

# Impact of the State Children's Health Insurance Program on Adolescents in New York

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## ABSTRACT

**OBJECTIVES.** Adolescents face financial and nonfinancial barriers to health care. Little is known about the impact of health insurance on health care for adolescents. We assessed the impact of New York's State Children's Health Insurance Program on access, use, and quality of care for adolescents.

**METHODS.** Adolescents and their parents from a stratified random sample of new enrollees in New York's State Children's Health Insurance Program were interviewed by telephone shortly after enrollment (baseline,  $n = 1118$  adolescents and their parents) and 1 year later (follow-up,  $n = 970$ ). Outcome measures included access (having a usual source of care and reported unmet health needs), use (preventive care and other types of visits), and quality (satisfaction with care, receipt of confidential care and preventive counseling). Outcomes were assessed at baseline (year before the State Children's Health Insurance Program) versus follow-up (year during the State Children's Health Insurance Program).

**RESULTS.** The proportion of adolescents who reported having a usual source of care increased during State Children's Health Insurance Program compared with before (69.9% to 87.1%). The proportion with any unmet health care need (54.3% to 42.1%) or with unmet need for preventive care (53.8% to 40.6%) decreased, with elimination of racial disparities that existed before the State Children's Health Insurance Program. After enrollment in the State Children's Health Insurance Program, more adolescents reported having had a preventive care visit (65.9% to 74.2%); emergency department use did not change. No differences in satisfaction were noted, although significant increases were noted in both parent- and adolescent-reported rates of having received confidential care and preventive counseling.

**CONCLUSIONS.** Adolescents who enrolled in New York's State Children's Health Insurance Program experienced improved access, use, and quality of care. These findings suggest that the provision of health insurance can help to improve health care for adolescents.

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### Key Words

SCHIP, health insurance, adolescents, access, quality

### Abbreviations

SCHIP—State Children's Health Insurance Program

FPL—federal poverty level

CAHMI—Child and Adolescent Health Measurement Initiative

YAHCS—Young Adult Health Care Survey

USC—usual source of care

ED—emergency department

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SINCE 1997, THE State Children's Health Insurance Program (SCHIP) has provided publicly supported health insurance expansions for low-income children and youth who are not eligible for Medicaid or covered by private insurance. In New York State, we previously reported that enrollment in SCHIP for children aged 0 to 18 was associated with improved access, continuity, and quality of care and with a greater proportion of care being delivered within a usual source of primary care.<sup>1</sup> Between 1995 and 2002, the proportion of adolescents without insurance coverage in poor and near-poor families declined by >25%.<sup>2</sup> In addition, the quality of care that was received by children and adolescents before enrollment in SCHIP reflects high levels of unmet health care needs and suboptimal receipt of recommended preventive services.<sup>3,4</sup> Although these findings suggest that SCHIP might improve care for adolescents, relatively little is known about the impact of health insurance on health care for adolescents.

Adolescents and young adults face unique financial and nonfinancial barriers to health care.<sup>5</sup> Adolescents have poorer access to care than younger groups, yet they are at substantial risk for morbidity and mortality related to their behaviors.<sup>6,7</sup> Although many young people report having a source of primary health care and use health care services, relatively few receive recommended preventive services, and many forgo needed care.<sup>6-9</sup>

In the first 5 years of SCHIP, >1.5 million adolescents had enrolled nationally,<sup>10</sup> and almost one third of 2001 SCHIP enrollees were adolescents.<sup>11,12</sup> We have reported that the population of adolescents who enrolled in SCHIP in both New York and Florida had high rates of health care use before SCHIP enrollment yet still had high levels of health care needs and unmet needs on enrollment in SCHIP.<sup>13</sup> In addition, a significant number had fair or poor health status. These findings were more pronounced among black and Hispanic youth, demonstrating the presence of racial disparities in access to care among adolescent SCHIP enrollees in these 2 states. The majority of enrollees were from families who were living in poverty, and most were uninsured before their enrollment in SCHIP.<sup>4</sup> Clearly, one measure of the success of SCHIP will be the degree to which programs effectively serve these adolescents.

