hand, seem to underscore the fact that obtaining other insurance requires an ability to pay. That is, the parents' loss of employment has no effect on transitions from ESI to other insurance because parents who lose employment are not able to pay for other insurance. At the same time, fathers who change jobs or reduce their hours of work may retain their ability to pay for other insurance if they lose ESI. Nevertheless, we are surprised that the father's reduction in hours should have such a strong, positive effect on the likelihood of a child moving from ESI to other insurance.

Children without Insurance. Logistic regression analysis of the effects of potential trigger events on children who are without health insurance indicates that very few events were significantly associated with transitions out of uninsurance after controlling for other events. In Table 15 we see that increases in the hours worked by either parent had significant effects on transitions into ESI, as did a marked rise in family income and a parent joining or rejoining the family. This last event also had a very strong positive effect on the likelihood of a child enrolling in Medicaid. A parent's *leaving* the family also had a positive but much weaker effect on this same transition while the mother's changing jobs or losing employment had positive effects as well. The mother's losing employment presumably helps to qualify the child for Medicaid, but the fact that the child was previously uninsured suggests that the mothers that account for this effect held jobs that provided no insurance coverage but produced enough income to make the child ineligible for Medicaid. Income changes in both directions had significant, positive effects on transitions to other insurance, and the same was true of the mother's changing jobs. With respect to the income changes, recall that we saw the same result for transitions from ESI to other insurance. Here, too, it is difficult to explain why changes in both directions should affect transitions in the same way, but we saw this same phenomenon with respect to other insurance in our earlier analysis of events preceding transitions.

TABLE 15

**LOGISTIC REGRESSION ESTIMATES OF THE EFFECTS (ODDS RATIOS) OF
TRIGGER EVENTS ON THE ODDS OF UNINSURED CHILDREN BECOMING
INSURED**

Child's Coverage after Becoming Insured

Trigger Event	ESI	Medicaid	Other Insurance
Father Increased Hours to 30 or More	2.34 **	0.98	1.10
Mother Increased Hours to 30 or More	2.35 **	1.38	0.91
Father Changed Jobs	1.54	1.14	1.03
Mother Changed Jobs	1.41	1.88 *	2.22 *
Mother Lost Employment	1.30	2.55 **	1.70
Family Income Rose Markedly	1.34 **	0.94	1.78 *
Family Income Fell Markedly	0.88	0.95	1.95 *
Parent Joined Family	2.57 **	6.52 **	0.00
Parent Left Family	0.85	2.39 *	0.63
Family Size Increased	0.88	0.90	0.10 *
Event Occurred in First Reference Month	1.47 **	1.40 **	1.41 **

SOURCE: Survey of Income and Program Participation, 1992 Panel.

* Statistically significant at the .05 level.

** Statistically significant at the .01 level.

NOTE: Coefficients were estimated from a multinomial logistic regression in which the dependent variable contrasted each of the three transitions with the alternative, remaining uninsured. The coefficients in the first row indicate that a child whose father increased his hours of work was 2.34 times as likely to become covered by ESI as a child whose father did not increase his hours of work. Similarly, a child whose father increased his hours of work was .98 times as likely to enroll in Medicaid and 1.10 times as likely to obtain other insurance as a child whose father did not increase his hours of work.

Children with Medicaid. Regression results for children who were initially covered by Medicaid are presented in Table 16. The odds ratios are strikingly similar for transitions into uninsured and transitions into Medicaid. The loss of AFDC is the single strongest predictor of transitions from Medicaid to uninsured, but it is also one of the strongest predictors of transitions from Medicaid to ESI. Trigger

events that had significant effects on the transitions from Medicaid to uninsurance tended to have similar if not significant effects on transitions from Medicaid to ESI, and vice versa. The chief exceptions to this pattern are the mother's changing jobs, which had a significant if modest effect on the child's moving from Medicaid to ESI but no measured effect on the child's moving from Medicaid to uninsured, and the family's income falling markedly, for which

TABLE 16
LOGISTIC REGRESSION ESTIMATES OF THE EFFECTS (ODDS RATIOS) OF
TRIGGER EVENTS ON THE ODDS OF CHILDREN LEAVING MEDICAID
Child's Coverage After Leaving Medicaid

Trigger Event	Uninsured	ESI	Other Insurance
Family Lost AFDC	3.52 **	2.04 **	0.83
Father Gained Employment	2.89 **	2.95 *	0.85
Father Increased Hours to 30 or More	1.52	0.95	1.59
Mother Increased Hours to 30 or More	1.53 *	1.92 **	1.54
Father Changed Jobs	1.85	1.33	0.47
Mother Changed Jobs	1.15	1.79 *	0.86
Father Lost Employment	2.91 *	1.43	9.23
Father Reduced Hours below 30	0.59	1.00	0.23
Family Income Rose Markedly	1.52 **	1.39	2.76
Family Income Fell Markedly	1.71 **	1.00	3.75
Parent Joined Family	2.34	0.99	0.00
Parent Left Family	2.33	1.88	0.00
Event Occurred in First Reference Month	1.42 **	1.31 **	1.03

SOURCE: Survey of Income and Program Participation, 1992 Panel

* Statistically significant at the .05 level.

