

Final Report of R40MC11281 (SDAS)

Title: The Changing Role of SCHIP in Serving Children with Special Health Care Needs

Organization: RAND Corporation

PI: Hao Yu, Ph.D.

I. Introduction

A. Nature of the research problem

The past two decades have witnessed a dramatic increase in public health insurance for children, including Medicaid expansions in the late 1980s and implementation of the State Children's Health Insurance Program (SCHIP) in the late 1990s. Despite this achievement, concerns about recent turbulence in the economy, ongoing declines in private coverage, and the number of children remaining uninsured have sparked a national debate over future strategies for covering children, as evidenced by the struggle over SCHIP reauthorization, including two presidential vetoes in 2007. Although many studies of SCHIP have contributed to the debate, few have focused on recent trends in SCHIP eligibility, coverage and access to care for children with special health care needs (CSHCN), a group of children especially vulnerable in the current health insurance systems. The goal of this project is to help inform the debate by providing new information about these issues. Findings from this empirical analysis can help inform policy-making on health care financing for CSHCN in the ongoing debate of health care reform.

B. Purpose, scope, and methods of the investigation

Specifically, this study aims to examine the changing role of SCHIP in serving CSHCN between 2001 and 2005. It has the three specific aims: (1) To assess trends in SCHIP-eligibility for CSHCN; (2) To examine trends in the proportion of CSHCN who are SCHIP-eligible but uninsured; and (3) To investigate trends in access to health care for the SCHIP-enrolled CSHCN.

This study is a secondary data analysis of the National Survey of CSHCN in 2001 and 2005. Both descriptive and multivariate analyses are performed.

C. Nature of the findings

Our analyses showed that there is a slight increase in SCHIP eligibility for CSHCN between 2001 and 2005 (8.44% vs. 9.83%, χ^2 test, $P < 0.05$). Among the SCHIP-eligible CSHCN, we found a substantial decrease in the uninsurance rate from 21.15% in 2001 to 10.87% in 2005 (χ^2 test, $P < 0.05$). After controlling for covariates, our analyses indicated that CSHCN in 2005 were 57% less likely to be uninsured than those in 2001. Our multilevel analysis also identified state policies that significantly affect uninsurance among the SCHIP-eligible CSHCN, including asset tests (positive effects), and presumptive eligibility (negative effects). In addition, our analyses showed that access to care for CSHCN improved substantially over the study period and that SCHIP played an important role.

II. Review of the Literature

Background Information about CSHCN: CSHCN include "those who have or are at increased risk for a chronic physical, developmental, behavioral or emotional condition and who also require health and related services of a type or amount beyond that required by children generally," as defined by the Maternal and Child Health Bureau (MCHB) ¹. A recent national survey noted a prevalence of 12.8% ², or 9.4 million in 2000.

In recent years, CSHCN have been the focus of numerous studies, which have concluded that CSHCN have poorer health status, greater needs for health care, and higher expenditures than children generally ³⁻¹⁰. In particular, some researchers have expressed concerns that CSHCN are

especially vulnerable in the current marketplace, which is dominated by managed care plans, and could suffer from the serious problem of limited access to health care^{4, 10, 11}.

To identify CSHCN based on the above definition, “the policy research community has converged in its support for”¹² the instrument, called the CSHCN Screener, which includes five stem questions on general health care needs¹³. Each of the stem questions has two follow-up questions to screen for chronic health conditions. Those who affirmatively answer one of the stem questions and its two follow-up questions are considered to have a special health care need. This study will identify CSHCN on the basis of parental responses to the CSHCN Screener questions as part of the National Survey of CSHCN.

SCHIP eligibility and coverage for CSHCN: SCHIP was enacted by the Congress in 1997 to help provide health insurance for children of low-income families, who are not qualified for Medicaid and cannot afford private insurance. After its initial implementation, some researchers have examined SCHIP eligibility for CSHCN, and have reported mixed results. For example, the proportion of CSHCN eligible for SCHIP in 2000 ranged from 7.5%¹⁴ to 16.8%¹⁵. The literature also reported on SCHIP coverage for CSHCN. For example, Yu and colleagues found that most of the SCHIP-eligible CSHCN were actually enrolled in SCHIP, and less than 20% of the SCHIP-eligible CSHCN were uninsured in 2000¹⁴. That was a relatively small proportion, compared with the literature report that 36% of all the SCHIP-eligible children were uninsured¹⁶. The published research has examined risk factors for uninsurance among the SCHIP-eligible CSHCN. After controlling for personal factors, the uninsurance rate was significantly affected by State-level factors (e.g. free-standing SCHIP programs have higher uninsurance rate)^{16, 17}.

