# Public Health Insurance Expansions for Parents and Enhancement Effects for Child Coverage

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**ABSTRACT**

In 1997, the federal government provided states with new incentives to expand public health insurance coverage through the State Children's Health Insurance Program (SCHIP). In addition to expansions for child eligibility, a number of states have expanded coverage for parents as well. The intent of the parent expansions is to remove barriers to labor-force participation and to enhance the take-up rates for eligible children. Pooled data from the 1997-2002 March CPS survey are used to estimate the changes in public coverage and uninsurance rates resulting from both children's eligibility expansions and parent expansions. The model is identified through cross-state variation in both the timing and magnitude of the expansions. Using the linear probability model, early results indicate that parent expansions resulted in a 0.79 percentage-point increase in children's public health insurance participation and a 0.48 percentage-point decline in the number of uninsured children.

## INTRODUCTION

In 1997, the federal government provided states with new incentives to expand public health insurance coverage through the State Children's Health Insurance Program (SCHIP). Between 1997 and 2001, the average eligibility threshold for children expanded from 137% to 213% of the federal poverty level. While these expansions contributed to a drop in the percentage of uninsured children, they also raised concerns that private health insurance expansions would crowd out private insurance, resulting in families substituting public coverage for private.

In addition to expansions for child eligibility, a number of states have expanded coverage for parents as well. The common goals of parent expansions include removing barriers to labor-force participation and enhancing the take-up rates for eligible children. Research on specific state programs have shown mixed results in the impact that parent expansions have had on enhancing child take-up rates. The goal of this research is to assess whether parent expansions have enhanced children's participation, on average, using data from all 50 states.

## LITERATURE REVIEW

Dubay and Kenney (2001) have used the National Survey of American Families from years 1997 and 1999 (representing 13 states) to analyze the impact of parent expansions on both parent and child coverage rates. They find that children's participation rates in public health insurance programs are 80.8% of the eligible population in states that expand parent coverage, compared to only 57.1% in states without parent expansions. They also examine Massachusetts' parent expansions specifically, and find that parent expansions account for a 14.7 percentage-point increase in child participation, an 11.0% decrease in child uninsured rates, and a 3.2% decrease in private coverage. Based on these estimates, they conclude that crowding out explains between 22.5% and 39.6% of the increased child participation in public insurance programs.

Kronick and Gilmer (2002) analyzed the impact of parent expansions in Minnesota, Washington State, Oregon, and Tennessee. While they did not address the impact of these expansions on children (only adults), they did find that there was considerable variation across these states in the participation rates, resulting declines in uninsured rates, and crowding out. For example they find the parent expansions resulted in an 8.6 percentage point increase in parents covered by public insurance with no measured crowding out in Oregon, compared to a 3.3 percentage point increase in parents covered by public insurance with nearly 100% crowding out.

Thus, a comprehensive study must look at the impact of parent expansions across a number of states, but also look for state-level differences that may explain the variation of success rates. This

study extends the existing literature by 1) including data from all states in the analysis and 2) including additional years in which additional states expanded parent coverage.

## DATA

Data on the Medicaid and state program eligibility limits, and the effective dates of these changes, is gathered from the following sources: a report issued by Mathematica Policy Research, Inc. (2001); state reports made to the Health Care Financing Administration (HCFA); and from the State Children's Health Insurance Program (SCHIP) Database, available from the U.S. Department of Health and Human Services, Office of the Assistant Secretary for Planning and Evaluation (1999).

Data on parent expansions is compiled from that presented by Aizer and Grogger (2003), Dubay and Kenney (2001), Guyer (2004), Kronick and Gilmer (2002), and Krebs-Carter and Holahan (2000). At this time, the data on parent expansions is likely incomplete and possibly incorrect due to differences presented in these sources. In the absence of accurate data, the results presented here are likely somewhat imprecise. However, the inclusion of state indicators in the regression model helps relieve some of the measurement error which may be present. The states with parent expansions and the initial year of the expansion is listed in Table 1 (where 1996 is the first year included in the study).