New York's SCHIP Program, Child Health Plus, was modeled on commercial managed care insurance and first was established as a state-specific program in 1991. New York's SCHIP served as one of the prototypes for the separate-model program option when SCHIP was created nationally in 1997. At the time of this study, New York's SCHIP was administered by 32 managed care plans. Children were eligible for coverage if they were 0 to 18 years, at or below 230% of the federal poverty level (FPL), residing in New York, not covered by other insurance, and not eligible for Medicaid.

Monthly premiums ranged from no premium (for families <160% of FPL) to \$9 to \$15 per child per month for other income levels. A percentage of all families above 230% of FPL purchased New York's SCHIP for the full premium; approximately two thirds of all enrollees received full state subsidy. Cost-sharing levels and benefit packages were uniform statewide and included ambulatory, emergency, inpatient, pharmacy, dental, and mental health services. These benefits were similar to those offered by commercial plans but were less comprehensive than Medicaid benefits.<sup>1</sup>

This article uses data from a study of New York State's SCHIP program to assess the impact of SCHIP on adolescents' health and health care. We describe the characteristics and needs of adolescents who entered SCHIP (baseline) and the impact of SCHIP on access to care, use, and parent-reported quality of services among adolescent SCHIP enrollees. In addition, we describe the impact of SCHIP on access to care and use from adolescents' self-report.

## METHODS

### Study Design

We used a time 1/time 2 (T<sub>1</sub>/T<sub>2</sub>) cohort design. Detailed methods have been reported elsewhere.<sup>1</sup> Briefly, we selected adolescents who were newly enrolled in New York's SCHIP and interviewed these youth and their parents roughly 4 to 6 months after enrollment (T<sub>1</sub>) and again 13 months after enrollment (T<sub>2</sub>). The T<sub>1</sub> interview reflected the teen's experience during the year before SCHIP enrollment, and the T<sub>2</sub> interview reflected experience during the first year after SCHIP enrollment. We also conducted a baseline interview with a comparison group who enrolled in SCHIP 1 year after the study group enrolled to account for possible secular trends in characteristics and experiences of new SCHIP enrollees. Parents and adolescents in the comparison group completed an identical interview about their experiences in the year before SCHIP enrollment.<sup>1</sup> The University of Rochester Research Subjects Review Board approved this study.

### Sample

New York State administrative files were used to identify new enrollees. A stratified random sample (1 unique adolescent per family) of new SCHIP enrollees was selected from 4 geographic regions (New York City, the urban environs of New York City, upstate urban areas, and upstate rural regions) and 3 race/ethnicity groups (white non-Hispanic, black non-Hispanic, and Hispanic); other racial/ethnic groups were excluded. The comparison group consisted of randomly selected parents of children throughout New York State who were newly enrolled in SCHIP during the appropriate time period. Data were weighted to account for the sampling design,

and reported estimates represent adolescent SCHIP enrollees statewide.

### Telephone Interviews

The National Opinion Research Center conducted T<sub>1</sub> interviews via telephone between March 15, 2001, and September 15, 2001, and follow-up T<sub>2</sub> interviews between December 1, 2001, and May 4, 2002, using Computer Aided Technology, Inc. Interviews were conducted in English and Spanish, day and evening, 7 days per week. Adolescent interviews were designed to ensure confidentiality of responses.

### Measures

Key questions were obtained from standard instruments and were developed collaboratively with other SCHIP evaluation projects that were supported by the Child Health Insurance Research Initiative.<sup>14</sup> Demographics included age, gender, race/ethnicity, geographic region, family structure (number of parents), family income, and parent education. Race and Hispanic ethnicity were measured separately.<sup>15</sup> Adolescents' place of residence was categorized as rural or urban on the basis of Rural Urban Commuting Areas codes.<sup>16</sup> Previous health insurance was assessed as the number of months the adolescent was insured during the year before SCHIP enrollment and the type of insurance before SCHIP (private, public, or none). Health status was assessed by a standard self-report question (parent report of child's health as excellent, good, fair, or poor), by parent report of special health care needs, and by adolescent report of risk behaviors. Presence of special health care needs was determined by parent report using the Child and Adolescent Health Measurement Initiative (CAHMI) 5-question screener.<sup>17</sup> Youth-reported risk behavior items for tobacco use, depression risk (feeling sad or depressed in the past year), and having had sexual intercourse came from the CAHMI Young Adult Health Care Survey (YAHCS).<sup>18</sup> Access measures that were reported by questions to parents and teens included the presence of a usual source of care (USC), accessibility of the USC (using 4 measures from the Consumer Assessment of Healthcare Providers and Systems<sup>19</sup>), and assessment of unmet health care needs. Use measures (parent and teen report) assessed preventive care and other types of visits, including any use of emergency department (ED), outpatient, or hospital-based services and prescription medication use during the periods before and during SCHIP. Quality measures included parent and adolescent ratings of specific aspects of care during the year before and then the year after SCHIP enrollment; ratings of the health care provider at 3 months after enrollment and 1 year later using Consumer Assessment of Healthcare Providers and Systems items<sup>19</sup>; and assessment of the quality of specific preventive services, including provider counseling and private/confidential care using YAHCS mea-