** Statistically significant at the .01 level.

NOTE: Coefficients were estimated from a multinomial logistic regression in which the dependent variable contrasted each of the three transitions with the alternative, remaining enrolled in Medicaid. The coefficients in the first row indicate that a child whose family lost AFDC was 3.52 times as likely to become uninsured as a Medicaid child whose family did not lose AFDC. Similarly, a child whose family lost AFDC was 2.04 times as likely to obtain ESI and .83 times as likely to obtain other insurance as a Medicaid child whose family did not lose AFDC.

the reverse was true. An interpretation of the overall pattern is that the principal effect of these events is to move children out of Medicaid rather than pull them into ESI or uninsurance.

Our estimates of the effects of trigger events on transitions to other insurance are affected by the very small sample size of these particular transitions. We included these transitions in our regressions only to obtain a complete accounting of transitions. Nevertheless, there are some similarities with the findings for the other two transitions--in particular, the estimated effects for either parent's increase in hours worked, the father's loss of employment or reduction in hours below 30, and the rise or fall in family income (where the resemblance is to transitions from Medicaid to uninsured but not Medicaid to ESI).

Children with Other Insurance. Regression results for children whose initial coverage was other insurance are presented in Table 17. Because of the relatively small sample size of children with other insurance, odds ratios that would be significant in the regression results that we have already reviewed are not significant here, and some of the odds ratios are quite large. Rather than viewing these as evidence of very powerful effects on transitions, we are more inclined to see them as the result of large standard errors. The father's increasing his hours of work or the mother changing jobs had significant effects on the likelihood of a child leaving other insurance for ESI. Both of these make intuitive sense, but we cannot explain the significant positive effects of either parent's gaining employment on the likelihood of a child leaving other insurance to become uninsured. On the other hand, the significant positive effects of the father's losing employment or family income falling markedly *do* fit our priors here, and they suggest that with a major employment loss or reduction in family income the family's ability or willingness to continue paying for other insurance tends to decline. Finally, as in the previous table the sample size for transitions between other insurance and Medicaid is very small. We included these transitions, again, so that we could fully account for transitions out of other insurance, but we find these odds ratios difficult to interpret.

TABLE 17

LOGISTIC REGRESSION ESTIMATES OF THE EFFECTS (ODDS RATIOS) OF TRIGGER EVENTS ON THE ODDS OF CHILDREN LEAVING OTHER INSURANCE

Child's Coverage After Leaving Other Insurance

Trigger Event	ESI	Uninsured	Medicaid
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Father Gained Employment	2.33	10.61 *	16.18 **
Mother Gained Employment	1.42	4.06 *	1.02
Father Increased Hours to 30 or More	3.36 **	0.80	1.11
Mother Changed Jobs	2.91 **	2.77	8.43 *
Father Lost Employment	2.55	6.97 **	4.36
Family Income Fell Markedly	0.80	1.79 *	0.45
Parent Joined Family	0.90	0.00	24.04 *
Parent Left Family	1.04	5.15	0.00
Event Occurred in First Reference Month	1.56 **	1.20	1.24

SOURCE: Survey of Income and Program Participation, 1992 Panel

* Statistically significant at the .05 level

** Statistically significant at the .01 level.

NOTE: Coefficients were estimated from a multinomial logistic regression in which the dependent variable contrasted each of the three transitions with the alternative, remaining covered by other insurance. The coefficients in the first row indicate that a child whose father gained employment was 2.33 times as likely to become covered by ESI as a child whose father did not gain employment. Similarly, a child whose father gained employment was 10.61 times as likely to become uninsured and 16.18 times as likely to obtain Medicaid as a child whose father did not gain employment.

2. Conditional Frequencies of Transitions

The number of transitions attributable to a particular trigger event is a function of both the net effect of that event and its frequency in the population.⁽³¹⁾ If two trigger events have similar effects on the likelihood of a particular transition, but one event occurs much more often than the other, then the more commonly occurring event will induce a larger number of transitions. Because of their nonlinearity, the net effects that we reported in the preceding section do not translate directly into probabilities that children will experience transitions, but the gross or unadjusted effects do, and estimates of the frequencies of individual types of events are readily obtainable. In this section we examine the frequencies of the 12 types of transitions while conditioning on each of the events that was included in our final regression models. While these conditional frequencies are based on unadjusted effects, meaning that they do not control for the effects of other events, we calculated them only for events that the regression analysis identified as the strongest predictors of transitions from each initial coverage status. As a result, we can be certain that we are restricting our attention to those events with the strongest net effects.

