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Demographics of Disenrollment from SCHIP: Evidence from NJ KidCare

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Abstract: The State Children's Health Insurance Program (SCHIP) provides health insurance coverage for children in low-income families. Although there is evidence of substantial disenrollment from SCHIP, few studies have examined how disenrollment varies by demographic characteristics. This study uses data from administrative records of all 41,881 children enrolled prior to April 2000 in NJ KidCare (New Jersey's SCHIP) separate state plans for families with incomes between 133% and 350% of the Federal Poverty Level. Survival methods were used to analyze disenrollment according to demographic and plan characteristics. Reasons for disenrollment were also studied. Overall, 18.9% of children disenrolled within 12 months of enrollment. Disenrollment was higher among non-Hispanic black children, children aged 1 to 5, and children without siblings in NJ KidCare than among their counterparts. Surprisingly, English speakers had the highest disenrollment rate of all language groups. Children in families with moderate income categories for whom premium contributions were required were 3 times as likely as lower-income children to disenroll, principally due to non-payment of premiums. To maximize retention in SCHIP and ensure access to care and continuity of care for low-income children, research is needed concerning why some groups disenroll more quickly.

Key words: State Children's Health Insurance Program (SCHIP), socioeconomic factors, health insurance, program evaluation, blacks.

The Balanced Budget Act of 1997 created a federally funded insurance initiative aimed at expanding health insurance to the estimated 11 million uninsured low-income children in the United States.¹ Under the Act, Title XXI of the Social Security Act, \$24 billion in federal funds were made available to states over a 5-year period to help implement the State Children's Health Insurance Program (SCHIP). By the close of Federal Fiscal Year 2000, all 50 states and the District of Columbia had implemented SCHIP programs and more than 3 million children had been

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enrolled in SCHIP.² Since the program was enacted, the rate of uninsurance has declined substantially, particularly among the near-poor.^{3,4} Children covered by health insurance have better access to outpatient care and are more likely to use preventive health services.^{1,5-8} Studies show that those who remain covered by SCHIP are more likely than those who do not to receive coordinated, comprehensive preventive health services.⁹

Initial research focused on low SCHIP enrollment rates seen in almost every state as states struggled to reach their targeted enrollment and thus avoid losing their share of federal funds.^{10,11} However, with enhanced outreach and enrollment efforts, enrollment rates have improved and attention has turned to the issue of retention. States may be enrolling new families while losing others who remain eligible.

To date, there has been little large-scale quantitative research on disenrollment patterns. The few studies that have been conducted suggest substantial levels of disenrollment even prior to the recertification date. In a comparison of SCHIP programs in Kansas, Oregon, New York and Florida, Dick and colleagues found disenrollment rates of roughly 20 percent within a year of enrollment.¹² Shenkman, Schaffer and Vargas observed a similar disenrollment rate in Texas.¹³ Evidence from New Jersey suggests that non-payment of premium, placement in other government programs, and finding other insurance are common reasons for disenrollment.¹⁴ The studies cited were among the few to calculate disenrollment rates using survival methods to correct for differences in duration of enrollment. Other states vary in how they calculate disenrollment rates, making them difficult to assess or to compare with other states.¹⁵

Both qualitative and quantitative studies suggest that disenrollment due to non-renewal at redetermination of eligibility is a substantial problem. Surveys and focus group studies of SCHIP participants and former participants also reveal considerable confusion about eligibility, with some still-eligible families believing they no longer qualified, and some families that were no longer eligible believing they did qualify.¹⁶ A recent cross-state comparison found that fewer than half of enrolled children retained eligibility at renewal time, and a substantial additional share were lost due to non-response to renewal notices.¹⁷ Out of concern about these early statistics on non-renewal, many states have worked to streamline the recertification process, increasing the continuous eligibility period from 6 to 12 months, reducing paperwork, and instituting a variety of mail and telephone reminders.^{18,19}