asures. Assessment of quality using the YAHCS was pertinent only for youth who had received preventive care in the previous 12 months.

### Statistical Analyses

Bivariate analyses of health care access, use, and quality were conducted for the year before New York's SCHIP to describe baseline characteristics and health care experiences. We then estimated multivariate models to generate adjusted rates to assess the change in key outcome measures before versus during SCHIP. All models controlled for the effects of before–after differences in analyses of the entire sample and in analyses of subgroups. Multivariate analyses controlled for demographic and socioeconomic measures, including age, gender, race/ethnicity, single-parent household, household size, family income, maximum parent education, parental employment status, and urban residence. All analyses were weighted to be representative of the population of white, black, and Hispanic adolescents who were newly enrolled in New York's SCHIP.

In all analyses, we used sample weights to obtain estimated means and odds ratios. Stata 8.2<sup>20</sup> was used to account for the complex weighting and stratification strategy. We first summarized baseline demographics, health characteristics, and insurance measures (baseline survey) for adolescents in the SCHIP population. Subsequent analyses compared baseline (before SCHIP) versus follow-up (during SCHIP) using survey design–based *F* tests and *t* tests.

To assess whether bivariate results of key outcomes were affected by confounding demographic and previous insurance variables, we estimated multivariate logistic regression models for having a USC, unmet needs, preventive and other types of visits, and confidential care measures each as dependent variables, controlling for demographic characteristics and previous insurance status. We calculated adjusted proportions and confidence intervals for follow-up versus baseline separately for each subgroup. We then compared these adjusted results with the unadjusted bivariate results. Generalized estimating equations<sup>21</sup> were used to estimate logistic population-averaged models with exchangeable correlation structure to account for the correlation between baseline and follow-up responses for the same subject.

## RESULTS

### Response Rates and Comparison Group Analyses

Baseline interviews were completed with 1118 adolescents and their parents shortly after enrollment, and 970 (87%) of these individuals completed follow-up interviews 1 year later. A total of 401 parents and/or adolescents in the comparison group completed interviews. Previously described analyses of the comparison group

suggest that there were no major secular trends during the 1-year period studied.<sup>1</sup>

### Demographics of Adolescents Enrolled in SCHIP

Demographics, health status, and health/risk behaviors of the 970 adolescents who were interviewed at both T<sub>1</sub> and T<sub>2</sub> are reported in Table 1. The mean age at SCHIP enrollment was 14.8 years, and 75% of adolescent enrollees were black or Hispanic. The majority of parents had completed high school or more, and 82.5% reported that their family income was <160% of the FPL. More than two thirds (71%) of adolescents were uninsured for the entire year before their enrollment in SCHIP.

### Health Status and Health Behaviors

More than 1 (13.6%) in 8 adolescents reported fair to poor health status at SCHIP enrollment (Table 1). On the basis of the CAHMI 5-item screener that was asked of

parents, 19.4% of adolescents had special health care needs. One in 4 adolescents reported feeling sad or hopeless every day for 2 weeks or more in the past 12 months. Approximately 14% reported smoking cigarettes, and one fifth reported having had sexual intercourse.

### Health Care Access and Use

The proportion of parents who reported that their adolescent had a USC increased from 79% before SCHIP to 95% during SCHIP ( $P \leq .0001$ ; Table 2). Financial reasons for not having a USC decreased during SCHIP enrollment: 31% of parents reported not having a USC because they did not have health insurance before SCHIP, compared with only 4% during SCHIP ( $P \leq .0001$ ). Parent-reported rates of using a clinic at a hospital as the USC increased from 15% to 26% ( $P = .001$ ), whereas the proportion who reported that the USC was a doctor's office outside a hospital decreased slightly, from 42% to 37% ( $P = .072$ ).