After one decade of SCHIP implementation, a question naturally arises of how SCHIP eligibility and coverage changed over the years. A number of studies aimed to answer this question¹⁸⁻²¹, and commonly concluded that (1) SCHIP eligibility has been expanded after 2000, and (2) there are still large number of children who were SCHIP-eligible but uninsured. While these studies provided updated information about SCHIP, none of them has focused on CSHCN.

SCHIP and access to care for CSHCN: Numerous studies have confirmed the positive effect of SCHIP both on extending coverage to children living near poverty, and on improving access to care for those enrolled^{22-26 27-29}. Few studies, however, have examined the role of SCHIP with respect to CSHCN, although some researchers have recognized SCHIP’s potential for improving access to care for CSHCN^{4, 30, 31 32}. Two national studies^{14, 15} found that access to care for the SCHIP-enrolled CSHCN was better than those CSHCN who were SCHIP-eligible but uninsured. Some researchers also noted that within three states of New York, Florida, and Kansas, CSHCN have increased access to and satisfaction with health care after SCHIP enrollment^{3, 33, 34}. Despite these positive effects of SCHIP, the literature also reported on access problems for the SCHIP-enrolled CSHCN, including unmet needs and problems in some States with respect to provider availability and service authorization^{35, 36}. Little is known, however, about the changing role of SCHIP with respect to CSHCN after nearly 10 years of SCHIP implementation. For example, one recent study found significant effect of Medicaid eligibility, on unmet needs for CSHCN, compared with insignificant effect of SCHIP³⁷. In particular, it is not clear in the literature if access to care for the SCHIP-enrolled CSHCN is better now.

Summary: Despite prior work on SCHIP and CSHCN, there are many gaps in the literature, which we will address in this study, including (1) the trends in SCHIP eligibility for CSHCN between 2001 and 2005; (2) the trends in the proportion of CSHCN who were eligible for SCHIP but uninsured; and (3) the trends in access to care for the SCHIP-enrolled CSHCN.

III. Study Design and Methods

A. Study design

This study has three parts. It will first identify the CSHCN who are eligible for SCHIP. Then, among the SCHIP-eligible CSHCN, it will assess the proportion of CSHCN who remain uninsured, and the risk factors of being uninsured. Finally, the study will focus on the SCHIP-enrolled CSHCN and examine changes in their access to care. To examine these issues, this study uses the Andersen Behavioral Model of health care seeking behavior^{38,39}. The model covers four categories of variables, including (1) predisposing factors, such as age, sex, race, mother's education, and the language used for the interview; (2) need factors, including type of special need, and number of CSHCN within household; (3) enabling factors, including income as percentage of federal poverty line, place of residence as indicated by the Metropolitan Statistical Areas (MSA); and (4) system factors, including State policies on type of SCHIP program, enrollment and renewal procedures, and cost-sharing practices. In addition, dummy variables were included in all the multivariate analyses to control for State variations.

B. Population studied

The study population includes CSHCN across the nation.

C. Sample selection

The study sample includes those children who were interviewed by the National Survey of Children with Special Health Care Needs (NS-CSHCN). Two waves of the survey have been conducted, first in 2000-2001 and then again in 2005-2006. The survey was designed to collect information about the prevalence of CSHCN, the health insurance coverage they have and the health services they use^{40,41}. It first selected a random sample of households with children. Then, all children in each selected household were screened for special health care needs, using the CSHCN Screener, which was described above. Finally, in each screened household, a detailed interview was conducted for one randomly selected CSHCN. There were approximately 40,000 interviews completed for each waves of the survey.

D. Instruments used

We link the NS-CSHCN with the following state-level data.

Data on States SCHIP Policies: Data on SCHIP policies were obtained from the Kaiser Commission on Medicaid and the Uninsured, which has conducted an annual national survey since 2000 to collect information about type of SCHIP programs, eligibility rules, and enrollment and renewal procedures for children and families in the 50 States and the District of Columbia. The survey results are published online for public use and have been analyzed by many studies of health insurance coverage for children⁴²⁻⁴⁴. Information from the 2000 and 2006 survey^{45,46} are used by the study.

Data on SCHIP Eligibility Criteria: We gathered state-specific eligibility criteria by children's age and family income from the National Governors Association⁴⁷ in 2000 (the time that the first wave of NS-CSHCN was started). We also obtained from the National Academy for State Health Policy information about SCHIP eligibility criteria by age, income, and State in 2005, the time that the second wave of NS-CSHCN was started.

E. Statistical techniques employed

We perform both descriptive and multivariate analyses using SAS version 9.1. Two multivariate logistic models were estimated. One model investigates factors significantly affecting un-insurance rate among the SCHIP-eligible CSHCN, and the other compares access to health care among three groups of CSHCN, including those who were enrolled in SCHIP either in 2001 or in 2005, those who were income-eligible for SCHIP but privately insured in one of the two years, and those who were income-eligible for SCHIP but uninsured in one of the two years.

