Consequences of States' Policies for SCHIP Disenrollment

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Policymakers are concerned about disenrollment from the State Children's Health Insurance Program (SCHIP). We describe disenrollment in Florida, Kansas, New York, and Oregon and assess the links between disenrollment and States' SCHIP policies. We found that SCHIP is used on a long-term basis (at least 2 years) for a significant group of new enrollees and as temporary coverage (fewer than 12 months) for many others. Recertification generates large disenrollments (about one-half of children still enrolled at the time), but as many as 25 percent return within 2 months. The increased disenrollment rate at recertification is completely eliminated by a policy of passive re-enrollment.

INTRODUCTION

Congress' primary aim when it passed the Balanced Budget Act of 1997 (Public Law 105-33) was to increase the number of low-income children who had health insurance that were not eligible for Medicaid. Like Medicaid, SCHIP is a Federal and State program, but SCHIP affords States more discretion in the design and implementation of their programs. Among the decisions States have had to make is whether to run a separate freestanding SCHIP program, an expansion of their Medicaid programs, or a combination of the two approaches (Rosenbaum et al., 1998). Medicaid expansions establish an entitlement for eligible children for whom they must provide certain benefits, including Early and Periodic Screening, Diagnosis, and Treatment (EPSDT) services, while separate freestanding programs allow the State more freedom to enact policies that would only be permitted to a Medicaid expansion program under a waiver from the Federal Government. Combination programs allow States to establish an entitlement for certain age or income groups, while maintaining flexibility to implement policy innovations and caseload limits for other groups. Fifteen States and the District of Columbia have created Medicaid expansion programs, 16 have separate freestanding SCHIP programs, and 19 have combination programs (U.S. General Accounting Office, 2001).[1]

Having made the initial decisions regarding their SCHIP program structures and policies, the States' next major challenge has been to enroll children into the program. To do so, they launched multiprong campaigns using advertising and creative outreach methods to get the word out to families potentially eligible for SCHIP (Mickey, 1999; National Conference

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[1] Some States, including one of our study States (Oregon), have enacted Medicaid-look-alike programs. These programs technically are separate freestanding SCHIP programs, in that States can limit the number of enrollees, but in almost all other respects are identical to Medicaid expansion programs.

of State Legislators, 1999; Perry et al., 2000; Schwalberg et al., 1999; U.S. General Accounting Office, 2000). In addition, the Federal Government, national organizations, foundations, and even corporations have been active in increasing public awareness of SCHIP (Edmunds, Teitelbaum, and Gleason, 2000). Efforts have also been made to streamline the enrollment process by simplifying applications and eliminating requirements (Mickey, 1999; National Conference of State Legislators, 1999; Rosenbach et al., 2001; Ross and Cox, 2000; Schwalberg et al., 1999). As a result of these concerted efforts, 2 million children participated in SCHIP sometime during Federal fiscal year (FFY) 1999, 3.3 million during FFY 2000 and 4.6 million during FFY 2001 (Health Care Financing Administration, 2000).

Attention is now shifting to retention of those children already enrolled in SCHIP (Bachrach and Tassi, 2000; Pernice et al., 2002; Klein, 2001; Rosenbach et al., 2001). Aggregate numbers show that disenrollment in SCHIP is substantial. While 1.96 million different children were enrolled in SCHIP at some time during FFY 1999, only 1.61 million different children were enrolled during the fourth quarter of FFY 1999, indicating a high turnover rate (Rosenbach et al., 2001). Thus, a minimum of 18 percent of children enrolled at some time during FFY 1999 had a disenrollment. In some cases, States' successes in enrolling children into SCHIP have been substantially eroded by disenrollments (Allison, LaClair, and St. Peter, 2001b; Bachrach and Tassi, 2000). As findings from the 1999 National Survey of America's Families (NSAF) demonstrate, the number of uninsured children could be reduced, perhaps by 10 percent, if children who enrolled in SCHIP or Medicaid remained enrolled (Kenney and Haley, 2001).

The phenomenon of disenrollment from public children's insurance programs is not new. Children are frequently enrolled in Medicaid for only a short period of time (Carrasquillo et al., 1998; Czajka, 1999; Ellwood, 1999). For example, in 1991 only 38 percent of new Medicaid enrollees remained on Medicaid a year later (Carrasquillo et al., 1998). Medicaid disenrollees also frequently return to the program after a brief gap in coverage. For example, in FFY 1993 and 1994 one of every five enrollments into the Medicaid program were by children who had been previously enrolled in Medicaid that year but had subsequently disenrolled (Czajka, 1999).

In order to provide some stability of coverage, 31 States have instituted a policy of continuous eligibility in SCHIP (4 for 6 months, 26 for 12 months, and 1 for up to 24 months [(National Conference of State Legislatures, 2000b]). This was designed to reduce the number of short enrollments by disregarding income variations during the defined period of continuous eligibility. As enrollees come up for recertification at the end of the continuous eligibility period, however, States are finding that a large proportion of children are not re-enrolling (Bachrach and Tassi, 2000; Hill, 2001; Holmes, 2001). Furthermore, there have been indications that children are disenrolled from the program before their period of continuous eligibility expires (Allison, LaClair and St. Peter, 2001a; Cooper, 2001).

STUDY QUESTIONS

Although there is growing concern about SCHIP disenrollments, few data exist about the extent of disenrollment and re-enrollments, the variation across States, and the degree to which State policies may affect enrollment patterns of covered individuals. In order to fill in this gap in the

literature we begin our analyses by describing two basic features of enrollment in separate freestanding SCHIP programs: (1) how long children enrolled in SCHIP are likely to remain enrolled, and (2) whether children who disenroll from SCHIP are likely to re-enroll at a later time. We next ask whether particular State policies affect those patterns. Specifically, we address five questions regarding the impact of different State policies:

- What is the impact of presumptive eligibility?
- What is the extent of disenrollment during periods of continuous eligibility?
- To what extent is disenrollment associated with recertification, what effect does recertification at 6 versus 12 months have on retention, and what impact does passive re-enrollment have?
- What effects do premiums have on disenrollment from SCHIP?
- How do these policies interact with one another?

We consider disenrollment from separate freestanding SCHIP programs in four States—Florida, Kansas, New York, and Oregon. These States represent different regions of the country, as well as varying demographic and population density profiles. They also represent a sizable proportion of the SCHIP caseload. In FY 2000, 32 percent of all children enrolled in SCHIP resided in these four States (Health Care Financing Administration, 2000).

The analyses presented in this article are a product of the Child Health Insurance Research Initiative (CHIRI™) (Agency for Healthcare Research and Quality, 2001a). CHIRI™ consists of a set of nine research projects sponsored by AHRQ, The David and Lucile Packard Foundation, and the Health Resources and Services Administration. The collaborative nature of CHIRI™ allows comparable results to be reported in several States, increasing the strength of findings, and allowing explanations of the consequences of State policy choices. CHIRI™ includes studies of SCHIP, Medicaid, and Title V programs; however this article presents findings only on separate freestanding SCHIP operations. While SCHIP serves many fewer children than Medicaid, States' ability to innovate makes SCHIP an ideal research subject to learn about the impact of various policies. Lessons learned from the separate freestanding SCHIP programs can inform policy about the Medicaid program and SCHIP Medicaid expansions as well, although a waiver from the Federal Government may be needed to enact some policy changes (for example, charging premiums).

SCHIP POLICIES IN THE FOUR STATES

Table 1 shows how the four States in our study used their discretion in setting SCHIP policies. Each State begins SCHIP eligibility where Medicaid eligibility leaves off, and families remain eligible until their income reaches a maximum level, which varies by State. All four States use age-based eligibility rules, whereby younger children are Medicaid eligible at higher family incomes than older children. Florida and New York have combination SCHIP programs. In addition to their separate freestanding SCHIP programs, both States serve a particular group of children (defined by age and family income) through a SCHIP Medicaid expansion program. Additionally, Florida operates a SCHIP Medicaid-look-alike program. As a result of eligibility rules that hinge on age and family income, children on Medicaid and SCHIP Medicaid expansion or Medicaid-look-alike programs can become eligible for the separate freestanding SCHIP program by virtue of becoming

Table 1

Policies in Four States' Separate Freestanding SCHIP Programs: 2000-2001

Policy[1]	Florida[2,3]	Kansas	New York[4]	Oregon
Income Eligibility as a Percent of FPL				
Ages Under 1	None	150-200	185-250	133-170
Ages 1-5	133-200	133-200	133-250	133-170
Ages 6-18	100-200	100-200	100-250	100-170
Presumptive Eligibility	No	No	Yes – for 3 months	No
Continuous Eligibility	None; eligibility not recertified for 6 months	12 months	None; eligibility not recertified for 12 months	6 months
Premiums	$15 per family per month	151-175 percent of FPL: $10 per family per month; 176-200 FPL: $15 per family per month	160-222 percent of FPL: $9 per child per month to $27 per family per month; 222-250 FPL: $15 per child per month to $45 per family per month	None
Non-Payment of Premium Policy	30-day grace period after which child is disenrolled; 60-day waiting period for re-enrollment	No disenrollment for non-payment until 12-month recertification	30-day grace period after which child is disenrolled; no waiting period for re-enrollment	NA
Recertification Procedures	Passive re-enrollment: no income documentation requirements; income checked via State computer systems	No face-to-face interview required; verification of income required; completed re-enrollment form required	No face-to-face interview required; verification of income required; completed re-enrollment form required; plans contact enrollees 1 month before eligibility expires to remind them to recertify	No face-to-face interview required; verification of income required; completed re-enrollment form required

[1] Children with incomes below the lower Federal poverty level (FPL) bounds are covered by Medicaid, with exceptions noted in Florida's and New York's combination programs. Children with incomes above the upper FPL bounds are eligible for New York and Florida's SCHIP programs, but their families must pay the full cost for the coverage.