Parents were more likely to report that their adoles-

**TABLE 1** Demographics, Health Status, and Health Behaviors of Adolescents Who Were Newly Enrolled in SCHIP

Characteristic	% (N = 970)
Demographics <sup>a</sup>	
Age at enrollment, y	
Early adolescent (12–13)	39.9
Middle adolescent (14–16)	43.9
Late adolescent (17–18)	16.2
Gender	
Male	50.3
Female	49.7
Race/ethnicity	
White, non-Hispanic	24.7
Black, non-Hispanic	33.4
Hispanic	42.0
Maximum household education	
Less than high school	23.8
High school or GED	37.1
More than high school	33.9
Region	
New York City	69.3
New York City environs	14.1
Upstate urban	11.8
Upstate rural	4.8
Income <160% FPL	82.5
Single-parent household	58.1
Health insurance <sup>a</sup>	
No. of months insured during year before SCHIP	
None (uninsured all year)	70.8
1–11	11.1
All 12	18.2
Type of last insurance (for those with previous insurance)	
Any private	67.6
Medicaid	23.8
Other	11.6
Health status and behaviors <sup>b</sup>	
Fair to poor health status	13.6
Sad in past 12 mo	25.8
Smoked cigarettes	13.9
Had sexual intercourse	20.3

<sup>a</sup>Parent report.

<sup>b</sup>Adolescent report.

**TABLE 2** Parental Report of Adolescent's USC, Use, and Receipt of Confidential Care, Before and During SCHIP Enrollment

Parameter	Before SCHIP, %	During SCHIP, %	P
USC			
Had a USC	78.6	94.8	$\leq .0001$
Top reasons for not having a USC (n = 161)	(n = 42)		
Seldom gets sick	23.9	54.3	.002
Recently moved	18.9	2.9	.009
Do not know where to go for care	2.6	6.8	.161
Did not have health insurance	30.8	4.1	$\leq .0001$
Place closed or moved	2.6	0.0	.330
Cannot afford it	10.9	5.8	.410
Other reason no USC	10.2	26.1	.030
Type of USC			
Doctor's office outside hospital	42.2	36.8	.072
Doctor's office in hospital	6.2	3.6	.142
HMO-run clinic	2.7	0.8	.016
Community health center	20.8	21.4	.816
ED	3.5	5.6	.224
Clinic at hospital	15.4	26.4	.001
School clinic	0.2	0.4	.314
Health department	4.5	3.4	.373
Other	4.3	1.6	.018
Use			
Preventive or routine visit	65.9	74.2	.003
Mean no. of routine visits	1.31	1.74	$\leq .0001$
ED use	18.0	18.3	.898
Illness or injury visit	23.5	22.9	.780
Specialist visit	12.9	24.0	$\leq .0001$
Mental health care	4.8	6.4	.287
Dental care	57.8	62.4	.111
Vision care	28.2	27.1	.646
Prescription medication use	38.9	46.7	.003
Receipt of confidential care			
Adolescent had an opportunity to speak privately with a provider	36.6	59.0	$\leq .0001$

HMO indicates health maintenance organization.

cent had a preventive visit during SCHIP (74%) compared with before SCHIP (66%;  $P = .003$ ). Parents also were more likely to report that their adolescent had a visit to a specialist ( $P \leq .0001$ ) or used prescription medications ( $P = .003$ ) during the year when they were enrolled in SCHIP compared with the year before. ED use and other specialty services use (eg, mental health, dental, vision) remained the same during SCHIP enrollment compared with before SCHIP.

On the basis of parent report, SCHIP enrollment improved access to care and eliminated disparities in USC that were present before SCHIP: parents of 92% of white adolescents, 75% of black adolescents, and 74% of Hispanic adolescents reported that their teenager had a USC before SCHIP enrollment ( $P = .002$  for racial/ethnic difference before SCHIP). During the year after enrollment, parents reported that 96% of white, 94% of black, and 95% of Hispanic adolescents had a USC ( $P = .745$  for racial/ethnic difference during SCHIP; all  $P < .01$  for  $T_1$  to  $T_2$  changes).