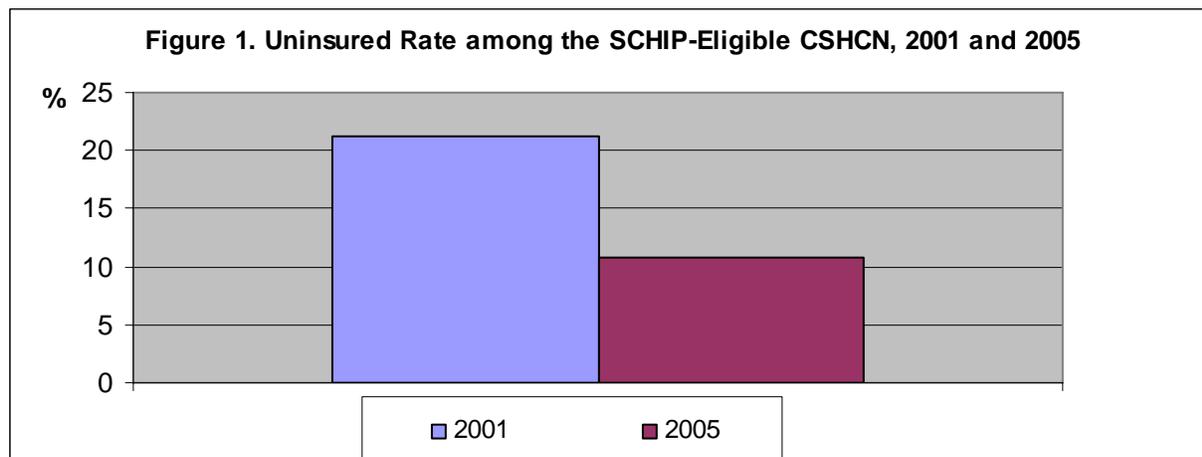
IV. Detailed Findings

SCHIP Eligibility for CSHCN

Our analysis shows that there is a slight increase in SCHIP eligibility for CSHCN between 2001 and 2005 (8.44% vs. 9.83%, χ^2 test, $P < 0.05$).

SCHIP Coverage for CSHCN

As Figure 1 shows, among the SCHIP-eligible CSHCN, we found a significant decrease in the uninsurance rate from 21.15% in 2001 to 10.87% in 2005 (χ^2 test, $P < 0.05$).



Note: * $P < 0.05$, χ^2 test

After controlling for predisposing, need, enabling, and system factors, our analysis indicates that the CSHCN in 2005 were 57% less likely to be uninsured than those in 2001, as shown in Table 1.

Table 1. Adjusted Odds Ratio for Factors Affecting Uninsurance among the SCHIP-Eligible CSHCN

Variables	Odds Ratio	95% Interval Confidence	
Predisposing Factors			
Age 0—5	1	N/A	N/A
6—12	0.59*	0.39	0.91
13—17	2.24*	1.66	3.01
Female	1.11	0.89	1.39
Race			
Non-Hispanic White	1	N/A	N/A
Non-Hispanic Black	0.69	0.41	1.18
Non-Hispanic Other	0.97	0.67	1.41
Hispanic	1.03	0.76	1.38
Highest Education Level of Anyone in Household			
Less than high school	0.75*	0.60	0.94
High school	1	N/A	N/A
More than high school	1.04	0.93	1.17

Interview in languages other than English	1.91*	1.42	2.59
Enabling Factors			
Family income as 150% or lower of Federal Poverty Level	0.38*	0.24	0.60
101%-199%	0.61*	0.40	0.93
At 200% or higher	1	N/A	N/A
Residence in MSA	1.10	0.82	1.48
Need Factors			
Type of special need			
Prescription Medicine	1	N/A	N/A
More Medical Care	0.93	0.74	1.17
Disability/Limitation	1.62*	1.28	2.04
Specialty Therapy	0.71	0.47	1.09
Emotional/Behavioral Counseling	1.00	0.70	1.44
2 or more CSHCN in the household	0.87	0.70	1.09
System Factors			
Type of SCHIP Program			
Medicaid Expansion	1	N/A	N/A
Separate SCHIP	1.12	0.83	1.50
Combination	1.45	0.95	2.21
Income verification at enrollment	0.82	0.54	1.25
12-Month continuous eligibility	1.07	0.77	1.48
Joint application of Medicaid and SCHIP	1.40	0.77	2.54
Face-to-Face interview required at enrollment	0.85	0.38	1.92
Asset test required at enrollment	1.78*	1.23	2.57
Presumptive eligibility	0.61*	0.39	0.96
Year 2005 compared with 2001	0.43*	0.33	0.56

Note: Results from a multivariate analysis of 5,858 children in 50 states and the District of Columbia.