Children with ESI. On average, 41.8 million children were covered by ESI at any one time from June 1993 through May 1994.⁽³²⁾ For this group of children, Table 18 reports the average number who

experienced individual events in the next month and, for each event, the percentage who retained their ESI for at least the next four months or lost their coverage and became uninsured, enrolled in Medicaid, or obtained other insurance. In the final three columns Table 18 gives the actual number of transitions implied by the average monthly number of events listed in the first column and the four-month transition probabilities reported in the previous three columns. For the group of children as a whole--most of whom experienced no events--94 percent remained covered by ESI, 3 percent became uninsured, and between 1 and 2 percent enrolled in Medicaid or obtained other insurance. (33) For children who experienced an event, however, we find as many as 31 percent losing their ESI, with most of these becoming uninsured. For example, among the nearly 200,000 children covered by ESI whose fathers lost employment in an average month, 23 percent became uninsured in the next four months, 4 percent enrolled in Medicaid, and an additional 4 percent obtained other insurance. In combination with the average monthly frequency of children's fathers losing employment, these transition probabilities imply that about 46,000 children moved from ESI to uninsured, 8,000 moved from ESI to Medicaid, and 7,000 moved from ESI to other insurance.

TABLE 18
CHILDREN WITH ESI WHO EXPERIENCED INDIVIDUAL EVENTS IN THE NEXT MONTH:
PERCENTAGE DISTRIBUTION OF CHANGES IN COVERAGE IN THE NEXT FOUR MONTHS AND IMPLIED NUMBER OF TRANSITIONS

Trigger Event	Average Monthly Number	Change in Coverage in Next Four Months (Percent of First Column)				Implied Number of Transitions in Next Four Months to:		
		No Change	Uninsured	Medicaid	Other Insurance	Uninsured	Medicaid	Other Insurance
All Children with ESI	41,846,400	93.7	3.2	1.5	1.7	1,351,600	611,000	690,500
Children with ESI and a Trigger Event								
Father Lost Employment	198,200	68.9	23.3	4.2	3.6	46,100	8,300	7,200
Mother Lost Employment	421,100	81.4	9.5	5.7	3.4	39,900	24,000	14,400
Father Reduced Hours below 30	341,400	70.2	20.5	2.6	6.7	69,900	9,000	22,700
Mother Reduced Hours below 30	421,100	81.2	11.4	4.1	3.3	47,900	17,300	13,700

Father Changed Jobs	560,900	84.7	10.9	1.5	2.9	61,300	8,300	16,300
Mother Changed Jobs	566,700	87.7	9.0	2.1	1.2	51,100	11,600	6,800
Family Income Rose Markedly	1,826,500	90.4	4.2	1.9	3.5	76,200	34,700	63,900
Family Income Fell Markedly	1,863,700	86.3	7.4	2.6	3.8	137,900	47,500	70,800
Parent Joined Family	38,100	81.5	8.2	9.0	1.3	3,100	3,400	500
Parent Left Family	73,300	74.4	15.9	9.1	0.7	11,600	6,700	500
Family Size Increased	600,000	89.6	4.8	2.9	2.7	28,800	17,400	16,200
Family Size Decreased	397,700	85.8	7.8	3.6	2.9	30,800	14,300	11,500

SOURCE: Survey of Income and Program Participation, 1992 Panel.

The greatest number of transitions from ESI to uninsured is associated with children whose family income fell markedly in the past month. While declines in family income were associated with a very modest transition probability--only 7 percent--declines in income were the most common event, occurring nine times as often as fathers losing employment, for example. Children whose fathers lost employment were the most likely to lose ESI in the next four months--23 percent did so--but they accounted for only one-third as many transitions as children who experienced a marked reduction in family income.

Children with marked reductions in family income also accounted for the most transitions from ESI to Medicaid and ESI to other insurance. In the regression analysis, however, declines in family income had significant coefficients for transitions from ESI to either uninsured or other insurance but not to Medicaid, suggesting that we should discount the 47,000 transitions to Medicaid. Similarly, marked *increases* in family income were nearly as common as marked decreases and were also associated with large numbers of transitions of all three types, but the regression analysis indicated that a decline in income had a significant effect only on transitions to other income.

Further underscoring the importance of looking at both the effect of a given event on the probability of a transition and the frequency of that event, we see that the father's and mother's loss of employment had roughly similar gross effects on the probability of a child moving from ESI to Medicaid, but the mother's

loss of employment was associated with three times as many transitions as the father's, owing primarily to the greater frequency of employment loss among the mothers than among the fathers of ESI children. Likewise, a parent's leaving the family was associated with the largest conditional probability of a child leaving ESI for Medicaid (and also the largest net effect in the regression analysis), yet because of the relatively low frequency of ESI children losing parents, the associated transitions are less than 7,000 or the second lowest among all of the events reported in Table 18.

Children Without Insurance. Transitions out of uninsurance occur at a much higher rate than transitions out of ESI. In the first row of Table 19 we see that 29 percent (100 minus 71) of the 9.0 million children who were without insurance in an average month from June 1993 through May 1994 became insured over the next four months. Roughly equal fractions moved into ESI and Medicaid while a much smaller fraction obtained other insurance. Because transitions out of uninsurance were so common, we see rather substantial transition rates associated with individual trigger events. More

than two-thirds of the children who experienced a parent joining the family became insured in the next four months, with 31 percent obtaining ESI and 37 percent enrolling in Medicaid. Likewise, nearly half of the children whose parents increased their hours of work to 30 or more became insured, with 30 to 33 percent obtaining ESI, 12 to 16 percent obtaining Medicaid, and 2 to 3 percent obtaining other insurance.