Gender and age differences in preventive care use also were found. Adolescent boys were significantly more likely to have had a preventive visit during SCHIP (80%) compared with before (68%;  $P \leq .0001$ ). More than 60% of girls had preventive visits, with no significant differences before versus after SCHIP enrollment. Older teens (aged 17–18) had the largest increase in use of preventive visits during SCHIP (from 50% to 72%;  $P = .001$ ) compared with early (aged 12–13) and middle (aged 14–16) adolescents, whose preventive care use increased from 72% to 82% ( $P = .096$ ) and 66% to 73% ( $P = .099$ ), respectively.

Adolescents' reports of improved access and use during SCHIP confirmed parents' reported changes (Table 3). Adolescents were more likely to report that they had a USC in the year after they were enrolled (87%) compared with the year before (70%;  $P \leq .0001$ ). Adolescents also were significantly less likely to report that they had any unmet health care need ( $P \leq .0001$ ) or an unmet need for preventive care ( $P \leq .0001$ ) during the year when they were enrolled in SCHIP compared with the previous year. Reported needs for mental health or reproductive health remained unchanged; however, rel-

**TABLE 3 Adolescent Report of USC, Unmet Needs, and Confidential Care, Before and During SCHIP Enrollment**

Parameter	Before SCHIP, %	During SCHIP, %	<i>P</i>
Had a USC	69.9	87.1	$\leq .0001$
Had any unmet need	54.3	42.1	$\leq .0001$
Unmet need for preventive care	53.8	40.6	$\leq .0001$
Unmet need for mental health care	6.5	5.1	.322
Unmet need for reproductive health care <sup>a</sup>	4.9	3.1	.296
Had an opportunity to speak privately with a provider	39.9	54.2	$\leq .0001$

<sup>a</sup> Asked of girls only.

atively few adolescents identified needs for these services in either baseline or follow-up surveys.

### Receipt of Confidential Care

The proportion of parents who reported that their child had an opportunity to speak privately with the provider increased substantially, from 37% before SCHIP to 59% during SCHIP ( $P \leq .0001$ ; Table 2). Adolescents' reports were similar to parents' reports on this item: nearly 40% reported that they had an opportunity to speak privately with their provider before compared with 54% during SCHIP ( $P \leq .0001$ ; Table 3). Baseline gender differences were noted: the proportion of girls who reported that they received confidential care increased from 35% to 56% ( $P \leq .0001$ ); increases for boys were not statistically significant (from 45% before to 53% during SCHIP;  $P = .106$ ).

### Multivariate Analyses

Multivariate models were used to adjust the associations between baseline and follow-up reports for access, use, unmet need, and receipt of confidential care (Table 4). When adjusted for demographics and previous insurance status, SCHIP resulted in increased rates of reporting a USC, more preventive care, specialty care, prescription medication use, fewer unmet needs, and more confidential care delivery. In fact, on multivariate analyses, all measures improved except for having an ED visit.

### Perceived Health, Worry, and Satisfaction With SCHIP

Neither parents nor adolescents reported that their health was better during SCHIP than it was before SCHIP. However, parents reported significantly less worry about their child's health 1 year after enrollment

**TABLE 4 Adjusted Rates for Key Access, Use, and Quality Measures (Parent and Adolescent Report), Before and During SCHIP Enrollment**

Parameter	Adjusted Rates <sup>a</sup>		<i>P</i>
	Before SCHIP (Time 1)	During SCHIP (Time 2)	
Parent report			
Had a USC	.786	.952	$\leq .0001$
Had a preventive/routine visit	.659	.765	$\leq .0001$
Had an ED visit	.180	.178	.893
Had a specialist visit	.129	.240	$\leq .0001$
Used prescription medications	.390	.470	.006
Adolescent had an opportunity to speak privately with the provider	.368	.519	$\leq .0001$
Adolescent report			
Had a USC	.700	.878	$\leq .0001$
Had any unmet need	.544	.415	$\leq .0001$
Had unmet need for preventive care	.539	.400	$\leq .0001$
Had an opportunity to speak privately with the provider	.395	.458	.063

<sup>a</sup> Adjusted for age, gender, race/ethnicity, geographic region, and previous insurance status.

compared with the baseline (51% vs 45%;  $P = .028$ ). The proportion of parents who reported that they were more satisfied with the benefits in SCHIP compared with their adolescent's last health insurance increased from 67% to 73% ( $P = .057$ ). A high proportion of both parents and adolescents reported that they were more satisfied with their providers (62% and 76%, respectively) and with their care (74% and 84%, respectively) than before they had enrolled in SCHIP.