[2] Florida operates a Medicaid expansion SCHIP program for children under age 1 with incomes from 185-200 percent of the FPL, and a SCHIP-funded Medicaid-look-alike program for children ages 1-4 with incomes from 133-200 percent of the FPL. These children were not part of this study.

[3] On October 1, 2000, Florida added to its SCHIP Medicaid expansion program 17 and 18 year olds with incomes of 28-100 percent of the FPL, but this group is being phased into mandatory Medicaid coverage under Federal law and will not exist as a Medicaid expansion after September 2002.

[4] New York's SCHIP Medicaid expansion program covers 15-19 year olds with incomes under 100 percent of the FPL who are not otherwise eligible for Medicaid. Estimates by the New York Department of Health indicate that approximately 30 percent of SCHIP enrollees in New York actually fall below the lower FPL bounds and are eligible for Medicaid (Dutton, Chin, and Hunter-Grant 2001). This is because there was a pre-existing State children's health program before SCHIP whose enrollees were grandfathered into SCHIP when the program began, and these children have not yet been transferred to the Medicaid program.

NOTES: SCHIP is State Children's Health Insurance Program. NA is not applicable.

SOURCES: (National Conference of State Legislatures, 2000a, b; 2001a, b; Ross and Cox, 2000; and Center for Medicare & and Medicaid Services, 2001.)

older, without any change in family income. However, the converse is not true—children in separate freestanding SCHIP programs will transfer to Medicaid and other SCHIP programs only if the family experiences a decrease in income or a change in structure, not because the children have aged. The range of family incomes that qualify a child for separate freestanding SCHIP programs is fairly small.

Presumptive eligibility, another State option, provides applicants with immediate coverage while eligibility determinations are made. New York is one of six States that have enacted presumptive eligibility (National Conference of State Legislatures, 2000b).

Two of our four States have opted for continuous eligibility, which allows children to retain coverage regardless of changes of family income during that time.

These policies were devised in recognition of SCHIP's narrow band of income eligibility and the fact that fluctuations in income are common. Oregon opted for 6 months of continuous eligibility, while Kansas opted for 12 months. Florida and New York have not officially adopted a continuous eligibility policy, but do not make requests for income updates until recertification. Families are supposed to contact the State if there is a change in their status that could affect their SCHIP eligibility, but there is no practical enforcement of this requirement.

Three out of our four study States elected to implement premiums, an option that is limited to separate SCHIP programs unless a Federal waiver is granted. Only Florida, however, instituted premiums for all families participating in SCHIP, while Kansas and New York instituted premiums only for higher income families. Nationally, 22 States elected to institute premiums, while 13 did not. (National Conference of State Legislatures, 2000a).

Other policies that might affect retention are the procedures States use to recertify enrollees. Kansas, New York, and Oregon all require that additional paperwork be returned to the State, including verification of income. Florida, however, has adopted a system of passive re-enrollment, in which children are assumed to be eligible unless information is provided to the contrary. Florida's program (KidCare) sends a form to enrollees' families, telling them it is time to renew and asking them to update any inaccurate information. Children remain enrolled, however, even if families do not respond.

DATA AND METHODS

We used State administrative records from separate SCHIP programs in Florida, Kansas, New York, and Oregon. These data, however, differ in important ways. First, the files in Florida, Kansas, and New York are all used to determine capitation payments to plans. Each of them adopts a rule about when applications and eligibility determinations must be made in order for applicants to be enrolled, and enrollment begins at the beginning of the next month. The Oregon file, however, is used to determine eligibility, which can begin and end at any time in a month. To maintain some degree of consistency, and because of how Oregon sets the recertification month, we consider a child in Oregon to be enrolled in a month if the child is eligible on the first of the month. Second, in Florida and New York, SCHIP enrollees of certain ages are not included in the data because they are covered by Medicaid expansion or Medicaid-look-alike programs. The Florida data include only children enrolled in the Healthy Kids component of KidCare, which covers children age 5-18. Children age 0-4 are covered by MediKids, a combination of Medicaid expansion and Medicaid-look-alike programs. Only about 7 percent of all children funded by SCHIP are enrolled in MediKids. Similarly, the New York data do not include children from New York's SCHIP Medicaid expansion program, which covers children age 15-18 from families with income under 100 percent of the Federal poverty level who are not otherwise eligible for Medicaid.

We define a SCHIP enrollment "spell" as an enrollment episode beginning with the first month of enrollment and continuing for as long as the child remains continuously enrolled. Our analysis considers the universe of new enrollment spells that began in January 1999, or later, and all subsequent enrollment spells for each child. We chose January 1999 as our start date because it was the earliest date for which the analyses could be performed in all four

States.[2] We define a new enrollment to be one that was preceded by at least 12 months during which there was no SCHIP enrollment. We constructed enrollment histories that included 1998 enrollment experiences, but only for the purpose of identifying new spells as of January 1999. The enrollment histories extend through the period for which States had data available at the time of the analysis (June 2001 for Florida and Kansas, March 2001 for New York, and January 2001 for Oregon). For each spell we know whether it is a new spell, its length (number of continuous months of enrollment), the calendar month during which the spell began, the premium level paid at the beginning of the spell, the characteristics of prior spells, and whether the spell is censored.

We admit censoring from two sources. First, spells are censored if they continue through the last month in our data because we do not know whether the children would have remained enrolled beyond that month. Spells such as this are said to be right censored. Second, when children pass the eligibility age limit (19 in all four States), they are disenrolled or age-censored. While these are real exits, we do not know how long the spells would have lasted had the children not aged out of the program. We investigate the importance of this kind of exit by censoring these spells in some of our analyses.

We characterize SCHIP enrollment and disenrollment experiences in the four States with three sets of statistics. First, we consider the enrollment experiences in new spells. We calculated Kaplan-Meier (1958) (empirical) hazard functions and the corresponding non-parametric survivor functions for these spells, both incorporating censoring (Kalbfleisch and Prentice, 1980). The hazard function, $H(t)$, is the probability that a child exits a spell at time t conditional on having survived at least until time t. The Kaplan-Meier hazard function is defined as:

$$H(t)=\frac{\text{Number of disenrollments in month } t}{\text{Number at risk of disenrolling in month } t}$$

The numerator includes all uncensored spells with length = t. The denominator includes all uncensored spells with length $\geq t$ and all censored spells with length $> t$. Censored spells of length t are removed from the calculation of $H(t)$, so that the probability of disenrollment is not affected by disenrollments due to aging out of the program, nor by enrollment spells that have reached the end of the observation window. The corresponding non-parametric survivor function, $S(t)$, which is the probability that a spell is at least t months long, is defined as

$$S(t)=S(t\text{-}1)*(1\text{-}H(t\text{-}1))=\Pi(1\text{-}H(\tau\text{-}1)).$$

Because all observed spells are at least 1 month long, $S(1) = 1$.

In order to characterize the relationship between premium requirements and children's enrollment and disenrollment experiences, we calculate $H(t)$ and $S(t)$ separately for premium payers and for premium non-payers. We report figures of $H(t)$ and $S(t)$ for each State, and by premium status.