* P<0.05. MSA--Metropolitan Statistical Areas

Risk Factors for Uninsurance among the SCHIP-Eligible CSHCN

Table 1 also summarizes the factors significantly affecting uninsurance among the SCHIP-eligible CSHCN. Among predisposing factors, children between six and 12 years of age were less likely to be uninsured than children younger than five years, whereas teenagers had a higher probability of being uninsured. Children from households where everyone's education level was below high school were less likely to be uninsured than those children from households with someone receiving high school education. Compared with children from households in which English was the language used during the interview, children whose families used other languages were 91% more likely to be uninsured. For enabling factors, income was significantly associated with uninsurance, with individuals from households with lower income less likely to be uninsured than those with incomes above 200% of the FPL. Among need factors, CSHCN with disability or limitation were 62% more likely to be uninsured than those CSHCN who need prescription medicine.

In terms of system factors, Table 1 shows that the uninsurance rate is significantly affected by two state policies: asset test and presumptive eligibility. Those CSHCN who are from the states

that require an asset test at SCHIP enrollment are more likely to be uninsured. Those CSHCN who are from the states that have presumptive eligibility are less likely to be uninsured.

Trends in Access to Care

Table 2. Access to Care between 2001 and 2005 by CSHCN Insurance Status

Unmet Need (Care Delayed or Forgone)	Model 1 Year Only			Model 2 Year, Predisposing, Need, and Enabling		
	Odd Ratio	t	P	Odds Ratio	t	P
Year	0.71	-3.49	0	0.67	-2.21	0.027
uninsured				7.52	13.01	0
SCHIP				0.95	-0.41	0.685
Needed Care						
Preventive	Odd Ratio	t	P	Odds Ratio	t	P
Year	1.23	3.01	0.003	1.43	2.66	0.008
uninsured				0.93	-0.43	0.669
SCHIP				1.06	0.63	0.531
Specialty						
Year	1.08	1.29	0.196	1.66	3.99	0
uninsured				0.86	-0.99	0.323
SCHIP				1.10	0.99	0.324
Received Needed Care						
Preventive	Odd Ratio	t	P	Odds Ratio	t	P
Year	1.91	3	0.096	1.48	1.3	0.193
uninsured				0.08	-9.44	0
SCHIP				0.92	-0.37	0.713
Specialty						
Year	1.30	1.55	0.224	1.42	1.05	0.295
uninsured				0.12	-8.78	0
SCHIP				0.61	-2.39	0.017

Note: Results from multivariate analyses. The first model includes year variable only while the second model includes year, predisposing, need, and enabling factors as described above. Reference group-- those CSHCN who were income-eligible for SCCHIP but enrolled in private insurance.

As Table 2 shows, our analyses found that access to care for CSHCN improved substantially over the study period and that SCHIP played an important role. We found a substantively important and statistically significant reduction in unmet need between 2001 and 2005 (OR= 0.71, p<0.001). Controlling for predisposing, need, and enabling characteristics increased the reduction (OR=0.67, p=0.027). We found that, relative to those CSHCN who were income-eligible for SCCHIP but enrolled in private insurance, CSHCN enrolled in SCHIP had similar levels of unmet needs (OR=0.95, p=0.685), and those CSHCN were eligible for SCHIP but were uninsured were at considerably higher risk of unmet needs (OR = 7.52, p<0.001).

We found that the overall decrease in unmet needs was not the result of decreased need. In fact, we found that perceived need for care increased over the study period, particularly for preventive care (OR=1.23, p=0.003). After controlling for predisposing, need, and enabling characteristics, we found that perceived need increased both for preventive care (OR=1.42, p=0.008) and for specialty care (OR=1.66, p< 0.001) over the study period, and we found that perceived need did not differ by insurance type.

Finally, we found weak evidence of increased rates at which CSHCN received care for perceived needs (preventive OR=1.91, p=0.096; specialty OR=1.30, p=0.224) over the study period. We found, however, CSHCN enrolled in SCHIP received needed preventive care at very similar rates to those CSHCN who were income-eligible for SCCHIP but enrolled in private insurance, while those CSHCN were eligible for SCHIP but were uninsured received the needed care at much lower rates (OR=0.08, p<0.001). Compared to those CSHCN who were income-eligible for SCCHIP but enrolled in private insurance, children enrolled in SCHIP reported lower rates of receiving needed specialty care (OR=0.61, p=0.17). This was still, however, considerably higher than those CSHCN were eligible for SCHIP but were uninsured (OR=0.12, p<0.001).