TABLE 19

UNINSURED CHILDREN WHO EXPERIENCED INDIVIDUAL EVENTS IN THE NEXT MONTH:

PERCENTAGE DISTRIBUTION OF CHANGES IN COVERAGE IN THE NEXT FOUR MONTHS AND IMPLIED NUMBER OF TRANSITIONS

Trigger Event	Average Monthly Number	Change in Coverage in Next Four Months (percent of First Column)				Implied Number of Transitions in Next Four Months to:		
		No Change	Other		ESI	Medicaid	Other Insurance	
			ESI	Medicaid				
All Uninsured Children	9,000,700	71.2	13.6	12.6	2.6	1,225,000	1,129,600	234,900
Uninsured Children with a Trigger Event								
Father Increased Hours to 30 or More	193,800	52.6	33.0	11.7	2.8	63,900	22,700	5,300
Mother Increased Hours to 30 or More	194,900	52.1	29.6	15.9	2.5	57,700	30,900	4,900
Father Changed Jobs	197,800	60.1	24.2	12.7	3.0	47,900	25,200	5,900

Mother Changed Jobs	190,300	56.3	19.2	19.8	4.8	36,500	37,600	9,100
Mother Lost Employment	153,500	54.0	15.3	26.3	4.5	23,400	40,400	6,900
Family Income Rose Markedly	665,200	61.7	21.6	12.8	3.9	143,700	84,900	26,000
Family Income Fell Markedly	574,300	67.8	13.0	14.3	4.9	74,600	81,800	28,400
Parent Joined Family	33,000	32.4	30.6	37.0	0.0	10,100	12,200	0
Parent Left Family	41,200	61.2	10.2	26.5	2.1	4,200	10,900	900
Family Size Increased	198,400	69.5	15.0	15.2	0.3	29,800	30,200	600

SOURCE: Survey of Income and Program Participation, 1992 Panel.

Because transitions out of uninsurance occurred at such a high rate in general, we must compare the transition rates associated with individual triggers to the rates for all uninsured children to properly interpret the numbers of transitions reported in the final three columns. For example, there were 75,000 transitions from uninsured to ESI among children whose family incomes fell markedly, but the 13.0 percent rate that these transitions represent is lower than the unconditional 13.6 percent rate among all uninsured children, and the regression coefficient in Table 15 indicated no relationship between such changes in income and transitions from uninsured to ESI. The implication is that none of these transitions should be attributed to the family income change. At the same time, however, the transition rate from uninsured to other insurance among children with a sharp drop in family income is nearly twice the average rate, and the regression coefficient in Table 15 showed a doubling of the odds of this particular transition when family income dropped markedly. Thus the 28,000 transitions from uninsured to other insurance reflect both a strong effect of a family's loss of income and the high frequency with which uninsured children experienced a sharp drop in family income. The mother's changing jobs is associated with a comparable transition rate from uninsured to other insurance, yet the lower frequency of such job changes translates into only 9,000 transitions.

The high rate of transitions from uninsured to ESI among children who gained a parent yields a relatively small number of transitions--10,000--compared to parents increasing their hours of work, which is associated with a comparable transition rate but six times as many transitions.

Children With Medicaid. Transitions out of Medicaid also occurred at a much higher rate than transitions out of ESI but not as high as transitions out of uninsurance. Table 20 reports the distribution of outcomes among all children with Medicaid and the subsets who experienced individual trigger events. About 15 percent of the 13 million children who were reported to be enrolled in Medicaid in an average month between June 1993 and May 1994 left Medicaid within four months. Of these, nearly 10 percent became uninsured while 5 percent obtained ESI and only one-tenth that number (.5 percent) acquired other insurance.

Four events were associated with particularly large movements from Medicaid to uninsured: the family's loss of AFDC benefits, the father's gaining employment, the father's increasing his hours to 30 or more, and a parent joining the family. In each case between 28 and 31 percent of the children recorded such a transition in the next four months. The numbers of transitions associated with these events ranged from about 8,000 for the family demographic change to 75,000 for the loss of AFDC. Transitions associated with income changes once again dominated the movements, and while the corresponding transition rates were not nearly as high as those associated with the other four variables, they were sufficiently above the average rate that the residual transitions are still high.

For transitions to ESI there were no events that clearly dominated the others with respect to rates of change. These rates ranged from 4.7 percent for all children with Medicaid to nearly 11 percent for those whose fathers gained employment. The actual numbers of transitions varied over a much broader range, of course. For the strongest net predictors from the regression analysis the numbers of transitions ranged from 11,000 to nearly 24,000. Children with family income changes had more numerous transitions, but these events had no net effects in the regression analysis, so we must discount their importance here.

Transitions from Medicaid to other insurance were infrequent generally. Consistent with the findings from the regression analysis the father's loss of employment was associated with the highest transition rate--at 2 percent--but children with large changes in family income appear to account for more transitions, even after we allow for the weaker association of income changes with this particular type of transition.