We generated a second set of statistics because we are interested not only in how long a child stays on SCHIP during his or her initial spell, but also the length of time a child stays disenrolled from SCHIP. The length of disenrollment spells could signal that certain explanations for disenrollment are more likely than others. For example, brief disenrollments of a few months or less are more likely to occur because of administrative mistakes or because of families' difficulties with recertification processes than because families obtained private

[2] The following SCHIP programs began enrolling children in: KidCare (Florida) March 1992; HealthWave (Kansas) January 1999; Child Health Plus (New York) August 1991; and Oregon Health Plan July 1998.

insurance. To investigate this, we characterized disenrollment spell durations by calculating Kaplan-Meier hazard functions and the corresponding non-parametric survivor functions for these spells. Disenrollments that occur at the time of recertification may be very different in nature from those that occur at other times. We therefore generated $H(t)$ and $S(t)$ separately for children who disenrolled at the time of recertification, after short spells (less than 12 months), and after long spells (more than 12 months). We also estimated $H(t)$ and $S(t)$ separately for premium payers and non-payers to assess the differences in re-enrollments among these children.

Children may have many short enrollment and disenrollment spells, and as a result, the Kaplan-Meier hazard functions for new spells and for disenrollment spells may understate the long-term attachment to SCHIP coverage. To investigate this, we estimated a third set of statistics, the probability that a child will be enrolled in each month during the 2 years following initial enrollment, regardless of disenrollment experiences in the interim. Let $P(t)$ be the probability that a child is enrolled in the tth month following initial enrollment. We consider newly enrolled children as previously defined, and we estimate $P(t)$ nonparametrically as:

$$P(t)=\frac{\text{Enrollment in month } t}{\text{Possible enrolling in month } t}$$

Because every first spell is at least 1 month long, $P(1)=1$, we pooled cohorts of children who had their initial enrollments in each of the months following December 1998 to estimate $P(t)$. Children who are newly enrolled towards the end of the observations window (e.g., December 2000) can only contribute to calculations of $P(t)$ in which t is sufficiently small. The denominator accounts for this as well as for right censoring and, in some of our analyses, age censoring.

Our estimates are based on very large numbers of observations (N = 177,615 in Florida, 40,572 in Kansas, 792,111 in New York, and 44,243 in Oregon). In addition, because our data include the universe of enrollees in separate SCHIP programs in the four States, and because our models are non-parametric, our results contain neither sampling nor estimation error. Thus, we do not report standard errors or p-values.

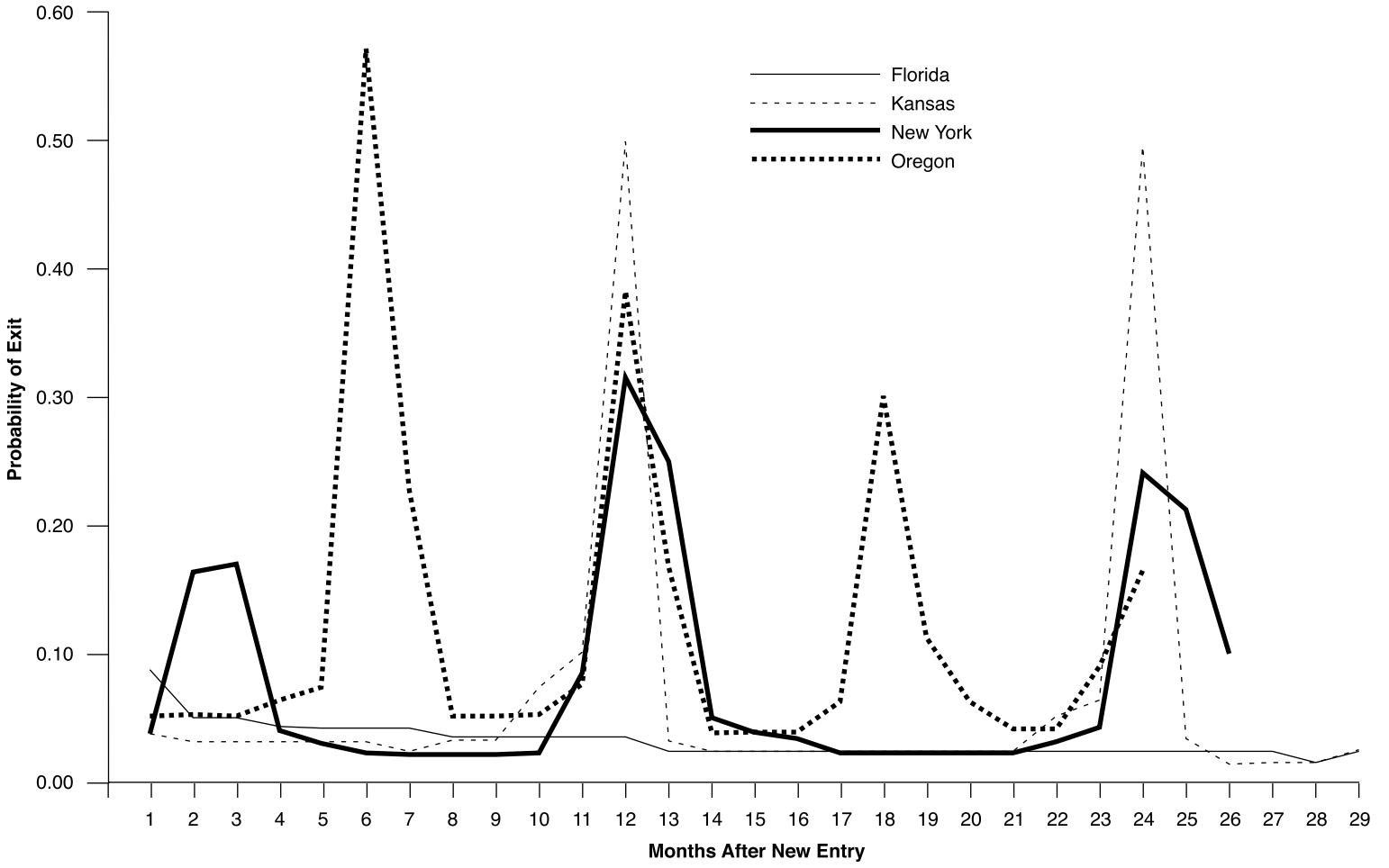
RESULTS

New SCHIP Enrollment Spells

Figure 1 presents the Kaplan-Meier hazard function for new spells, by State. Several differences across the States are immediately apparent. First, relative to the other States, New York has a much higher hazard (or exit) rate during months 2 and 3 ($H(2)$ and $H(3) > 0.15$ vs. 0.05 or less), which correspond to the months in which presumptive eligibility is resolved. Second, each of the States has a relatively low underlying exit rate during the remaining months before recertification. Florida and Oregon have higher rates than either Kansas or New York. Third, the three States that do not have passive re-enrollment all have large spikes in the hazard functions at the points of recertification. The hazard rates in Kansas and New York account for approximately 50 percent reductions in total enrollment at every recertification point. Oregon shows an even higher hazard at the first recertification and then a 10- to 15-percentage point reduction in the hazards for successive recertifications. In contrast, Florida shows no evidence of an increased disenrollment rate at recertification.

Figure 2 presents the Kaplan-Meier survivor functions for new SCHIP enrollment spells, conditional on enrollment until month 4. We present these conditional or