In most studies, disenrollment statistics are reported for each state plan as a whole. Comparing aggregate state figures leads to an “apples and oranges” problem because SCHIP programs vary across states in terms of the eligible income range and cost-sharing requirements. As of 2000, for example, 12 states had not extended SCHIP benefits up to 200% of the Federal Poverty Level (FPL), whereas Tennessee’s program encompassed up to 400% of the FPL.⁴ Some states charge monthly premiums per child, often with a limit on the total premium paid by a family, while other states charge a uniform monthly premium regardless of the number of enrolled children in the family. Most states’ fees are on a sliding scale relative to family income, but even states that cover comparable income ranges have widely varying cost-sharing requirements. For example, for families with incomes between 150% and 200% of the FPL, New Jersey charges \$15/family/month, compared with up to \$30/family/

month in Massachusetts. Co-payments also differ across states, both in terms of amount of payment and type of services.⁴

In New Jersey, uninsured children from families with incomes below 350% of the poverty level amounted to nearly 90% of all uninsured children.²⁰ With a higher income eligibility level than most states,²¹ New Jersey's SCHIP program (initially called NJ KidCare)¹ could provide health insurance to many of the estimated 212,000 uninsured children in the state.²² In 1998, one-quarter of children from families with incomes below twice the FPL were uninsured, compared with 13% and 8% of families with incomes of 200–299% and 300–399% of the FPL, respectively.²⁰ Although NJ KidCare enrolled over 89,000 uninsured children by the end of FFY 2000,²¹ there were concerns about disenrollment rates. This study uses survival methods with administrative program data to analyze patterns of disenrollment across demographic groups and plans.

Methods

NJ KidCare Program details. Data were taken from account and individual eligibility records for 41,881 children aged 0 through 17 years who enrolled in Plans B, C or D of NJ KidCare between March 1998 and April 2000. NJ KidCare* began operation in February 1998 with 3 plan levels for children with family incomes up to 200% of the FPL: Plan A covered children with family incomes up to 133% of the FPL, while Plans B and C covered those with family incomes between 133% and 200% of the FPL. The fourth plan (Plan D) became effective in July 1999 and provided coverage to children with family incomes between 200% and 350% of the FPL (350% of the FPL was about \$59,000 for a family of two adults and two children in 1999).²³ Plan A was a Medicaid expansion program, while Plans B, C and D were separate state programs. Plans C and D required cost sharing in the form of monthly premiums per family (Plan C: \$15; Plan D: sliding scale from \$30–\$100) and co-payments for some services.²⁴ Although current NJ KidCare policies and procedures have been streamlined to facilitate SCHIP enrollment and retention,^{25,26} during the period under study, NJ KidCare required documentation of income, recertification every 6 months, and did not extend presumptive eligibility until late in the study period.^{**24,27} Data for Plan A were not complete, hence these analyses include Plans B, C and D. †

Information was collected from parents/guardians at the time of enrollment and redetermination of eligibility for NJ KidCare.²⁸ The period of enrollment for each child was defined as the number of months between date of enrollment and either

* NJ KidCare became NJ FamilyCare in October 2000, extending coverage to uninsured adults in families with incomes up to 200% of the FPL.

** Families applying to NJ KidCare must document all earned and unearned income within a four-week period with wage stubs, documentation from an employer on company letterhead, or statement of gross benefit amount from any government agency providing benefits. In January 2000, presumptive eligibility was adopted for families eligible for NJ KidCare Plans A, B or C.

† Approximately half of all children in Plan A enrolled through the county social service agencies, but those data were not available at the time of this writing. Data on Plan A families who enrolled through the statewide enrollment broker are not representative of all Plan A families because those families are likely to differ from those enrolled through county social service agencies.

date of disenrollment or April 30, 2000. Plan membership was defined as the plan at time of disenrollment or April 30, 2000.