TABLE 20

**CHILDREN WITH MEDICAID WHO EXPERIENCED INDIVIDUAL EVENTS IN THE NEXT MONTH:
PERCENTAGE DISTRIBUTION OF CHANGES IN COVERAGE IN THE NEXT FOUR MONTHS AND IMPLIED NUMBER OF TRANSITIONS**

Trigger Event	Average Monthly Number	Change in Coverage in Next Four Months (percent of First Column)				Implied Number of Transitions in Next Four Months to:		
		No Change	Other		Uninsured	ESI	Other Insurance	
			Uninsured	ESI Insurance				
All Children with Medicaid	13,191,600	85.2	9.6	4.7	0.5	1,267,700	620,000	62,000
Children with Medicaid and a Trigger Event								
Family Lost AFDC	247,100	60.8	30.4	8.3	0.4	75,200	20,600	1,000
Father Gained Employment	103,000	58.1	30.6	10.8	0.6	31,500	11,100	600

Father Increased Hours to 30 or More	165,500	63.6	28.2	7.5	0.7	46,700	12,500	1,100
Mother Increased Hours to 30 or More	232,400	70.6	18.4	10.2	0.9	42,800	23,600	2,000
Father Changed Jobs	172,000	73.9	19.8	6.0	0.3	34,100	10,200	500
Mother Changed Jobs	213,400	77.4	13.1	9.1	0.5	28,000	19,300	1,000
Father Lost Employment	87,800	72.5	19.5	5.9	2.1	17,100	5,200	1,800
Father Reduced Hours below 30	106,000	76.1	16.5	6.3	1.1	17,500	6,700	1,200
Family Income Rose Markedly	635,200	73.9	17.7	7.5	1.0	112,200	47,500	6,300
Family Income Fell Markedly	573,500	75.9	17.9	4.9	1.3	102,700	28,100	7,700
Parent Joined Family	28,800	66.3	29.0	4.7	0.0	8,400	1,400	0
Parent Left Family	43,500	71.5	21.4	7.1	0.0	9,300	3,100	0

SOURCE: Survey of Income and Program Participation, 1992 Panel.

Children with Other Insurance. The overall rate at which children left other insurance was even higher than the exit rate from uninsurance. In Table 21 we see that an average of 30 percent of the children who were covered by other insurance at any one time between June 1993 and May 1994 left that coverage over the next four months. Most of the movement--22 percent--was to ESI, with 6 percent becoming uninsured and little more than 1 percent enrolling in Medicaid. Consistent with the interpretation of other insurance as generally privately purchased coverage, the high rate of movement from other insurance to ESI is consistent with the view that other insurance serves as an imperfect substitute for ESI.

The highest conditional exit rates from other insurance ranged from 63 to 74 percent (that is, the proportion retaining other insurance was between 37 percent and 26 percent). Interestingly, the father's gaining employment was associated with the highest exit rate from other insurance, but a substantial proportion of the children with this event became uninsured--26 percent compared to the 40 percent who obtained ESI. When fathers increased their weekly hours to 30 or more--which happened nearly three times as often as employment gains--54 percent of their children gained ESI, and less than 7 percent became uninsured. Children whose family income fell markedly had the most transitions from other insurance to ESI, but the transition rate of 21 percent was no higher than the unconditional average rate, implying that these transitions reflect no more than a small impact of the event per se. This contrasts with the smaller numbers of transitions associated with some of the employment changes, where many of the transitions truly reflect the impact of the events with which they correspond.

Both the father's gaining employment and losing employment are associated with high rates of children's movement from other insurance to uninsured, as is true as well of a parent leaving the family. All three of these events are relatively infrequent compared to the family's income falling markedly, which has a much weaker association with the transition but may still account for more transitions.

Transitions from other insurance to Medicaid were infrequent generally, and we found the regression results difficult to interpret. Compared to all children with other insurance there are very high transition rates associated with several trigger events, but we can infer from the magnitudes of the odds ratios in Table 17 that the standard errors were very large as well. As a result, we hesitate to attach much importance to the exit rates and transitions reported in Table 21.

TABLE 21

CHILDREN WITH OTHER INSURANCE WHO EXPERIENCED INDIVIDUAL EVENTS IN THE NEXT MONTH: CHILDREN WITH OTHER INSURANCE WHO EXPERIENCED INDIVIDUAL EVENTS IN THE NEXT MONTH: PERCENTAGE DISTRIBUTION OF CHANGES IN COVERAGE IN THE NEXT FOUR MONTHS AND IMPLIED NUMBER OF TRANSITIONS

Trigger Event	Average Monthly Number	Change in Coverage in Next Four Months (percent of First Column)				Implied Number of Transitions in Next Four Months to:		
		No Change	ESI	Uninsured	Medicaid	ESI	Uninsured	Medicaid
All Children with Other Insurance	2,791,800	69.9	22.3	6.4	1.4	623,700	179,000	38,000
Children with Other Insurance and a Trigger Event								
Father Gained Employment	15,000	26.1	40.4	25.9	7.5	6,100	3,900	1,100
Mother Gained Employment	39,400	51.5	28.6	18.8	1.1	11,300	7,400	400
Father Increased Hours to 30 or More	42,000	37.1	53.6	6.6	2.7	22,500	2,800	1,100
Mother Changed Jobs	38,300	40.1	41.3	12.5	6.1	15,800	4,800	2,300
Father Lost Employment	15,200	36.3	29.8	30.7	3.2	4,500	4,700	500
Family Income Fell Markedly	193,000	65.9	20.9	12.5	0.8	40,300	24,200	1,500

Parent Joined Family	4,200	49.3	28.1	0.0	22.6	1,200	0	900
Parent Left Family	6,300	47.7	22.1	30.2	0.0	1,400	1,900	0

SOURCE: Survey of Income and Program Participation, 1992 Panel.