### Receipt of Preventive Counseling

More parents reported that their teen's provider had counseled on a variety of health issues during the year when they were enrolled in SCHIP compared with the year before enrollment, including guns/weapons, smoking, drugs, alcohol and sexuality, and behaviors to expect from their child (Table 5). The proportion of teens who reported that their provider discussed various health issues with them also increased significantly for condom use and healthy eating, and a trend was noted for several other counseling items. For example, 38% of adolescents reported that their provider counseled them about condoms before SCHIP compared with 45% during SCHIP enrollment ( $P = .014$ ), and 58% reported discussing healthy eating before compared with 67% during SCHIP ( $P = .01$ ).

### DISCUSSION

Our study demonstrates that enrollment in SCHIP increased access to care and improved the quality of care that was received by adolescents in New York. In this analysis of low-income white, black, and Hispanic youth, most of whom were uninsured before enrollment, SCHIP insurance was associated with greater access to a USC; more use of preventive care, specialty care, and prescription medications; and fewer unmet needs. SCHIP also seemed to eliminate preexisting racial disparities in access; differences for black and Hispanic adolescents that were noted in the year before enrollment were no longer present during SCHIP—that is,

access to care during SCHIP was equivalent among white, black, and Hispanic adolescents.

Adolescents' access to health care is among the worst of all age groups, and relatively few interventions have shown to be effective in improving their access to care. Although insurance benefits are not always matched to the needs of adolescents, Medicaid and SCHIP programs often are believed to offer the potential for providing comprehensive insurance coverage to many uninsured adolescents.<sup>22</sup> Our findings suggest that New York's SCHIP does improve adolescents' access and use of services. Adolescents perceived a difference in their use of and need for preventive care before and during SCHIP enrollment. They also reported fewer unmet needs, likely because preventive care use improved. It is interesting that there were no increases in ED use during the study period, suggesting that SCHIP targets needed access and does not merely increase use of all health care. Despite concerns about availability of reproductive health care under SCHIP,<sup>12,23</sup> relatively few adolescents reported unmet needs for reproductive care. However, this may reflect New York's long-standing history of supporting enhanced access to family planning services for underserved adolescents and adults,<sup>24</sup> independent of SCHIP.

Other studies of New York's SCHIP have demonstrated that SCHIP is effective in improving access to care for specific populations, including children with asthma and those with special health care needs.<sup>1,25</sup> We also have shown that SCHIP reduces racial and ethnic disparities in a population of children aged 0 to 18, based on parental reports alone.<sup>26</sup> These analyses show that elimination of racial/ethnic disparities in access can be achieved with enrollment of adolescents into New York's SCHIP.

Early studies of SCHIP in 5 states suggested that there was room for improvement in adolescents' access to and use of preventive and specialist care and prescription drug coverage.<sup>10</sup> This article adds to this evidence for the impact of SCHIP on improved access to care by including

**TABLE 5** Parent and Adolescent Report of Receipt of Preventive Counseling, Before and During SCHIP Enrollment

Parameter	Parent Report			Adolescent Report		
	Before SCHIP, %	During SCHIP, %	<i>P</i>	Before SCHIP, %	During SCHIP, %	<i>P</i>
Provider talked about topic during visit						
Growth and development	60.7	68.9	.031			
School performance	57.9	64.8	.037	41.5	45.8	.216
Healthy eating	51.0	54.4	.371	58.0	67.0	.010
Behaviors you can expect	35.6	46.6	.006			
Things you can do to help your child	31.2	41.3	.011			
Smoking, drugs, alcohol, sexuality	28.1	43.7	≤.0001			
Smoking				40.1	42.0	.512
Condoms				37.5	45.3	.014
Guns and weapons	20.7	36.0	≤.0001	33.1	29.0	.163
Feeling sad				15.8	20.0	.148

adolescents' own reporting about their care. This is especially important for older adolescents, because the proportion of care that is obtained without parents' knowledge increases during the adolescent years.<sup>6</sup> Financial barriers to not having a USC decreased significantly with enrollment in SCHIP, because parents were most likely to cite nonfinancial reasons for not having a USC during SCHIP. Although adolescents' reported rates of having a USC were slightly lower than rates that were reported by parents, a comparable increase was noted by both parents and adolescents during SCHIP enrollment. In addition, enrollment in SCHIP was associated with less parental worry about their child's health, although neither teens nor parents reported actual changes in perceived adolescent health status.