V. Discussion and Interpretation of Findings

A. Conclusions to be drawn from findings (with reference to data supporting each).

While there is a slight increase in the proportion of CSHCN who were eligible for SCHIP between 2001 and 2005 ((8.44% vs. 9.83%), we found that the uninsurance rate among the SCHIP-eligible CSHCN dropped by nearly a half during the study period (from 21.15% in 2001 to 10.87% in 2005). In 2001, SCHIP was still a very young program in most states while it became relatively mature by 2005. So the reduction in the uninsured rates among CSHCN between 2001 and 2005 closely corresponds to the maturing of SCHIP. The reduction in the SCHIP-eligible uninsured CSHCN is confirmed by our multivariate analysis in which we controlled for a wide range of socio-economic characteristics of CSHCN and their families.

Our multivariate analysis also indicated that the uninsurance status is strongly related to state policies. We found that asset tests at SCHIP enrollment is positively related to uninsurance, while presumptive eligibility are negatively related to uninsurance. These findings have important policy implications, as discussed below.

In terms of access to health care, our analyses indicate that CSHCN enrolled in SCHIP have similar access to care as those CSHCN who were income-eligible for SCCHIP but enrolled in private insurance (OR=0.95, P>0.05) while those CSHCN were eligible for SCHIP but were uninsured lagged behind in access to care (OR=7.52, P<0.01). The findings suggest that CSHCN enjoyed much better access to care as SCHIP matured and enrollment expanded. Indeed, our work provides compelling evidence that much of the improvement in access to care for this vulnerable population was due to SCHIP enrollment expansions.

B. Explanation of study limitations

This study relies on national survey data, and has a number of notable limitations. As pointed out by Selden and colleagues²⁰, “no survey or eligibility simulation is free from potential errors, and estimates from any one survey or eligibility simulation should be interpreted with caution.” First, when the second wave of NS-CSHCN was conducted in 2005-2006, Tennessee dramatically changed its SCHIP program and did not cover any child. Consequently, our results did not reflect the SCHIP eligibility and coverage after Tennessee restored its SCHIP program in 2007. Second, as described above, the public use files from the NS-CSHCN do not indicate which year the child was surveyed, and as a result, the above SCHIP eligibility criteria applied to the NS-CSHCN in this study approximately reflected SCHIP eligibility for CSHCN in the periods of 2000-2001, and of 2005-2006. Finally, we applied the state-level eligibility criteria by age, income, and year, which matched with most data of the NS-CSHCN. However, that was not a perfect match since the income level of about 3% of CSHCN interviewed by each wave of NS-CSHCN did not match precisely with the eligibility criteria. Finally, while we examine some important state SCHIP policies, other policies are not included in our analysis due to unavailable data for the study period, such as income disregards, which refers to the states’ policies regarding

whether certain types or amounts of income will be counted or exempted in determining income-eligibility.

C. Comparison with findings of other studies

Our study provides the first national estimate of trends in SCHIP eligibility and coverage for CSHCN. It is useful to compare our results with the trends reported by other researchers even though those published studies did not focus on CSHCN. Our finding of reduced uninsurance rate is consistent with the study by Hudson and Selden, who analyzed the Medical Expenditure Panel Survey and reported that the number of children who are eligible for Medicaid or SCHIP but uninsured fell from 2001 to 2005¹⁹. Other prior studies have also reported a reduction in the number of SCHIP-eligible but uninsured children⁴⁸.

The uninsured SCHIP-eligible CSHCN were more likely to have unmet needs. These results are consistent with literature reports^{4, 9, 38}, confirming insurance coverage as an enabling factor for access to health care.

Interestingly, those enrolled in SCHIP had similar overall unmet needs, and similar levels of specific unmet needs compared with the income-eligible CSHCN enrolled in private insurance with one notable exception. SCHIP-enrolled CSHCN reported more unmet needs regarding specialty care. It is unclear whether this is due to insufficient specialty providers participating in SCHIP, or to other causes. This was surprising because in general, the benefit structure for SCHIP plans tends to be more comprehensive than the benefit structure of many private insurance plans^{35, 49}, which should benefit the needs of CSHCN.

D. Possible application of findings to actual MCH health care delivery situations (including recommendations when appropriate)

N/A

E. Policy implications

Our results document the relatively stable SCHIP eligibility for CSHCN and the reduction in uninsurance among the SCHIP-eligible CSHCN and have important policy implications in “a time of great possibility in the realm of children’s health insurance⁵⁰.” In the wake of President Obama’s inauguration and the Democrats’ increased majorities in both houses of Congress, legislative leaders moved quickly to break the political stalemate over SCHIP expansion, and on February 4, 2009, President Obama signed the Children’s Health Insurance Reauthorization Act of 2009 to reauthorize and expand SCHIP. The empirical evidence found by this study supports renewal of SCHIP so that CSHCN can have continued eligibility and the reduction in their uninsurance can be sustained.