Footnotes:

24. For example, Swartz et al. (1993) used data from the 1984 SIPP panel to estimate a multivariate hazard model showing the effects of personal characteristics on the rate at which adults exited spells of uninsurance. The only event included among the characteristics was the loss of private insurance. Short and Freedman (1998) used data from the 1990 SIPP panel to estimate discrete-time logit models of single women's exits from three types of coverage--Medicaid, private insurance, and uninsured--into each of the other two types. Predictors included both fixed and time-varying characteristics of the woman, her family, and the state labor market but no events.

25. The model assumes no ordering among the four categories, which is appropriate for our situation. That is, the results are indifferent to which outcome is assigned the value "1" on the dependent variable, which outcome is assigned the value "2," and so on.

26. We also included as a predictor a binary variable indicating whether or not the month in which the possible trigger events were observed was the first month of a four-month SIPP reference period, which could produce a spurious relationship between one or more trigger events and a transition in health insurance coverage. Generally, this variable was statistically significant but relatively weak in its net effect on the odds of observing a transition.

27. While the effects *can* be expressed as changes in probabilities, these effects vary across the range of the dependent variable. Researchers sometimes report the effects in logistic regression models as probabilities evaluated at the mean of the dependent variable, but this can easily lead to misinterpretation.

28. Letting $Y=1$ represent the occurrence of a transition and $Y=0$ the absence of a transition, and letting P represent the probability that $Y=1$, the odds of a transition occurring are defined as $P/(1P)$. Thus if one in five or 20 percent of children experience a transition, the *odds* of the transition occurring are 1 to 4, or .25. If the two outcomes, transition versus no transition, are equally likely, the probability of either outcome is .5 while the odds favoring either outcome are 1.0.

29. This effect is constant across the range of the dependent variable.

30. The regression equations were estimated with the SUDAAN software, which can calculate standard errors that take account of the complex sample design of the SIPP. The standard error calculations used a pair of variables that the Census Bureau created and added to the SIPP file expressly to facilitate the estimation of standard errors. Because these variables are constant over time for individuals, they also help in correcting for the downward bias in the estimated standard errors that may arise from the use of multiple observations on the same individuals.

31. In Section E when we looked at the frequency of different types of events that preceded transitions we were seeing both their overall frequency of occurrence and, by comparison with children who reported no transitions, a measure of the strength of the relationship between each event and each type of transition.

32. The dates refer to the value of $m-1$ in the dataset we constructed. The universe of children in Table 18 is children who were covered by ESI in month $m-1$, that is, the month prior to month m .

33. It is possible for a child to have experienced more than one transition over the four-month period--for example, becoming uninsured and then enrolling in Medicaid. We count only the first transition in this table.

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The Effects of Trigger Events on Changes in Children's Health Insurance Coverage

G. DISCUSSION AND CONCLUSIONS

We have presented evidence that in the one-year period from July 1993 through June 1994 there were 23 million transitions among major categories of health insurance coverage among children--including transitions into and out of the uninsured. In frequency, these changes in coverage amount to one for every three children. And while the 23 million transitions probably affected no more than half that many children, this is still a lot of children. Moreover, the transitions out of (and into) uninsurance were nearly as large as the number of children who were uninsured at any one time, and the same could be said of transitions out of (and into) other insurance. For Medicaid, the number of transitions approached half the number who reported being enrolled in Medicaid at any one time during the year. And while the transitions out of ESI were proportionately much less common than the transitions out of these other statuses, there were still 7 million of them.

The purpose of this research was to investigate the contribution of trigger events to the occurrence of these transitions. To this end, we examined a large set of primarily economic and demographic changes in children's families as potential trigger events. We found evidence that many of these events occurred disproportionately among children who experienced these transitions versus children who did not, and a regression analysis of the effects of trigger events on subsequent transitions provided evidence of statistically significant net effects of particular events on the likelihood of a child experiencing specific kinds of transitions.

What does this analysis of trigger events tell us about why there are so many changes in health insurance coverage among children in as short a time as a year? While we did not address this macro level question explicitly, trigger events provide a mechanism that is capable of accounting for such changes--and for their fluctuation over time. The events that we examined occurred with varying frequency in the different coverage groups, and when they occurred some fraction of the children who experienced them reported changes in their health insurance coverage soon after. For children with ESI, 15 to 30 percent left ESI in the next four months. For uninsured children, 35 to 45 percent became insured in the next four months. Many of the events that we examined are potentially sensitive to changes in the economy. If particular events become more frequent or less frequent, will the transitions with which they are associated be affected as well? The question is important, but to answer it we need to observe changes in the frequency of events and then assess their impact on transitions. Comparison of the late 1990s with the earlier years included in this study may provide the material with which to answer this question.