Figure 1
Monthly Probabilities of Exiting New SCHIP Spells, by State

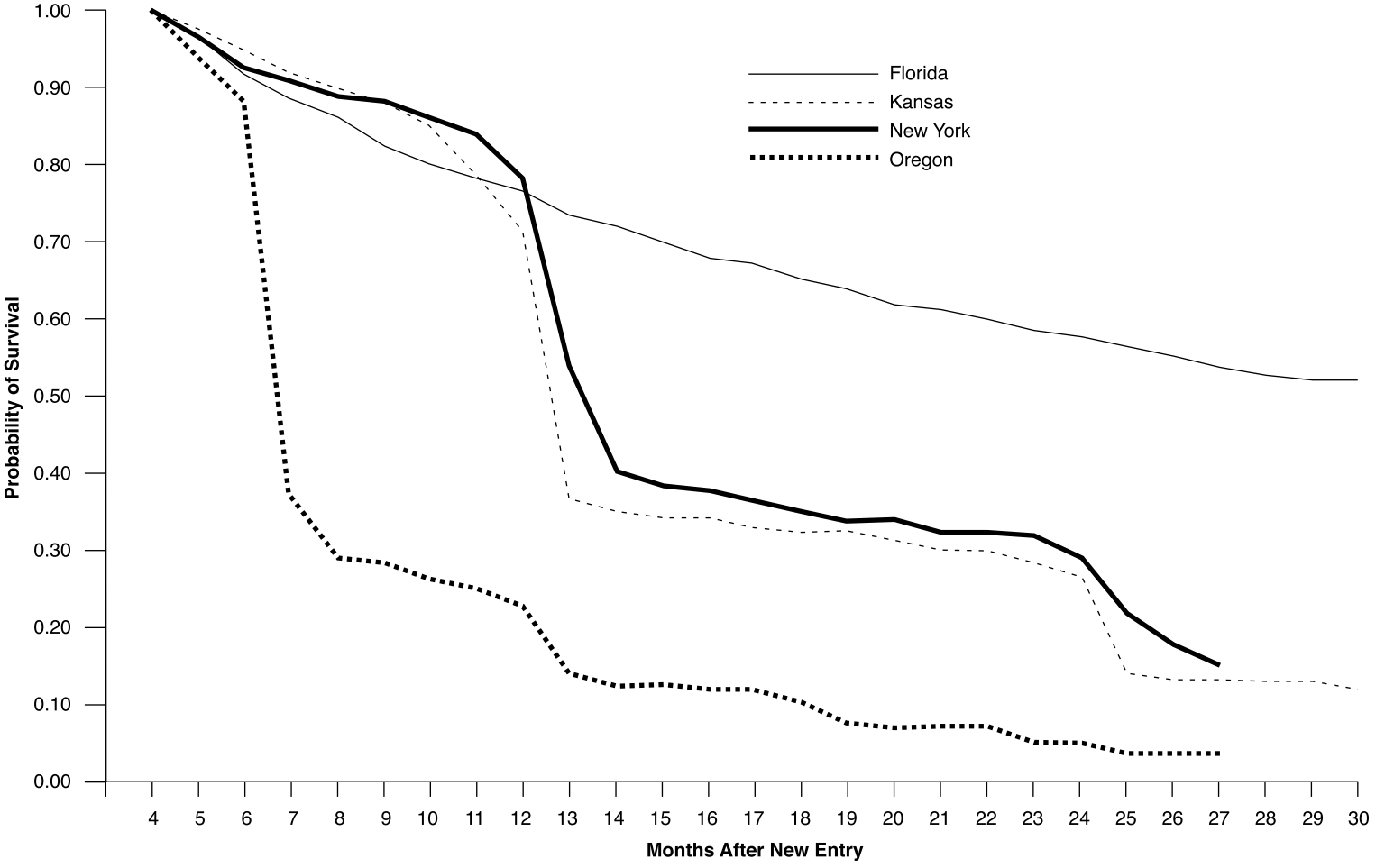


NOTES: SCHIP is State Children's Health Insurance Program. Calculations for this figure are based on the Kaplan-Meier (1958) empirical hazard functions.

SOURCES: Dick, A.W., University of Rochester, Allison, A., Kansas Health Institute, Haber, S. G., Center for Health Economics Research, Brach, C., Agency for Healthcare Research and Quality, and Shenkman, E., University of Florida, 2002.

Figure 2

Monthly Probabilities of Survival in New SCHIP Spells Conditional on Enrollment Until Month 4, by State



NOTES: SCHIP is State Children's Health Insurance Program. Calculations for this figure are based on the Kaplan-Meier (1958) empirical hazard functions.

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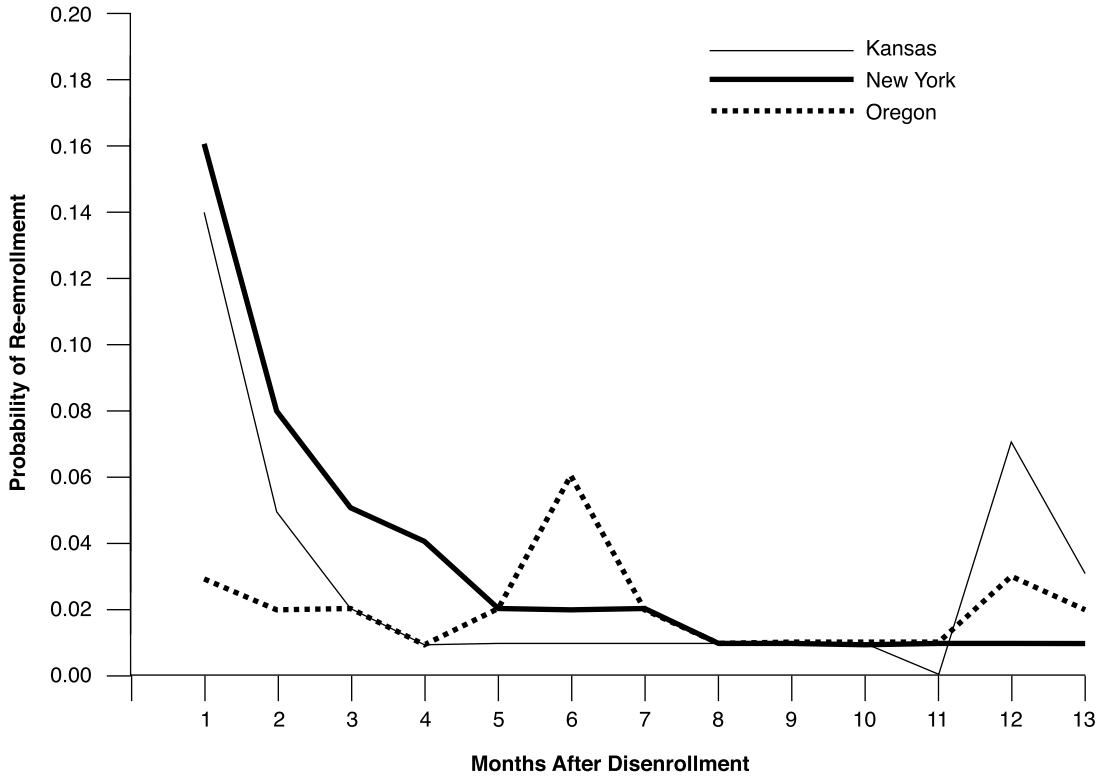
Figure 3

Monthly Probabilities of Re-enrollment Following Disenrollment from SCHIP at Recertification, by State



NOTES: SCHIP is State Children's Health Insurance Program. Calculations for this figure are based on the Kaplan-Meier (1958) empirical hazard functions. Florida is excluded from the figure because they showed no evidence of increased disenrollment at recertification.

SOURCES: Dick, A.W., University of Rochester, Allison, A., Kansas Health Institute, Haber, S. G., Center for Health Economics Research, Brach, C., Agency for Healthcare Research and Quality, and Shenkman, E., University of Florida, 2002.

normalized survivor functions to eliminate the effect of presumptive eligibility in New York, thereby allowing for a fair comparison across States.[3] The conditional survivor functions for Kansas and New York are strikingly similar. Both show an attrition of about 20 percent prior to recertification, followed by large drops at recertification, and the pattern is repeated through the two recertification cycles. Oregon is also similar, but its recertification cycle is every 6 months. In contrast, Florida shows only a slightly higher attrition rate than New York or Kansas prior to recertification, but no large drop in enrollment at any of its recertification points (6, 12, 18, and 24 months, respectively).

Disenrollment Spells

Figure 3 contains Kaplan-Meier hazard functions for disenrollment spells (i.e., re-enrollment rates) that begin with disenrollment at the time of recertification (12 months in New York and Kansas, and 6 and 12 months in Oregon). Because we are focusing on disenrollments related to recertification and because Florida shows no evidence of increased disenrollments at recertification,

[3] The value of the New York's unconditional survivor function in month 4 is 0.67. Thus, 33 percent of the new enrollees in New York disenrolled during the presumptive eligibility period.

we exclude Florida from Figure 3. The figure shows that, in Kansas 18 percent and in New York 23 percent of these children return to SCHIP in the first 2 months. However, from the hazard functions, we can deduce that about 65 percent do not return within a year. This represents a large number of children because disenrollment at recertification is common. Compared with the other States, Oregon has a much lower $H(t)$ over the first several months. The figure also shows that for all three States, very few children return to SCHIP if their disenrollment spells are more than 3 months ($H(t)$ falls to 0.02 or less). Oregon and Kansas, however, have substantial spikes in their hazard functions at 6 and 12 months, respectively. This could be the result of cycling through Medicaid, since Oregon and Kansas have continuous eligibility policies in Medicaid that are similar to that of SCHIP. That is, this shows that a proportion of children who switch from SCHIP to Medicaid at the SCHIP recertification point switch back to SCHIP at the Medicaid recertification point.

If disenrollments that occur at recertification were systematically different from those that occur at other times, we would expect to see differences in hazard (re-enrollment) rates for disenrollment spells that began at recertification and at other times. It is possible that disenrollments that occur at recertification are more likely to be short term (e.g., errors by parents in submitting forms), while disenrollments that occur at other times are more likely to be permanent disenrollments (e.g., changes to private insurance). We find, however, that the hazard rates, conditional on the length of the prior SCHIP enrollment spell, do not differ dramatically.