Children's demographic characteristics were extracted from individual eligibility records. Age at enrollment was calculated from dates of enrollment and birth. Although 18-year-olds were eligible, they were excluded from this analysis because all of them would have disenrolled within the year, as they reached age 19. Children who were missing information for race (5.5%) and language spoken (24.9%) were retained in the analysis by defining "missing" categories for those variables. Number of enrolled siblings was calculated by counting all children on a family account. For each child who disenrolled, one reason for disenrollment was recorded from information available to program administrators from the broker that handled enrollment and disenrollment. Possible reasons include non-payment, non-response to redetermination, being qualified for another government program (mostly Medicaid), being qualified for other insurance, having moved out of state, having aged out of the program, and other reasons.²⁹

Survival (or hazards) methods were used to calculate the percentage of enrolled children who disenrolled within 9, 12 and 18 months of enrollment. Survival methods correct for the fact that children were enrolled for differing lengths of time; hence, the length of time children were at risk of disenrollment varied.³⁰ Approximately 90% of children in the sample were censored either because they remained enrolled at the end of the observation period or because they had not yet been enrolled for at least 9, 12 or 18 months, depending on the analysis. The log rank statistic, a form of the χ^2 test used in survival analysis,³⁰ was used to test differences in disenrollment rates across groups. In order to utilize as much of the data as possible, demographic comparisons were based on disenrollment rates within 12 months of enrollment. Comparisons across NJ KidCare plans were based on disenrollment rates within 9 months of enrollment, the longest period possible for enrollees in Plan D at the time these data were collected. The direction and size of differences in disenrollment rates across groups were consistent across time (not shown) and did not affect substantive conclusions.

Cox proportional hazard regression was used to estimate the effect of each covariate on risk of disenrollment, controlling for all other sociodemographic characteristics, plan, and county of residence. Seventy-two percent of enrolled children had 1 or more siblings enrolled in the program; because risks of disenrollment among siblings are expected to be correlated, standard errors are likely to be under-estimated in an analysis that includes all enrolled children (41,881). To correct for this problem, the Cox regression was re-estimated with a sample comprising 1 randomly selected child per family (24,827; see results section below). Both models included control for number of enrolled siblings so that the effect of family size on disenrollment could be estimated.

Results

Overall, 13.2% of children disenrolled from NJ KidCare within 9 months of their enrollment date; 18.9% and 33.6% had dropped out by 12 and 18 months, respectively. In terms of demographic factors (Table 1), non-Hispanic black children had notably higher disenrollment rates than non-Hispanic white, Hispanic or

children of other races ($p < 0.0001$), although these differences were observed only in Plans C and D (Figure 1). Disenrollment rates were higher than average among children aged 1 to 5 years, and children with no siblings on the family NJ KidCare account (all $p < 0.0001$). Somewhat surprisingly, English speakers had the highest disenrollment rates of all language groups, followed by monolingual Spanish speakers. These differences cannot be explained by high rates of missing language data, because children with missing language disenrolled at the average rate.

The 2 plans that required families to share costs lost children far more rapidly: Within 9 months of enrollment, 14.7% to 16.7% of children in Plans C and D had dropped out, compared with only 5.5% of children in Plan B. The same relative pattern was observed at 12 and 18 months after enrollment, with a roughly 3-fold higher risk of disenrollment in Plan C than in Plan B; data for Plan D were not available beyond 9 months.

Cox proportional hazards models of disenrollment (Table 2) confirm the bivariate results. When all characteristics shown in Table 1 and county of residence were taken into account, the racial differences and variations across plans remained large and statistically significant. In the multivariate model, the risk of disenrollment from Plan B was less than 40% as high as from Plans C or D. Interaction terms between plan and non-Hispanic black race/ethnicity demonstrated that non-Hispanic black children in Plans C and D were 75% to 89% more likely to disenroll than non-Hispanic white children in the same plans ($p < 0.01$).^{*} In Plan B, there was