Despite our finding that about 10% of the SCHIP-eligible CSHCN were uninsured in 2005, this group clearly includes some of the most disadvantaged children in the United States as numerous studies have reported that CSHCN require continuing care both at home and from the formal health care system and incur higher medical expenditures than other children^{4, 10, 51, 52}. In particular, we found that those CSHCN whose families speak languages other than English were more likely to remain uninsured. They should be targeted by specific outreach efforts to help them get enrolled.

Our finding that the uninsurance status is strongly related to state policies has important policy implications. States may want to review and revise their SCHIP policies to help enroll the uninsured CSHCN. In particular, in 2005, there were only three states (Oregon, South Carolina, and Utah) that still required asset tests at the time of SCHIP enrollment, and only seven states

that offered presumptive eligibility (California, Illinois, Massachusetts, Michigan, Missouri, New Jersey, and New York). Our results suggest that asset tests should be changed because they may significantly impede enrollment in SCHIP for CSHCN. Conversely, based on our results, presumptive eligibility may facilitate enrollment in SCHIP for CSHCN, and its adoption could help expand SCHIP participation substantially.

Finally, SCHIP directors and child health leaders need to note unmet health care needs even among CSHCN who were enrolled in SCHIP or private insurance. In particular, as the multivariate analyses showed, those who needed specialty care were more likely to have unmet needs. This could be targeted for improvements to benefit CSHCN.

F. Suggestions for further research

Some important state SCHIP policies, such as income disregards, are not included in our analysis due to unavailable data for the study period. It remains an interesting topic for future studies to examine how state policies of income disregards affect CSHCN's enrollment in SCHIP.

While our study focuses on SCHIP and CSHCN, it would be interesting for future studies to compare CSHCN with those children without special needs in terms of SCHIP coverage and access to care under SCHIP.

We found that SCHIP-enrolled CSHCN reported more unmet needs regarding specialty care. It is unclear whether this is due to insufficient specialty providers participating in SCHIP, or to other causes. Further research is needed to assess the reasons for these deficiencies.

VI. List of products (peer reviewed articles, books, chapters in books, master and doctoral dissertations, conference presentations, etc.).

Articles published on peer-reviewed journals:

Hao Yu and Andrew W. Dick: Recent Trends in State Children's Health Insurance Program Eligibility and Coverage for CSHCN, *Pediatrics* 2009;124;S337-S342

Manuscripts being prepared:

Andrew W. Dick and Hao Yu: SCHIP and Access to Health Care for Children with Special Health Care Needs: Trends Analysis in 2001-2005.

Conference Presentations:

Hao Yu: Trends in SCHIP Eligibility and Coverage for Children with Special Health Care Needs, 2000-2005, Oral presentation at the 137th Annual Meeting of American Public Health Association, Philadelphia, PA, November 9, 2009

An electronic copy of the final report should be sent to the Grants Management Specialist named on your most current Notice of Grant Award (NGA). An electronic copy of the final report should also be sent to your Project Officer.