We found some improvement in the quality of care at preventive visits during SCHIP, reported by adolescents and parents alike. Slightly more than half of teens and parents reported that teens had an opportunity to speak privately with their provider. Both parents and adolescents reported significant increases in adolescents' receipt of preventive counseling on several health topics, which may reflect increased preventive care use. Similar improvements in communication also were reported recently by Alabama's SCHIP program.<sup>27</sup> However, Florida's SCHIP evaluation studies have not shown comparable changes in the quality of care received by youth.<sup>3</sup> Nonetheless, there remains significant room for improvement even in New York's SCHIP, because some parents and adolescents still were not satisfied with SCHIP and unmet health care needs remained relatively high, with >40% of adolescents reporting any unmet need. In addition, although recommended by adolescent preventive care guidelines,<sup>28,29</sup> nearly half of adolescents reported that they did not have an opportunity to speak privately with a provider, and fewer than half received preventive health screening/counseling on various health topics.

Seventy percent of adolescents in our study were uninsured during the entire year before SCHIP enrollment, and our findings suggest that SCHIP improved access to care and use of services for new adolescent SCHIP enrollees in general. Millions of US adolescents are uninsured, and many would be eligible for SCHIP if their families applied for coverage<sup>12</sup>; as many as 62% of uninsured children and families might qualify for Medicaid or SCHIP if they applied.<sup>30</sup> Providers and policy makers have focused appropriately on maintaining SCHIP funding and on enrollment policies that can help to ensure continuous coverage for poor children and families. However, many states do not target adolescents for outreach and enrollment,<sup>23</sup> and some states have implemented other policies that create barriers to adolescents' eligibility and enrollment.<sup>12</sup> Therefore, substantial work remains to identify and enroll adolescents who

are eligible for coverage if all adolescents are to receive the care that they need.

Our study is limited in that our survey data are based on parent and adolescent self-report. We did not compare self-reported access and use of care with provider reports or medical charts and could not verify self-reported data for the content of care received or for unmet needs. However, parent- and adolescent-reported rates increased comparably on several measures, including having a USC, receiving private care, and receiving preventive counseling. This suggests that both parents and adolescents perceived changes in their use of health care and the quality of care received during SCHIP. However, we were unable to examine the reasons that preventive visit quality improved in the current study. In addition, although adolescents were contacted separately after their parents had given consent and were given the opportunity to schedule a time to complete the interview at their convenience, adolescents may not have answered all of the questions honestly. However, our finding that many adolescents disclosed 1 or more risk-taking behaviors is similar to other studies that used the YAHCS survey measures.<sup>18</sup> Another limitation is that our findings may not be generalizable to all SCHIP populations. We did not study all racial/ethnic groups beyond white, black, and Hispanic, and we studied only adolescents who were enrolled in New York. Therefore, although 18% of the nation's entire 2001 SCHIP population resided in New York,<sup>11</sup> these findings may not generalize to other states or to the entire population.

## CONCLUSIONS

Overall, SCHIP has shown improvements in access and quality of care delivered to adolescents in New York. SCHIP had the greatest impact on improving health care access and quality for vulnerable populations, such as those who were previously uninsured, and resulted in a reduction in disparities in access for black and Hispanic youth. The investments in SCHIP programs for low-income adolescents produce significant improvements in health care access and quality, especially for those who are most vulnerable. These findings suggest that SCHIP can help to improve adolescents' access to care and provide strong evidence for continuation and expansion of policies to provide health insurance to all. Youth enroll in SCHIP with significant unmet health care needs. Although these improve during SCHIP, SCHIP benefits and delivery systems need to address a variety of ongoing health care needs to help ensure that the needs of adolescents are met. Focused programmatic efforts and outreach strategies likely will be needed to reduce further the barriers to care for some types of adolescent services.

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