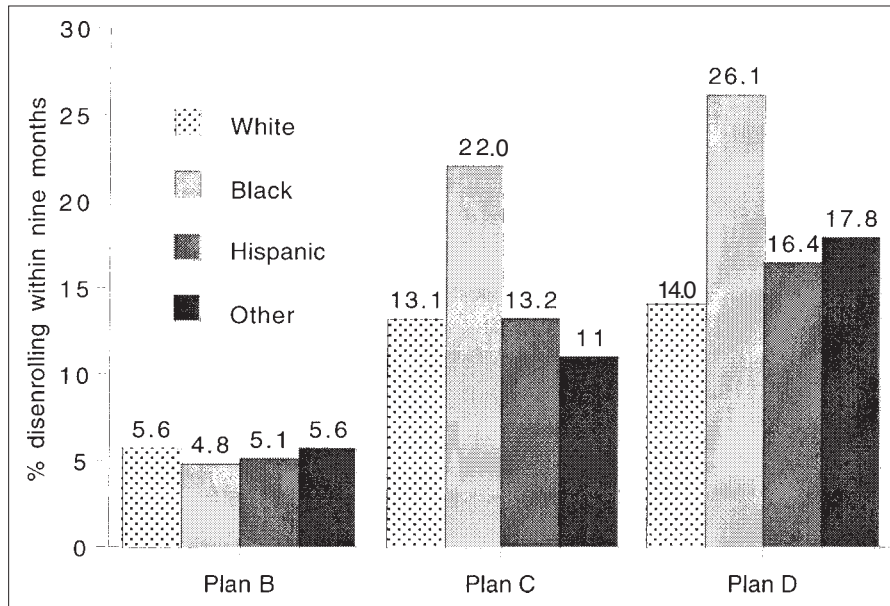


Figure 1. Disenrollment rate by race/ethnicity and plan, New Jersey Kidcare, March 1998–April 2000.

^{*} The hazard ratio for non-Hispanic black children in Plan D compared with non-Hispanic white children in Plan C (the reference category) is the product of the hazard ratios on black race, Plan D and the black*Plan D interaction term, or $1.75 \times 1.15 \times 1.08 = 2.17$. To compare across racial groups *within Plan D*, divide 2.17 by the HR for Plan D (1.15) to yield a HR of 1.89 for black compared with non-Hispanic white children within Plan D.

Table 1.**DISENROLLMENT RATES BY CHARACTERISTICS OF THE CHILD,
NJ KIDCARE PLANS B, C AND D,^a JANUARY 1998-APRIL 2000**

Characteristic	Ever enrolled ^b		Disenrollment rate ^c	Log-rank statistic (df) ^d	p-value
	n	%			
All children ^e	41,881	100.0	18.9		
Gender				0.22 (2)	0.63
Male	21,235	50.7	18.9		
Female	20,646	49.3	18.9		
Race				187.6 (5)	<0.0001
Non-Hispanic white	16,867	40.3	17.4		
Non-Hispanic black	7,411	17.7	25.8		
Hispanic	11,311	27.0	17.4		
Other	3,977	9.5	17.0		
Missing race	2,315	5.5	18.3		
Age group				51.5 (4)	<0.0001
<1 year	1,005	2.4	16.8		
1-5 years	14,087	33.6	21.4		
6-12 years	18,011	43.0	17.8		
13-17 years	8,778	21.0	17.1		
Language				109.7 (5)	<0.0001
English	19,547	46.7	21.3		
Spanish, some English	8,041	19.2	16.1		
Spanish, no English	833	2.0	20.0		
Other language	3,033	7.2	11.3		
Missing language	10,427	24.9	18.8		
Number children on account					
1	11,886	28.4	23.3	120.2 (4)	<0.0001
2	17,507	41.8	17.1		
3	8,993	21.5	17.7		
≥4	3,495	8.4	16.0		
Plan			By 9 mos. By 12 mos.		
B	7,800	18.6	5.5	7.9	
C	24,254	57.9	14.1	21.3	463.9(3)
D	9,827	23.5	16.7	NA ^f	<0.0001

^a Plan B enrolls children in families with incomes between 133% and 150% of the federal poverty level (FPL); Plan C income between 150% and 200% of the FPL, and Plan D income between 200% and 350% of the FPL.

^b Enrolled at any time from March 1998 through April 2000.

^c Percent of children who disenrolled from NJ KidCare within 12 months of enrollment.

^d Log-rank χ^2 from life table analysis of association between disenrollment pattern and variable shown. Df = degrees of freedom.

^e Includes children through age 17 years at time of enrollment.

^f Not available. Plan D had been in effect only nine months by the end of the data collection period.

Table 2.