References

1. McPherson M, Arango P, Fox H, Lauver C, McManus M. A New Definition of Children with Special Health Care Needs. *Pediatrics*. 1998;102(1):137-140.
2. Blumberg S. Comparing States Using Survey Data on Health Care Services for Children with Special Health Care Needs http://www.cdc.gov/nchs/about/major/slaits/Publications_and_Presentations.htm Accessed on November 17, 2003.
3. Szilagyi P, Shenkman E, Brach C, et al. Children with Special Health Care Needs Enrolled in SCHIP: Patient Characteristics and Health Care Needs. *Pediatrics*. 2003;112(6):e508-e520.
4. Newacheck P, McManus M, Fox H, Hung Y, Halfon N. Access to Health Care for Children with Special Health Care Needs. *Pediatrics*. 2000;105(4):760-766.
5. Newacheck P, Taylor W. Childhood Chronic Illness, Prevalence, Severity, and Impact. *Am J Public Health*. 1992;82(3):364-371.
6. Fox H, Newacheck P. Health Maintenance Organizations and Children with Special Health Care Needs: A Suitable Match? *American Journal of Disabled Children*. 1993(147):546-552.
7. Stein R. Challenges in Long-Term Health Care for Children. *Ambulatory Pediatrics*. 2001;1(5):280-288.
8. Liptak G, Burns C, Davidson P, McAnarney E. Effects of Providing Comprehensive Ambulatory Services to Children with Chronic Conditions. *Archives of Pediatric & Adolescent Medicine*. 1998;152(Oct.1998):1003-1008.
9. Edmunds M, Coye MJ. *Americans' Children: Health Insurance and Access to Care*. Washington, D.C: National Academy Press; 1998.
10. Neff J, Anderson G. Protecting Children with Chronic Illness in a Competitive Marketplace. *Journal of American Medical Association*. 1995;274(23):1866-1869.
11. Newacheck P, Brindis C, Cart C, Marchi K, Irwin C. Adolescent Health Insurance Coverage: Recent Changes and Access to Care. *Pediatrics*. 1999;104(2):195-202.
12. Davidoff AJ. Identifying Children with Special Health Care Needs in the National Health Interview Survey: A New Resource for Policy Analysis. *Health Serv Res*. 2004;39(1):53-71.
13. Bethell C, Read D, Stein R, Blumberg S, Wells N, Newacheck P. Identifying Children with Special Health Care Needs: Development and Evaluation of a Short Screening Instrument. *Ambulatory Pediatrics*. 2002;2(1):38-48.
14. Yu H, Dick A, Szilagyi P. The Role of SCHIP in Serving Children with Special Health Care Needs. *Health Care Financ Rev*. 2006;28(2):53-64.
15. Davidoff A, Yemane A, Hill I. Public Insurance Eligibility and Enrollment for Special Health Care Needs Children. *Health Care Financ Rev*. 2004;26(1):119-135.
16. Yu H, Seid M. Uninsurance among Children Eligible for SCHIP: Results from A National Survey. *Manag Care Interface*. 2006;19(5):31-39.
17. Sommers BD. The Impact of Program Structure on Children's Disenrollment from Medicaid and SCHIP. *Health Aff (Millwood)*. 2005;24(6):1611-1617.
18. Finegold K, Giannarelli L. *TRIM3 Simulations of Full-Year Uninsured Children and their Eligibility for Medicaid and SCHIP*. Washington, DC: Office of the Assistant Secretary for Planning and Evaluation, U.S. Department of Health and Human Services; 2007.
19. Hudson JL, Selden TM. Children's Eligibility And Coverage: Recent Trends And A Look Ahead. *Health Affairs - Web Exclusive*. 2007:w619-w662 619.
20. Selden T, Hudson J, Banthin J. Tracking Changes in Eligibility and Coverage among Children, 1996-2002. *Health Aff (Millwood)*. 2004;23(5):39-50.
21. Sommers AS, Dubay L, Blumberg LJ, Blavin FE, Czajka JL. Dynamics In Medicaid And SCHIP Eligibility Among Children In SCHIP's Early Years: Implications For Reauthorization. *Health Affairs - Web Exclusive*. 2007;26(5):w598-w607.
22. Holl J, Szilagyi P, Rodewald L, al. e. Evaluation of New York State's Child Health Plus: Access, Utilization, Quality of Health Care, and Health Status. *Pediatrics*. 2000;105(3):711-718.
23. Keane C, Lave J, Ricci E, LaVallee C. The Impact of A Children's Health Insurance Program by Age. *Pediatrics*. 1999;104(5):1051-1058.
24. Shenkman E, Pendergast J, Wegener D, al. e. Children's Health Care Use in the Healthy Kids Program. *Pediatrics*. 1997;100(6):947-953.
25. Trafton S, Shone L, Zwanziger J, al. e. Evolution of a Children's Health Insurance Program: Lessons from New York State's Child Health Plus. *Pediatrics*. 2000;105(3):692-696.
26. Szilagyi P, Zwanziger J, Rodewald L, al. e. Evaluation of a state health insurance program for low-income children: Implications for State Child Health Insurance Programs (SCHIP). *Pediatrics*. 2000;105:363-371.
27. Feinberg E, Swartz K, Zaslavsky A, Gardner J, DK. W. Family Income and the Impact of a Children's Health Insurance Program on Reported Need for Health Services and Unmet Need. *Pediatrics*. 2002;109(2):E29.