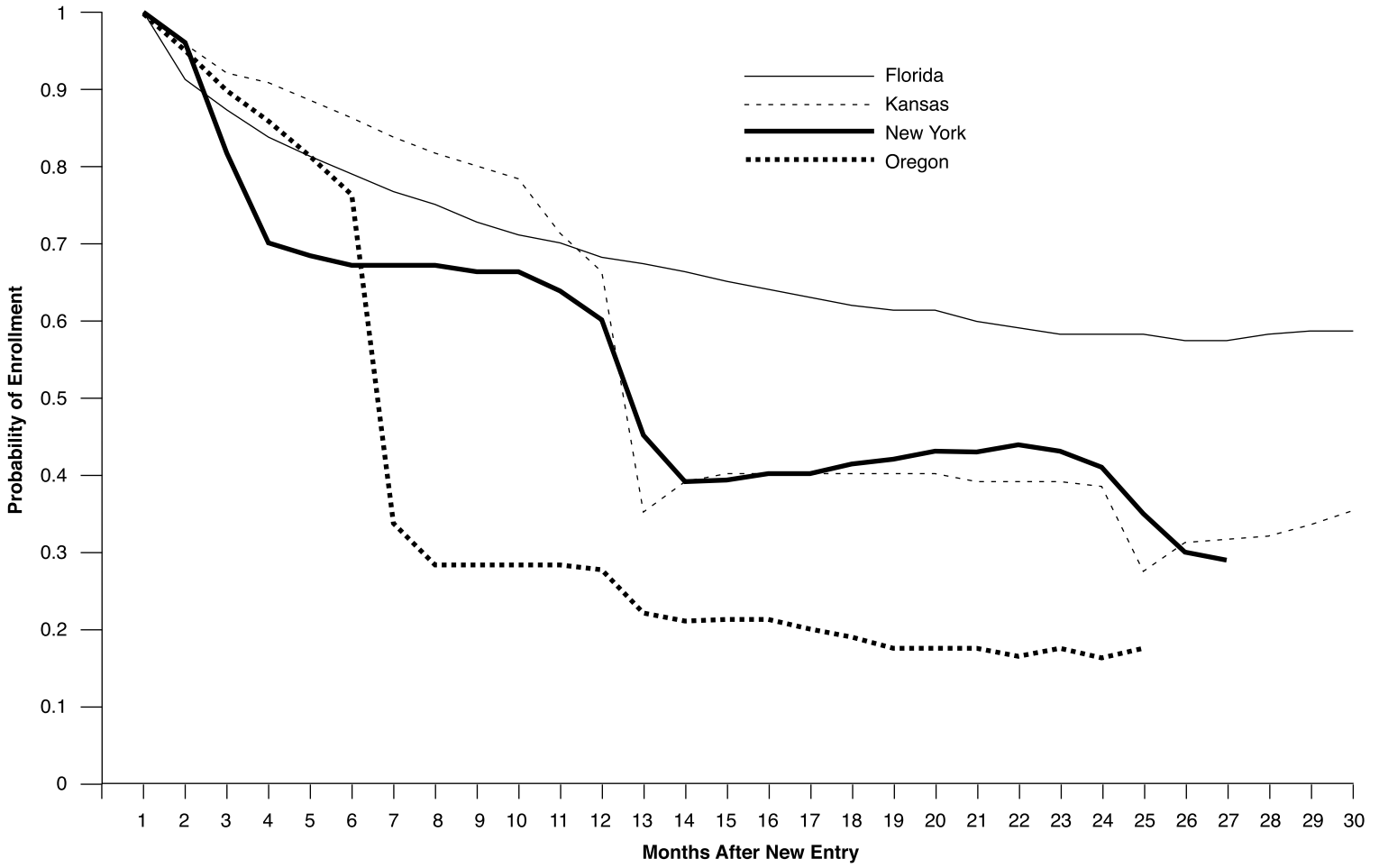
Not surprisingly, there is virtually no difference in the characteristics of disenrollment spells that start at recertification and at any other time in Florida. Although the reason for disenrollment was not included in the administrative data used for this study, a survey of 600 Florida disenrollees found that 56 percent identified failure to pay premiums as a reason for disenrollment (Shenkman, Steingraber, and Bono, 2001). A child who has been disenrolled in Florida for non-payment of premiums is required by law to wait 60 days before re-enrolling. After the waiting period, however, re-enrollments are not uncommon: $H(2)$ is nearly 10 percent and $H(3)$ is about 7 percent, respectively.

Long Term Attachment to SCHIP

Figure 4 presents our estimates, by State, of $P(t)$, the probability that a child will be enrolled in each month following a new enrollment, regardless of disenrollment experiences prior to the month. The curves are not dissimilar from the Kaplan-Meier survivor function estimates during the first year, but for Kansas, New York, and Oregon they are considerably higher during the second year. This is because of the many short disenrollment spells associated with recertification. In New York there is a 0.43 probability that a child will be enrolled 23 months after the initial enrollment. If we discount the presumptive eligibility period, however, that number increases to 0.53.[4] Florida shows a smooth decline in $P(t)$, and levels that easily exceed the other States immediately after their recertification points. However, Florida's $P(23)$ equals 0.58—not terribly different from New York. In Kansas, $P(23)$ equals 0.39. Both Kansas and New York show flat or increasing $P(t)$ curves during the second year, indicating that children from the original cohort are returning to SCHIP at least as often as they are disenrolling during the second year. The big disenrollment spikes

[4] We normalize $P(t)$ by estimating $P(t|$1st enrollment lasts at least 3 months).

Figure 4
Monthly Probabilities of Enrollment in SCHIP Including Re-enrollment, by State



NOTE: SCHIP is State Children's Health Insurance Program.

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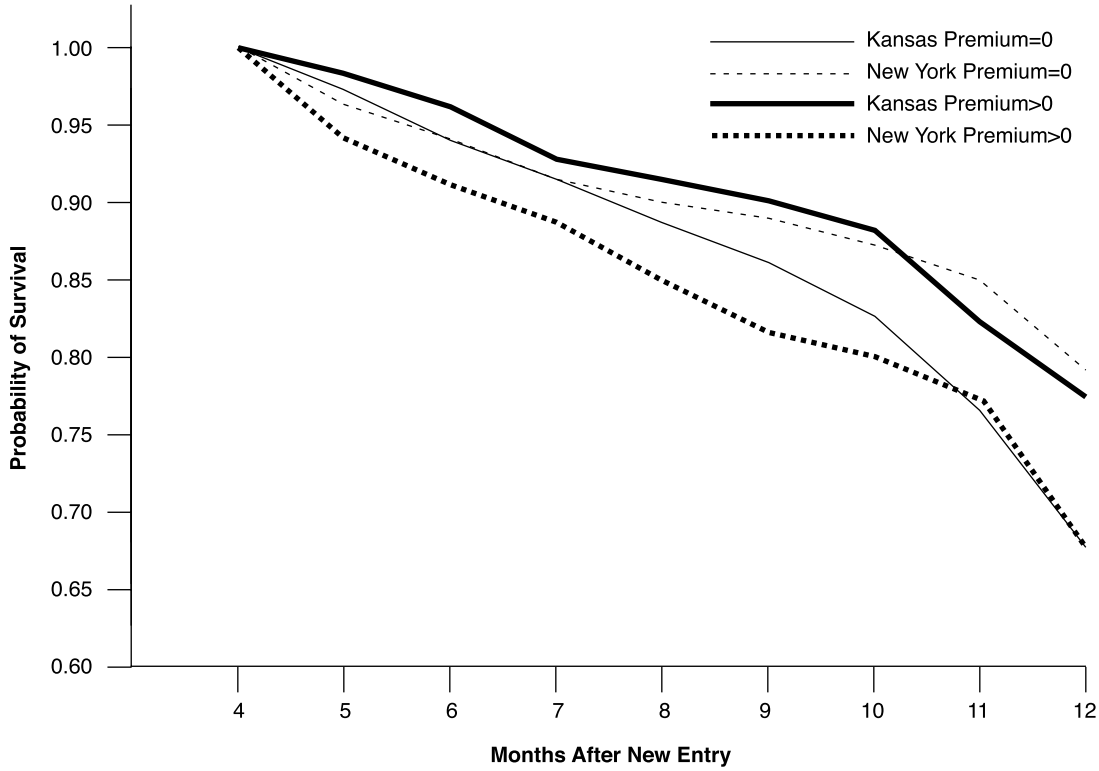
Figure 5

Monthly Probabilities of Survival in New SCHIP Spells, by Premiums Conditional on Enrollment Until Month 4: Kansas and New York



NOTES: SCHIP is State Children's Health Insurance Program. Calculations for this figure are based on the Kaplan-Meier (1958) empirical hazard functions.