**ESTIMATED HAZARDS RATIOS AND 95% CONFIDENCE INTERVALS
FROM COX PROPORTIONAL HAZARDS REGRESSION OF
DISENROLLMENT FROM NJ KIDCARE,^a 1998-2000**

Variable	Hazard ratio	95% CI
NJ KidCare Plan		
B	0.45	(0.39-0.53)
(C) ^b	1.0	
D	1.15	(1.03-1.28)
Race		
(Non-Hispanic white)	1.0	
Non-Hispanic black	1.75	(1.57-1.94)
Hispanic	1.18	(1.03-1.35)
Other race	1.16	(1.02-1.33)
Missing race	1.30	(1.13-1.50)
Race by plan interactions		
Non-Hispanic black & plan B	0.48	(0.35-0.66)
Non-Hispanic black & plan D	1.08	(0.90-1.31)
Hispanic & plan B	0.88	(0.67-1.15)
Hispanic & plan D	1.21	(1.00-1.46)
Language		
(English)	1.0	
Spanish with English	0.78	(0.69-0.89)
Spanish, no English	0.93	(0.72-1.21)
Other language	0.53	(0.45-0.63)
Missing language	0.86	(0.79-0.92)
Number of children on family account		
(1)	1.0	
2	0.77	(0.71-0.83)
3	0.83	(0.76-0.91)
≥4	0.75	(0.66-0.86)
Age group		
Infant	0.93	(0.75-1.16)
1-5 years	1.16	(1.08-1.25)
(6-12 years)	1.0	
13-17 years	0.95	(0.87-1.04)
Gender		
Male	1.0	
Female	0.99	(0.92-1.08)
-2 log L	806	

^a Analysis based on sample of all children enrolled in NJ KidCare between March 1998 and April 2000. See text for description of effects on parameter estimates and standard errors of one-child-per-family analysis.

^b Reference category shown in parentheses.

no statistically significant difference in risk across races. English speakers, children without siblings in NJ KidCare, and infants were also more likely to disenroll than other children (all $p < 0.05$). The risk for Hispanic children was higher in the model based on all children (hazard ratio=1.18 compared with non-Hispanic white children), but was not statistically significant in the 1-child-per-family model ($p=0.11$; not shown). Estimates of the hazard ratios for each of the covariates did not change appreciably between the all-children and the 1-child-per-family model (not shown). As expected, standard errors were larger in the model with 1 child per family, such that effects of Hispanic ethnicity and interactions between Hispanic ethnicity and plan were no longer statistically significant.

Analysis of reasons for disenrollment revealed that most of the excess disenrollment in Plans C and D was due to non-payment of the monthly premium (Figure 2); premiums do not apply in Plan B. Non-payment accounted for about 60% of disenrollment from Plans C and D. Finding alternative insurance was another common reason for disenrollment, particularly in Plans C and D. In Plan B, placement in other government programs accounted for most disenrollments.

Notable racial differences were observed in reasons for disenrollment, even taking plan level into account. For example, non-payment accounted for 80% of all disenrollments from Plan C among non-Hispanic black children, but only 50% of cases of non-Hispanic white children enrolled in the same plan (not shown). Within each plan level, non-Hispanic black children were more likely to be placed in other government programs and less likely to obtain other insurance than their white peers.