28. Dubay L, Hill I, Kenney G. *Five Things Everyone Should Know about SCHIP*. Washington, D.C.: The Urban Institute; 2002. Assessing New Federalism: Issues and Options for States, An Urban Institute Program to Assess Changing Social Policies. Series A, No.A-55.
29. Dick A, Szilagyi P, Shone L, Klein J, Yu H, Zwanziger J. The Evolution of SCHIP in New York: Changing Characteristics of the Population. *Pediatrics*. 2003;112:e542-e550.
30. Feder J, Levitt L, O'Brien E, Rowland D. Covering the Low-Income Uninsured: the Case for Expanding Public Programs. *Health Aff (Millwood)*. 2001;20(1):27-39.
31. Holahan J, Uccello C, Feder J, Kim J. Children's Health Insurance: The Difference Policy Choices Make. *Inquiry*. 2000;37(Spring):7-22.
32. Schwalberg R, Hill I, Mathis S. New Opportunities, New Approaches: Serving Children with Special Health Care Needs Under SCHIP. *Health Serv Res*. 2000;35(5 Part III):102-111.
33. Dick A, Brach C, Allison RA, Shenkman E, Shone L, Szilagyi P. SCHIP Impact in Three States: How Do the Most Vulnerable Children Fare? *Health Aff (Millwood)*. 2004;23(5):63-75.
34. Szilagyi P, Dick A, Klein J, Shone L, Zwanziger J, McNerny T. Improved Access and Quality of Care after Enrollment in the New York State Children's Health Insurance Program (SCHIP). *Pediatrics*. 2004;113(5):e395-e404.
35. Hill I, Lutzky AW, Schwalberg R. *Are We Responding to Their Needs? State's Early Experiences Serving Children with Special Health Care Needs Under SCHIP*. Washington, DC, 20037: The Urban Institute; 2001. Occasional Paper Number 48.
36. Fox H, McManus M, Limb S. *Access to Care for S-CHIP Children with Special Health Care Needs* <http://www.mchpolicy.org/publications/pdfs/access.pdf>, Accessed on April 5, 2002.: Maternal and Child Health Policy Research Center, 750 17th Street NW, Suite 1025, Washington, D.C 20006-4067; 2000.
37. Gnanasekaran SK, Boudreau AA, Soobader M-J, Yucel R, Hill K, Kuhlthau K. State Policy Environment and Delayed or Forgone Care Among Children with Special Health Care Needs. *Maternal & Child Health Journal*. 2007;November 2, 2007.
38. Andersen R. Revisiting the behavioral model and access to care: does it matter? *J Health Soc Behav*. 1995;36:1-10.
39. Gelberg L, Andersen R, Leake B. The behavioral model for vulnerable populations: application to medical care use and outcomes. *Health Serv Res*. 2000;34:1273-1302.
40. Blumberg S, Olson L, Frankel M, et al. Design and Operation of the National Survey of Children with Special Health Care Needs, 2001. . *Vital Health Statistics*. 2003;1(41):1-136.
41. van Dyck P, McPherson M. The National Survey of Children with Special Health Care Needs. *Ambulatory Pediatrics*. 2002;2(1):29-37.
42. Smith PJ, Stevenson J, Chu SY. Associations Between Childhood Vaccination Coverage, Insurance Type, and Breaks in Health Insurance Coverage. *Pediatrics*. June 1, 2006 2006;117(6):1972-1978.
43. Brach C, Lewit EM, VanLandeghem K, et al. Who's Enrolled in the State Children's Health Insurance Program (SCHIP)? An Overview of Findings From the Child Health Insurance Research Initiative (CHIRI). *Pediatrics*. December 1, 2003 2003;112(6):e499-507.
44. Kenney G, Chang D. The State Children's Health Insurance Program: successes, shortcomings, and challenges. *Health Aff (Millwood)*. 2004;23(5):51-62.
45. Cohen Ross D, Cox L. *Making It Simple: Medicaid for Children and CHIP Income Eligibility Guidelines and Enrollment Procedures*. Washington, DC: Kaiser Commission on Medicaid and the Uninsured; 2000.
46. Cohen Ross D, Cox L, Marks C. *Resuming the Path to Health Coverage for Children and Parents: A 50 State Update on Eligibility Rules, Enrollment and Renewal Procedures, and Cost-Sharing Practices in Medicaid and SCHIP in 2006*. Washington, DC: Kaiser Commission on Medicaid and the Uninsured; 2007.
47. National_Governors_Association_Center_for_Best_Practices. MCH Update 2000: States Have Expanded Eligibility and Increased Access to Health Care for Pregnant Women and Children <http://www.nga.org/cda/files/MCHUPDATE2000.pdf>.
48. Selden TM, Hudson JL, Banthin JS. Tracking Changes In Eligibility And Coverage Among Children, 1996–2002. *Health Aff (Millwood)*. 2004;23(5):39-50.
49. Szilagyi P. Care of Children with Special Health Care Needs. *The Future of Children*. 2003;13(1):137-152.
50. Sommers BD. Why Millions Of Children Eligible For Medicaid And SCHIP Are Uninsured: Poor Retention Versus Poor Take-Up. *Health Aff*. September 1, 2007 2007;26(5):w560-567.
51. Newacheck P, Strickland B, Shonkoff J, et al. An Epidemiologic Profile of Children with Special Health Care Needs. *Pediatrics*. 1998;102(1):117-123.
52. Newacheck PW, Inkelas M, Kim SE. Health services use and health care expenditures for children with disabilities. *Pediatrics*. 2004;114(1):79-85.