SOURCE: Dick, A.W., University of Rochester, Allison, A., Kansas Health Institute, Haber, S. G., Center for Health Economics Research, Brach, C., Agency for Healthcare Research and Quality, and Shenkman, E., University of Florida, 2002.

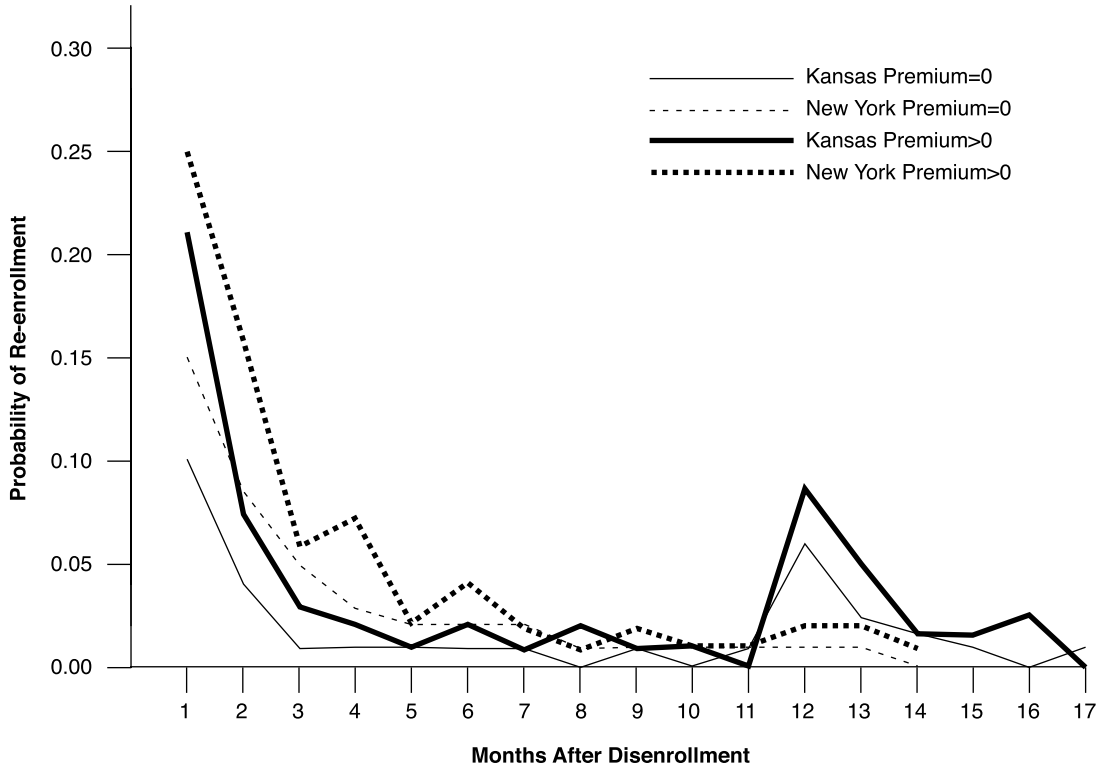
(Kansas, New York, and Oregon) at recertification are still evident, but in Kansas and New York they are somewhat blunted because of the many short disenrollment spells (re-enrollments within 2 months). SCHIP retention, as shown by $P(t)$, is considerably lower in Oregon than in the other States, both because of the more frequent recertification and the reduced likelihood of re-enrollment.

Premiums

We compare the enrollment experience of children based on whether their families are required to pay a premium. New York and Kansas are the only two in our sample of four States in which some families pay a premium and others do not. However, because the premium requirement is correlated with family income in both States (higher income families pay premiums and lower income families do not), we cannot disentangle premium effects from income effects on enrollment. Figure 5 shows the Kaplan-Meier survivor functions for new enrollment spells, by premiums, conditional on enrollment until month 4. (Figures 2 and 5 present the conditional survivor functions to eliminate the effects of presumptive eligibility.)

Figure 6

Monthly Probabilities of Re-enrollment, by Premiums Following Disenrollment from SCHIP at Recertification: Kansas and New York



NOTES: SCHIP is State Children's Health Insurance Program. Calculations for this figure are based on the Kaplan-Meier (1958) empirical hazard functions.

SOURCES: Dick, A.W., University of Rochester, Allison, A., Kansas Health Institute, Haber, S. G., Center for Health Economics Research, Brach, C., Agency for Healthcare Research and Quality, and Shenkman, E., University of Florida, 2002.

In New York, during the period of presumptive eligibility (not shown), premium non-payers are much more likely than premium payers to disenroll (35 percent versus 11 percent). This pattern then reverses itself. The underlying rate of attrition from months 4 to 12 (prior to recertification) is higher for premium payers than non-payers, however, and by month 12, premium payers are 12 percentage points less likely to still be enrolled than non-premium payers (for premium payers, $S(12)=0.67$, and for non-payers, $S(12)=0.79$).

The result is the opposite in Kansas, where premium payers disenroll at lower rates than non-payers. By month 12, there is a 10-percentage point difference in the likelihood of still being enrolled (for premium payers, $S(12)=0.77$, and for non-payers, $S(12)=0.67$).

Figure 6 shows the Kaplan-Meier hazard functions for disenrollment spells that start at recertification, by premiums. The figure shows that premium payers are much more likely than non-payers to return after short disenrollments (by more than 2 to 1 in Kansas and 5 to 3 in New York for 1 month spells).

Table 2
Summary of Disenrollment Patterns

	Florida	Kansas	New York[1] Unadjusted	New York[1] Adjusted	Oregon
Long-Term Use					
Enrolled at Month 24	58	38	41	53	16
Continuously Enrolled for at Least 24 Months	47	24	19	26	4
Those Enrolled at Month 24 Who Experienced at Least 1 Period of Disenrollment	19	37	53	51	75
Short-Term Use					
6 or Fewer Months of Continuous Enrollment	27	17	39	18	68
12 or Fewer Months of Continuous Enrollment	39	68	64	52	88
Effects of Recertification					
Disenrolled at First Recertification[2]	5	33	25	33	50
Those Who Disenroll At Recertification that Return within 3 Months	11	18	23	—	6
Median Months of Continuous Enrollment	21	12	12	12	6

[1] The unadjusted numbers include the effects of presumptive eligibility, and the adjusted numbers use the experience in Kansas to eliminate the effects of presumptive eligibility.

[2] We include disenrollment after months 6 and 7 for Florida and Oregon, and months 12 and 13 for Kansas and New York.

NOTE: SCHIP is State Children's Health Insurance Program.

SOURCE: Dick, A.W., University of Rochester, Allison, A., Kansas Health Institute, Haber, S. G., Center for Health Economics Research, Brach, C., Agency for Healthcare Research and Quality, and Shenkman, E., University of Florida, 2002.

DISCUSSION

Patterns of Disenrollment

As shown in Table 2, SCHIP appears to be used as a long-term insurance solution for many children and as a short-term, transitional program for many other children. A significant proportion of SCHIP enrollees were enrolled 2 years after initial enrollment (more than 50 percent of enrollees in Florida and New York—after adjusting for presumptive eligibility, and nearly 40 percent in Kansas), although in Kansas, New York, and Oregon many of these children experienced a period of disenrollment during that time.

On the other hand, a significant number of enrollees had relatively short spells of enrollment.[5] Almost 70 percent of Oregon enrollees did not have an initial enrollment spell lasting more than 6 months. The figure for Florida enrollees was 27 percent. Even in Kansas and New York, where most enrollees stayed enrolled for more than 6 months, close to one-fifth (17 and 18 percent, respectively) did not. By 12 months, the rate of disenrollment was even higher. Almost 90 percent of Oregon enrollees and almost 70 percent of Kansas enrollees disenrolled after an initial enrollment spell of 12 months or less. In New York, 52 percent of enrollees did not stay enrolled for more than 12 months (adjusted for presumptive eligibility), while in Florida only 39 percent did not make it past the 12-month mark. Most disenrollees did not return.

SCHIP enrollees in Florida were much less likely to experience disruptions in coverage at recertification, and as a result, they had much more stable enrollment overall. Only 5 percent of Florida enrollees disenrolled at the point of time when they were first asked to re-enroll. Correspondingly, the median length of enrollment in Florida was 21 months, compared with 12 months in Kansas and New York and 6 months in Oregon. As we will see in the following discussion, State policy choices may be important in determining these patterns of disenrollment.