Our research was not designed to explain *why* trigger events affect health insurance coverage. Clearly, the coverage offered by employers and the terms of its availability are important in mediating the impact of changes in the parents' employment on children's coverage. Data of this kind were not collected in the earlier SIPP panels, and the latest (1996) SIPP panel will provide only somewhat more information. The most promising national data source is the Medical Expenditure Panel Survey (MEPS), which collects

data from employers as well as household members. Unfortunately, however, there are no nationally representative data that would allow us to look at *change* in the coverage offered by parents' employers--or its costs to employees--as a factor in the gain or loss of employer-sponsored coverage for children or adults .

Despite the high transition rates that seem to follow certain events, it was surprising that some rates were not even higher. In particular, when fathers of children with ESI lost employment, two-thirds of the children--and their fathers--retained coverage through at least the next four months. Obviously, some portion of this can be attributed to the source of ESI being separate from the job that was lost, but how often can this be true, and what else can explain our findings? Better data on the actual source of coverage would be helpful here as well.

Finally, there are research issues involving some of the transitions themselves. Given the modest year-to-year change in the national distribution of children's coverage, we knew that movements between sources of coverage must be canceling each other, largely, but we were surprised to find how often this was true at the micro level--that is, how often children reversed their own transitions. While there is independent evidence of churning in the Medicaid program (see Ellwood and Lewis 1999, for example), its pervasiveness across types of transitions was striking. Of particular note are the children who moved from ESI to Medicaid and back within a four month period--and often without their parents losing ESI. Additional research involving data from a source other than the SIPP would be enlightening.

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The Effects of Trigger Events on Changes in Children's Health Insurance Coverage

Appendix Tables

TABLE A.1

PERCENTAGE OF TRANSITIONS AND TRIGGER EVENTS REPORTED TO HAVE OCCURRED BETWEEN REFERENCE PERIODS

Type of Transition or Event	Percentage Between Reference Periods
Transitions from ESI to:	
Uninsured	75.4
Medicaid	84.7
Other Insurance	98.3
Transitions from Uninsured to:	
ESI	83.0
Medicaid	68.5
Other Insurance	89.9
Transitions from Medicaid to:	
Uninsured	75.4
ESI	82.7
Other Insurance	66.1
Transitions from Other Insurance to:	
ESI	99.1
Uninsured	81.1
Medicaid	89.6
Potential Trigger Event	
Father Lost Employment	54.9
Mother Lost Employment	58.1

Father Reduced Hours below 30	63.1
Mother Reduced Hours below 30	5.6
Father Changed Jobs	40.9
Mother Changed Jobs	38.1
Father Gained Employment	46.3
Mother Gained Employment	42.9
Father Increased Hours to 30 or More	44.9
Mother Increased Hours to 30 or More	56.8
Family Income Rose Markedly	56.8
Family Income Fell Markedly	56.9
Family Lost AFDC	64.1
Family Headship Changed	33.9

SOURCE: Survey of Income and Program Participation, 1992 Panel.

NOTE: If the timing of events were reported accurately, 25 percent of transitions or events would occur between reference periods.

TABLE A.2

**CHILDREN LOSING ESI VERSUS CHILDREN REMAINING COVERED BY ESI:
PERCENTAGE OF CHILDREN EXPERIENCING SELECTED EVENTS IN PAST SIX
MONTHS**

Event	Coverage After Losing ESI						Children Remaining Covered by ESI
	Uninsured	Medicaid	Other	Insurance			
Father Lost Employment	12.6	*	5.3	*	5.0	*	1.5
Mother Lost Employment	13.7	*	15.7	*	9.3	*	4.0
Father Reduced Hours below 30	11.7	*	7.2	*	14.7	*	2.9
Mother Reduced Hours below 30	15.7	*	13.4	*	8.7	*	4.2
Father Changed Jobs	19.2	*	6.9		10.7	*	7.1
Mother Changed Jobs	11.7	*	8.4		5.1	*	7.4

Father Gained Employment	4.4	4.4	3.6	1.6
Mother Gained Employment	9.2	11.8	5.8	4.5
Father Increased Hours to 30 or More	10.6	8.3	5.3	4.9
Mother Increased Hours to 30 or More	10.0	10.6	8.4	6.5
Family Income Fell Markedly	39.1 *	31.1 *	40.7 *	14.9
Family Income Rose Markedly	32.6	30.9	35.5 *	20.5
Family Headship Changed	7.3 *	10.6 *	3.9	3.2
Family Size Increased	6.7	7.3	3.0	4.2
Family Size Decreased	7.4 *	12.9 *	2.9 *	3.4
Family Lost AFDC	0.8	5.0	0.0	0.2
Family Obtained AFDC	0.0	13.1 *	0.0	0.0
Any Relevant Event (Denoted by *)	71.0	53.2	66.8	--

SOURCE: Survey of Income and Program Participation, 1992 Panel.