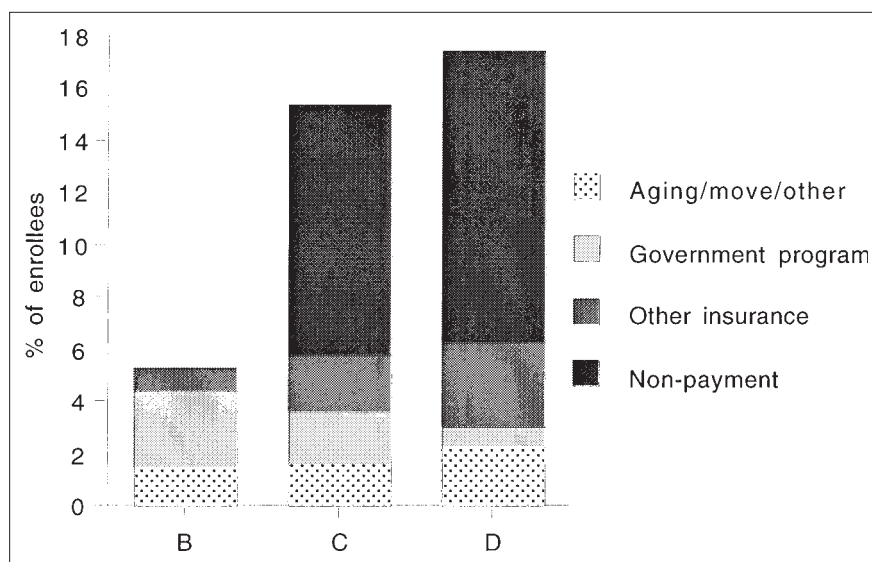


Figure 2. Disenrollment from New Jersey Kidcare within nine months of enrollment, by reason and plan

Another reason for disenrollment was non-response to redetermination notices that were sent out when a child had been enrolled in NJ KidCare for 12 months in order to determine whether s/he remained eligible for the program. Of children who remained enrolled for at least 12 months, 6.1% and 2.6% were disenrolled due to non-response to redetermination notices from Plans B and C, respectively. No children in Plan D had been subject to redetermination at the time of this analysis because that plan became available only 9 months prior to the end of the observation period.

Discussion

Analysis of data from NJ KidCare revealed that within nine months of enrollment, approximately 13% of enrollees with incomes between 133% and 350% of the FPL had dropped out of the program. By 18 months, one-third had dropped out. Consistent with findings from other studies, disenrollment rates were considerably higher in plans that involved cost sharing.¹² The higher disenrollment rates observed in NJ KidCare Plans C and D (for children from families with incomes of 150% to 350% of the FPL) were principally attributed to non-payment of premium. If no one had dropped out of Plans C or D for non-payment, the disenrollment rates would have been virtually the same as for Plan B, which did not require cost sharing. These findings provide evidence of possible difficulties with extending coverage to low- to moderate-income families, at least if cost sharing is involved. Although few other states' SCHIP programs cover children from families above 200% of the FPL, a number of other states require premiums for children in families with incomes even as low as 151% of the FPL.³¹

We found higher than average disenrollment rates among non-Hispanic black children in the higher-income plans, as well as among children without siblings in SCHIP, English speakers, and monolingual Spanish speakers. All other things being equal, non-Hispanic black children in families with incomes between 150% and 350% of the FPL were 75% to 89% more likely to disenroll than non-Hispanic white children in the same NJ KidCare plan. However, among families with incomes below 150% of the FPL, disenrollment rates were similar for all racial groups. Other studies have reported higher disenrollment among black families in Florida, New York, and Texas, although they did not examine racial patterns separately by income level.^{13,32}

We found that most of the excess risk of disenrollment for non-Hispanic black children in the higher-income plans was due to non-payment of premiums. Consistent with recent findings for Texas' SCHIP program,¹³ we also found that black children were more likely to shift to Medicaid and less likely to find other insurance than were other children at comparable income levels. These findings underscore the importance examining non-payment more carefully in order to understand racial differences in disenrollment.

The findings about non-payment of premium should be interpreted with caution, however, because non-payment could be due to finding other insurance, dissatisfaction with the program, or a reduction in family health care needs, and not to families finding the premiums unaffordable.^{17,12} Surveys and focus groups

have shown that, in general, families believe the premiums to be reasonable though they may occasionally have trouble making the payments.^{13,16} Premiums were required only of higher income families, an income range in which employment-based insurance is more likely to be available than in the income range in which families qualify for the free NJ KidCare plans. Therefore, some of the Plan C and D families that stopped paying premiums may have done so because they acquired other insurance but simply did not inform the SCHIP program of that change. Finally, higher income families are better able to afford out-of-pocket payments and may be more willing than lower-income families to take the risk of going without health insurance.