[5] Lin and Lave (1998) found similarly short enrollment spells, with a median spell of 10.6 months, not withstanding the fact that the authors discounted disenrollments of 3 months or less.

These disruptions in insurance coverage—even those of brief duration—are of concern for a number of reasons. First, relationships with providers and access to care may be interrupted, reducing continuity with primary care providers and subsequent quality of care (Halfon, Inkelas, and Newacheck, 1999). Unmet needs have been shown to persist when coverage is transient (Rosenbach et al., 2001; Schoen and DesRoches, 2000). Second, if enrollees stay insured for only brief periods of time, health plans do not have the incentive to invest in preventive care. Furthermore, it is difficult to hold plans accountable for providing appropriate care and health outcomes when children are enrolled only for brief periods (Bachrach and Tassi, 2000). Third, plans and providers who rely on public insurance payments lose anticipated revenues during periods of disenrollment (Bachrach and Tassi, 2000). Fourth, families are at risk for the cost of services utilized during their period of disenrollment. Families might not even realize that they are uninsured, use services, and then be presented with a bill. Fifth, frequent disenrollments and re-enrollments impose high administrative costs on States and plans (Bachrach and Tassi, 2000). Sixth, if disenrollments result in adverse selection—sicker children remaining on the program while healthier children leave the program—then SCHIP programs could become costlier (on a per capita basis) to operate, and participating insurance plans would then be receiving inadequate capitation payments. And seventh, children losing public insurance are at risk of being uninsured, which has been associated with poorer access to care (Kogan et al., 1995; Newacheck et al., 1998), lower quality of care (Rodewald et al., 1995), and adverse health outcomes (Braveman et al., 1989; Weissman, Gatsonis, and Epstein, 1992).

Presumptive Eligibility

Presumptive eligibility results in the temporary expansion of coverage to children who are eventually found to be ineligible for SCHIP because they were eligible for Medicaid, did not complete the application process, or did not qualify for SCHIP. In New York, presumptive eligibility is granted until eligibility has been determined or 60 days, whichever is shorter. As a result, New York's presumptive eligibility policy has the appearance of substantially increasing its disenrollment rate. About 33 percent of New York's new enrollees had spells that lasted 3 or fewer months. Using the experience of Kansas to control for the level of attrition not due to presumptive eligibility, we estimate that 70 percent of the disenrollment observed during the first 3 months was due to presumptive eligibility. In other words, without presumptive eligibility, we would have expected to see only 10 percent of New York's enrollees disenroll during the first 3 months of enrollment. Caution must therefore be used in comparing disenrollments of a State with presumptive eligibility to another State that would never have enrolled the additional children.

Our findings indicate that premium nonpayers were less likely to be deemed eligible than premium payers during the presumptive eligibility period (24 percent versus 13 percent, respectively, again using Kansas as a control for other attrition). We offer two possible explanations. First, some of these families may have been found eligible for Medicaid, a more likely outcome for lower income premium nonpayers. Second, failure to complete the enrollment process by providing the required supporting documentation would have resulted in disenrollment. This may have been more common among lower income families.

New York's presumptive eligibility policy comes at some cost—the cost of paying health plans to insure these children for 2 or 3 months. It is also possible that presumptive eligibility could actually increase the rate of incomplete applications. If families applied when their children had an acute need that was met during the period of presumptive eligibility, their incentive to complete the application process might be reduced. There is no evidence that presumptive eligibility has this perverse effect. However, even if it did, those children who were not ultimately found eligible, whether because they did not complete the application or because they did not qualify, gained access to health care services during the brief time they were enrolled. Furthermore, all SCHIP enrollees benefit because they did not have to defer utilizing services until their eligibility status was resolved. Advocates of a seamless health insurance system in New York have called for Medicaid's adoption of the presumptive eligibility policy, rather than rescinding the policy for SCHIP, indicating that overall presumptive eligibility is thought to benefit families (Dutton, Chin, and Hunter-Grant, 2001).

Continuous Eligibility

Continuous eligibility policies were designed to protect children from losing coverage due to frequent changes in family income. Surprisingly, even with continuous eligibility policies in place, we found that respectively, 36 and 25 percent of Kansas' and Oregon's new enrollees disenrolled prior to recertification (12 months in Kansas and 6 months in Oregon). Furthermore, New York and Florida, States without continuous eligibility, fared similarly.

The extent of the attrition during the period of continuous eligibility, which stems from policy design and implementation, underscores the fact that continuous eligibility policies are not absolute guarantees of enrollment. The policies were crafted to protect only those children who would become ineligible because of changes in family income. Some of the children who left SCHIP during the period of continuous eligibility were disenrolled for reasons other than income, such as moves out of the household (e.g., to another parent's house or foster care) or out of the State.[6] States also made decisions to allow certain events (perhaps related to other income thresholds) to trigger disenrollment from SCHIP during the period of continuous eligibility. For example, in Kansas children who enroll in Temporary Assistance for Needy Families (TANF) are automatically disenrolled from SCHIP and enrolled in Medicaid. In Oregon, pregnant SCHIP enrollees are transferred to Medicaid and enrollees are required to report when they obtain other health insurance and are subsequently disenrolled.

In addition to these designed exceptions, however, there is another type of disenrollment that occurs during the period of continuous eligibility—those due to preventable administrative actions. These include worker errors, such as entering the incorrect date for recertification. Conversations with Kansas State officials lead us to believe that a significant number of the disenrollments that occur in Kansas during the period of continuous eligibility are due to preventable administrative actions. Focus groups with SCHIP disenrollees in seven States confirm that preventable administrative actions occur elsewhere (Kannel et al., 2001). (Disenrollments of this type, which are likely to be followed quickly by re-enrollments, may at least partially explain why disenrollment spells that begin during continuous eligibility are not dissimilar from disenrollment spells that begin at recertification.)

[6] The results we present include disenrollments due to aging out. When we eliminated these exits, however, we found that the effect of aging out is minimal.

We did not observe an overall effect of the policy of continuous eligibility when comparing States with and without the policy. One of the reasons for the relatively weak effect of continuous eligibility policies is that the obligation to report changes of income between recertifications in States without continuous eligibility is virtually unenforceable. The resulting inequity—those honest enough to report changes in their income are disenrolled while those who do not report changes are retained—could be remedied in these States by instituting continuous eligibility. Reductions in disenrollments are likely to be modest compared with reductions generated by the policies discussed in the following section, though they could be enhanced by changes in how continuous eligibility policies are crafted and implemented.

Recertification and Passive Re-enrollment

Our results clearly show that there is a strong and large association between disenrollment and recertification. At each recertification in the three States that did not have passive re-enrollment, approximately one-half of those enrolled at the time dropped out of SCHIP. This happened regardless of whether recertification took place at 6 or at 12 months. Recertification at 6 months, therefore, meant that the effects of this dive in enrollment were compounded—at 24 months only 4 percent of SCHIP enrollees had been on continuously in Oregon compared with 24 and 19 percent in Kansas and New York, respectively. The effects of these drops at recertification on long-term attachment to SCHIP are felt more profoundly in Oregon because fewer Oregon disenrollees rejoin SCHIP later.

Our findings, as well as other studies, provide clues as to why we see disenrollment spikes at recertification. First, earlier results from CHIRI™ indicate that many SCHIP disenrollees (45 percent in Oregon and 33 percent in Kansas) move directly into Medicaid, although some of these make the transition before recertification (Agency for Healthcare Research and Quality, 2001b; Allison, 2001; Haber, 2001). This indicates that many enrollees experience a change in income or family composition that is discovered at recertification and makes them Medicaid eligible. While increases in income could also drive families above the upper income threshold for SCHIP eligibility, we have no data on such movement.

Second, the relatively high return rates within 2 months following disenrollment in Kansas and New York indicate that administrative errors and/or families' difficulties with complying with recertification requirements may be responsible for a portion of disenrollments. If families left SCHIP exclusively because they were dissatisfied with the program or had obtained other coverage, we would not expect to see such quick returns.

This is supported by findings from the NSAF and focus groups recently held with SCHIP disenrollees. The NSAF found that 18 percent of uninsured children had been enrolled in Medicaid or SCHIP within a year of the survey, and preliminary analyses indicated that the majority of these children remained eligible but lived in families that experienced disruptions in other areas of life (Kenney and Haley, 2001). Focus groups have revealed that unanticipated life events made it difficult for some families to comply with recertification requirements (Kannel et al., 2001). These focus groups also noted that some families questioned the need for coverage or felt guilty about accepting help. However, families held overwhelmingly positive opinions about SCHIP and there was no support for the conjecture that families left SCHIP because of dissatisfaction.