TABLE A.3

**CHILDREN BECOMING INSURED VERSUS CHILDREN REMAINING UNINSURED:
PERCENTAGE OF CHILDREN EXPERIENCING SELECTED EVENTS IN PAST SIX
MONTHS**

Event	Coverage After Becoming Insured				Children Remaining Uninsured
	ESI	Medicaid	Other Insurance		
Father Lost Employment	7.3	9.0 *	10.7 *	5.1	
Mother Lost Employment	9.3	16.1 *	13.2 *	6.8	
Father Reduced Hours below 30	8.6	12.8 *	10.0 *	7.1	
Mother Reduced Hours below 30	11.2	14.4 *	9.6 *	7.8	
Father Changed Jobs	20.3 *	14.7 *	13.3 *	11.2	
Mother Changed Jobs	15.2 *	12.5 *	10.5 *	9.1	
Father Gained Employment	11.3 *	6.9	0.9	4.7	
Mother Gained Employment	15.4 *	12.9	18.7	8.1	

Father Increased Hours to 30 or More	17.8		9.0		5.6		6.9
Mother Increased Hours to 30 or More	19.3		15.1		5.9		7.9
Family Income Fell Markedly	27.0		36.9	*	46.2	*	25.5
Family Income Rose Markedly	43.7	*	31.2		42.0	*	26.8
Family Headship Changed	7.4	*	11.6	*	5.2		4.7
Family Size Increased	7.4	*	9.8		7.3		7.1
Family Size Decreased	3.8		12.0	*	4.0		7.5
Family Lost AFDC	0.7		6.0		0.9		2.9
Family Obtained AFDC	0.0		16.6	*	0.0		0.0
Any Relevant Event (Denoted by *)	70.8		67.5		74.6		--

SOURCE: Survey of Income and Program Participation, 1992 Panel.

TABLE A.4
CHILDREN LEAVING MEDICAID VERSUS CHILDREN REMAINING COVERED BY
MEDICAID:
PERCENTAGE OF CHILDREN EXPERIENCING SELECTED EVENTS IN PAST SIX
MONTHS

Event	Coverage After Leaving Medicaid			Children Remaining Covered by Medicaid
	Uninsured	ESI	Other Insurance	
Father Lost Employment	9.6	4.1	--	2.8
Mother Lost Employment	10.6	7.9	--	7.0
Father Reduced Hours below 30	10.8	4.8	--	4.0
Mother Reduced Hours below 30	11.8	7.7	--	5.7
Father Changed Jobs	13.6	* 10.3	* --	5.1
Mother Changed Jobs	9.8	* 11.5	* --	6.3
Father Gained Employment	11.4	* 6.1	* --	2.7

Mother Gained Employment	17.3	*	14.6	*	--	7.9
Father Increased Hours to 30 or More	16.7	*	10.5	*	--	4.3
Mother Increased Hours to 30 or More	16.1	*	17.5	*	--	6.8
Family Income Fell Markedly	26.1		22.1		--	16.1
Family Income Rose Markedly	38.7	*	46.1	*	--	19.6
Family Headship Changed	9.0	*	6.3	*	--	6.4
Family Size Increased	12.6	*	10.9	*	--	7.1
Family Size Decreased	8.5		5.4		--	7.1
Family Lost AFDC	24.2	*	13.5	*	--	5.0
Family Obtained AFDC	0.0		0.0		--	8.8
Any Relevant Event (Denoted by *)	74.9		64.6		--	--

SOURCE: Survey of Income and Program Participation, 1992 Panel.

NOTE: The sample size for children leaving Medicaid and obtaining other insurance (see Table 2A) is too small to support these tabulations.

TABLE A.5

CHILDREN LEAVING OTHER INSURANCE VERSUS CHILDREN REMAINING COVERED:
PERCENTAGE OF CHILDREN EXPERIENCING SELECTED EVENTS IN PAST SIX MONTHS

Event	Coverage After Leaving Other Insurance			Children Remaining Covered by Other Insurance	
	ESI	Uninsured	Medicaid		
Father Lost Employment	4.6	8.5	*	--	1.9
Mother Lost Employment	3.2	4.0	*	--	4.5

Father Reduced Hours below 30	6.1		7.5	*	--	4.6
Mother Reduced Hours below 30	6.1		9.5	*	--	5.0
Father Changed Jobs	13.6	*	12.2	*	--	7.9
Mother Changed Jobs	9.2	*	13.1	*	--	5.0
Father Gained Employment	4.6	*	7.2	*	--	1.5
Mother Gained Employment	7.9	*	18.8	*	--	5.2
Father Increased Hours to 30 or More	16.2	*	7.1		--	4.0
Mother Increased Hours to 30 or More	10.1	*	5.6		--	5.4
Family Income Fell Markedly	32.8		44.3	*	--	23.8
Family Income Rose Markedly	44.6	*	41.7	*	--	28.4
Family Headship Changed	3.2	*	9.3	*	--	3.5
Family Size Increased	5.1	*	7.0	*	--	3.9
Family Size Decreased	0.6		19.9		--	3.4
Any Relevant Event (Denoted by *)	67.2		74.0		--	--

SOURCE: Survey of Income and Program Participation, 1992 Panel.

NOTE: The sample size for children leaving Medicaid and obtaining other insurance (see Table 2A) is too small to support these tabulations.

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