Another reason for cautious interpretation of the non-payment findings is that a recent evaluation of SCHIP administrative data in several states suggests that recorded disenrollment reason codes may be imprecise.¹⁷ The NJ KidCare administrative data recorded only one reason for each family, and program staff were not permitted to prompt families for the reason they were leaving the program. Hence we have more confidence in the codes “finding other insurance” or “placed in another government program” than in “non-payment of premium” because the latter could be a catchall category for those in the cost-sharing plans who discontinued payment for any of several underlying reasons.

Several of the reasons for disenrollment might appear to be relatively benign because the children were reported to have obtained coverage through another government program or by finding other insurance. However, as with other insurance transitions, even children who become covered by another insurance plan or government program after disenrolling from NJ KidCare may have experienced discontinuity of care because of differences in provider participation in NJ KidCare, Medicaid, and private insurance. Moving out of state can have a similar effect: Although SCHIP is a nationwide program, moving to another state can disrupt coverage; because SCHIP programs are administered on a statewide basis, families must re-apply in their new state and eligibility criteria vary by state. For example, during the study period, the three states adjacent to New Jersey (New York, Pennsylvania and Delaware) each capped their eligibility at or below 200% of the FPL.²

Previous studies have demonstrated that presumptive eligibility can inflate disenrollment estimates in the first few months after enrollment.³³ However, in NJ KidCare, presumptively enrolled children were not listed as enrolled in the administrative records until their eligibility was confirmed; hence, they could not have artificially inflated disenrollment figures. In addition, NJ KidCare did not begin granting presumptive eligibility until January 2000, only four months before the end of our study period and then only for Plans A, B and C.²⁴ Thus few families in our sample are likely to have been affected, resulting in little if any bias to the estimates shown here.

There are several limitations to this study. First, only one reason for disenrollment was specified in program records for each child, which may paint a simplistic picture of why children dropped out of the program. Second, for children who left the program due to non-payment or moving out of state, insurance status is unknown.

Third, the lower disenrollment rates observed for non-English speakers are unlikely to be explained by the missing language cases, most of whom are likely to be English speakers based on race/language distributions among enrollees. Finally, at the time these data were collected, less than 30% of children ever enrolled in NJ KidCare had been enrolled for long enough to become eligible for redetermination of program eligibility (12 months), and those who enrolled at the inception of the program may not be representative of all NJ KidCare enrollees. Other studies have found non-renewal rates at redetermination of up to 50%, although 20% to 50% of those who failed to renew subsequently re-enrolled.^{13,34}

Conclusion

This study has revealed important differences in SCHIP program retention according to race/ethnicity and several other demographic characteristics. These characteristics could be used to target retention efforts at families at greatest risk of dropping out of the program. Although this analysis included only children in New Jersey's separate state plans for families with incomes of 133% to 350% of the Federal Poverty Level, the findings may be informative for Medicaid and other public insurance programs for low-income children that serve families whose incomes differ from study families by only a few dollars per month.

To maximize the efficacy of such targeting, further research is needed to investigate reasons underlying the observed racial differences. One possible explanation is that black families may be concentrated in areas where access to health care is poor, reducing the perceived value of remaining enrolled. However, a recent study showed that even when county-level characteristics such as density of SCHIP health care providers, racial composition, residential segregation, and poverty are taken into account along with family traits, black families still disenroll at much higher rates than do other racial groups.³⁵ Another possibility is that there may be cultural differences among program staff, health care providers and enrolled families that could lead to program dissatisfaction. Third, non-Hispanic black families in the high disenrollment income ranges may have more difficulty affording cost-sharing because they have lower mean income and assets than non-Hispanic white families in the same income ranges,³⁶ giving them fewer resources to draw upon in tight economic times. Although similar patterns would be expected among Hispanic families,³⁷ they were not observed in these data. Investigation of the sociocultural factors that underlie these racial differences is critical to reducing racial disparities in SCHIP retention.

Other important directions for future research on SCHIP disenrollment include updating data to determine whether these figures continued to reflect disenrollment patterns once the program had become better established, and to obtain more information on the prevalence and risk factors for failure to recertify eligibility after one year of enrollment. Other studies should collect and analyze data on health status, health care utilization or client satisfaction of enrolled children to understand the extent to which they explain demographic differences in SCHIP disenrollment.

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