Florida's disenrollment pattern is starkly different because it instituted a simplification to its recertification procedures—passive re-enrollment. A family need take no action in order to re-enroll; unless they provide the State with information that shows that they are no longer eligible or fail to pay their premiums, they remain enrolled. Our results indicate a marked impact of passive re-enrollment on SCHIP disenrollment. Unlike Kansas, New York, and Oregon, Florida does not show the precipitous drop off in enrollment at the time of recertification.

Premiums

Premiums have been promoted as a policy to alleviate the welfare stigma associated with public assistance programs and, to a lesser extent, as a revenue source for eligibility expansions. However, there are concerns that premiums may have an adverse impact on program retention and even on the initial decision to enroll (Feder and Levitt, 1998; Haber, Mitchell, and McNeill, 2000; Ku and Coughlin, 1999/2000). While we cannot address the second concern with our data, we are able to compare disenrollment experiences for families that paid premiums and those that did not. Data from New York indicate that children from families that paid premiums were more likely to disenroll from SCHIP (after the presumptive eligibility period), while the opposite was true in Kansas. These contradictory findings could be explained by two important differences in the States' programs. First, their policies regarding non-payment of premiums differ: New York disenrolls children for non-payment of premiums after a 30-day grace period, while Kansas disenrolls children for non-payment of premiums only at recertification. Second, as previously discussed, public assistance programs in Kansas are administratively linked so that, for example, enrollment in TANF can trigger disenrollment from SCHIP. Relatively low-income families (those that do not pay premiums) are more likely to be administratively disenrolled because they are more likely to become eligible for other public assistance programs. In both States, however, children in families that paid premiums were substantially more likely to re-enroll after a brief disenrollment than those in families that did not pay premiums. This difference in the likelihood of a quick return suggests that some of the children in premium-paying families may have been disenrolled because of difficulties remaining current in premium payments. We cannot, however, rule out alternate explanations, such as lower income families having more difficulty in navigating the enrollment process and re-instating their eligibility.

As noted previously, our ability to measure the impact of premiums on SCHIP enrollment is limited by the fact that premium payment and income are closely related making it impossible to distinguish premium effects from income effects. For example, children in higher income families (who are subject to premiums) may be more likely to have an increase in income that makes them ineligible for SCHIP or to gain private insurance; and as previously described, lower income families in Kansas (those that do not pay premiums) are more likely to be administratively disenrolled. We, therefore, do not have evidence as to whether premium requirements do or do not increase disenrollment from SCHIP. Future CHIRI™ studies using survey data will be able to shed some light on the impact premiums have on enrollment and disenrollment decisions.

Policy Interactions

Several of the policies that we have identified in the four States have to be considered jointly because of their interactions. For example, in Oregon the decision to recertify SCHIP enrollees every 6 months has resulted in Oregon's experiencing much higher cumulative disenrollment than in Kansas and New York, where the basic pattern of disenrollment is similar. However, Florida's passive re-enrollment policy insulates it from the same impact. Passive re-enrollment has smoothed Florida's attrition so that the decision to recertify at 6 rather than 12 months has no visible effect on disenrollments.

Passive re-enrollment in Florida, however, might have had adverse financial consequences for the State if it had not been implemented with another policy—a universal premium requirement. Passive re-enrollment together with capitation puts the State at financial risk for paying health plans unnecessarily, since families would have no incentive to notify the State about unneeded coverage in the absence of premiums. Nonpayment of the premium provides a signal that a family may have obtained coverage elsewhere, moved out of State, or otherwise no longer wanted the insurance. To accommodate families who still desire insurance but are having trouble making payments, Florida has instituted its 30-day grace period policy. It should be noted, however, that Florida may be providing SCHIP coverage to families who in other States would have been found ineligible for public insurance or who may instead have been found to be eligible for Medicaid. But at least this erroneous coverage is being provided to families who want SCHIP coverage enough to continue to pay their monthly premiums.

LIMITATIONS

Our work has several significant limitations, and as a result, we leave many important questions unanswered. First and foremost, we do not know what happens to children when they disenroll from SCHIP: How many switch to Medicaid coverage, private insurance, or become uninsured. Second, some of our States lack individual level data that would allow us to use multivariate methods to control for population differences across the State, address more detailed questions about targeted policies, and investigate racial and ethnic disparities in enrollment trends. Third, some of our States have no information on health status or health care utilization, and consequently, we cannot address questions about adverse selection or the links between utilization and enrollment retention. Fourth, we have considered only four States, and therefore only four sets of policy combinations. Future work of CHIRI™ which will include survey and additional administrative data, will address many of these issues.

Finally, the hazard rates and empirical survival functions presented in this analysis implicitly assume a steady state throughout the study period (January 1999-Spring 2001) in terms of both the types of children enrolling and the programmatic policies in place in each State. The steady-state assumption would not hold if, for example, the first group of SCHIP enrollees during the study period included an unusually high number of children with characteristics that predisposed them to especially long periods of enrollment, e.g., children with special health care needs. In particular, the group of children enrolling during a program's first months in operation may be unique. Since the data for this study encompass the first

months of Kansas' SCHIP program and one-half of the Oregon program's first year, it is possible that the results of this study do not reflect a steady state in terms of the types of children enrolling over time. However, the fact that Kansas' disenrollment pattern was so similar to New York's, which has a mature program, provides some reassurance that the newness of SCHIP programs did not create atypical results. The steady-state assumption may also fail to hold if programmatic changes that affect enrollment patterns occur during the study period. Throughout 2000, for example, New York implemented facilitated enrollment, a policy that combines the applications processes for a variety of programs (including SCHIP, Medicaid, and Women, Infants, and Children). The policy could have resulted in changes either in the type of children who enrolled or in the hazard rates of those who did enroll. Because the policy was largely implemented late in the study period, it is unlikely that it poses a significant threat to the steady-state assumption.

CONCLUSIONS

There is large variation among States in the number of children who disenroll from SCHIP. Eliminating the period of presumptive eligibility, the chances of disenrolling from SCHIP during the remainder of the first year of enrollment ranged from 22 percent in New York to 77 percent in Oregon (Figure 2). SCHIP is used on a long-term basis (more than 2 years) by a significant number of enrollees, but many of these children experience one or more periods of disenrollment. Recertification procedures in Kansas, New York, and Oregon are generating large disenrollments (about one-half of children still enrolled at the time), but as many as 25 percent return within 2 months. Presumptive eligibility in New York allows urgent health needs to be met by providing immediate SCHIP coverage to all applicants who appear eligible, approximately 23 percent of whom are ultimately found eligible for Medicaid, do not complete the application process, or do not qualify for SCHIP.

Passive re-enrollment policies, and to a much lesser extent continuous eligibility, are associated with reductions in disenrollment. These policies could be beneficial if they reduce the number of children who become uninsured or if they improve continuity of coverage or care. As previously noted, the Medicaid program has exhibited similar disenrollment patterns to SCHIP. These policies would be likely to have the same beneficial effect on the much larger population of Medicaid enrollees as they would on SCHIP enrollees.

For SCHIP disenrollees who would otherwise transfer to Medicaid, the extent of the benefits from these policies will depend largely on the integration of SCHIP and Medicaid administrative features and delivery systems. In Florida, Kansas, and Oregon, where administrative coordination between the programs is high, children are unlikely to become uninsured during the transition. While families that successfully shift from SCHIP to Medicaid have maintained coverage, they may or may not have preserved continuity of care. Only in Oregon are the delivery systems identical.[7] Elsewhere separate delivery systems for SCHIP and Medicaid (either different health plans or different panels of participating physicians) could force children to change physicians upon transfer from one program to another, disrupting continuity of care.

[7] At the time the data were collected for this study, Kansas had different delivery systems for the two programs. In part due to data produced about the enrollment dynamics between SCHIP and Medicaid, integration of Kansas' programs under a single delivery system occurred in October 2001.

Disenrollees who neither re-enroll in SCHIP nor enroll in Medicaid, may be uninsured or may have obtained private coverage. A study of Pennsylvania's precursor to SCHIP gives us a hint of what the insurance status of SCHIP disenrollees could be (Lave et al., 1998). In that study 15 percent of a cohort of new enrollees—which constituted 54 percent of the disenrollees from this group—had obtained private insurance 1 year later. Twenty-five percent of disenrollees were covered by Medicaid, and 21 percent of disenrollees—or 6 percent of the original cohort—were uninsured. This study, however, was conducted using data from the mid-1990s when the economy was strong. With the economy in recession, we could expect fewer disenrollees to obtain jobs that offer private insurance.

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