Data from the March CPS Supplements taken in years 1997-2002 (representing data from 1996-2001) are used to determine whether children have insurance (public or otherwise), as well as for household demographic data. In addition to household demographic questions, the survey asks respondents about the type of insurance coverage held by all members of the household during the previous calendar year. Thus, including data beginning with the March 1997 CPS will allow for one full year of data prior to the implementation of the SCHIP expansions.

March CPS survey asks respondents who, if anyone, in the household received Medicaid coverage (using state-specific names as well as Medicaid) during the previous year. Similar questions are asked about employer- or union-sponsored plans, non-group plans, Medicare, military and VA health plans. The survey later asks whether anyone in the household was covered by any other type of health insurance plan (including state-specific state program names), not already talked about. Coverage under state programs is reported as "other government health care" which may include other state plans with limited coverage; the March 2001 CPS includes new questions relating directly to state programs. For the purposes of this study, children identified as having "public insurance" include only those reporting coverage through Medicaid or state programs (including "other government health care"). Children with other types of public insurance, such as Medicare and military health plans, are not included as those with "public" insurance due to the fact that eligibility in these programs is unrelated to the SCHIP expansions.

One difference between the March CPS and other surveys is that individuals are identified as being uninsured if they do not respond affirmatively to any of the health insurance questions. That is, the March CPS never asked if an individual is uninsured, prior to 2000. Beginning with the March 2000 CPS, a verification question was added for individuals who did not respond affirmatively for any source of health insurance. For the March 2000 CPS, there are duplicate sets of responses for each source of insurance: one set is based on the original responses to the questions, where the second set includes updated information obtained through the verification question. The inclusion of the verification question resulted in a reduction in the measured percent of uninsured children from 13.9% to 12.6% (Nelson and Mills, 2001).

While the inclusion of the verification question improves the accuracy of the estimates of the number of uninsured, it is impossible to infer how this would have affected responses for years prior to 2000. In order to avoid bias in the effects of the SCHIP expansions, resulting from changes in the survey questions, I ignore the updated responses due to the verification question in determining health insurance status1. Failure to report insurance status consistently would create an artificial decrease in the number of uninsured children for years including the verification question, since part of the decrease is due only to the change in the survey question.

The sample used from the March CPS, reflecting years 1996-20012, includes all never-married children ages 0-17 from civilian households. I have excluded children who are identified as the head of a household, family, or subfamily; and

children identified as primary individuals. Heads of households are treated as adults in the CPS, making it impossible to determine some variables, such as the number of parents present. Children identified as primary individuals (meaning that they are unrelated to other members of the household) are automatically recorded as having no income, making it impossible to describe their income and poverty-level group accurately.

Pooling all years together, the omissions account for less than 1.8% of the total number of observations, representing less than 1.8% of the total population of children. In any given survey year, the omissions are always less than 1.9% of either the total number of observations or the represented population. While those omitted are more likely to be uninsured, compared to those included in the dataset, their exclusion has very little impact on either the estimates of the percent of uninsured children in each year or the year-to-year changes in these estimates. Thus, it is unlikely that the omitted data have a significant impact on the findings of this research.

## STATISTICAL METHODS

I begin with a model that will estimate the change in insurance status resulting from the public health insurance expansions for children directly. This model is used to separately estimate the impact of the SCHIP expansions on both the likelihood of being uninsured and the likelihood of having public insurance.

The approach used is most similar to that of Cutler and Gruber (1996). However, Cutler and Gruber analyze the effect of changes in eligibility (instrumented by state-level variation in eligibility) on changes in insurance source. Eligibility for state programs may depend on a child's current or recent enrollment in private insurance policies, if waiting periods for eligibility are used. Since this cannot be observed with March CPS data, inference about actual eligibility is not possible. Instead of trying to infer eligibility from the data, this model looks at changes in the likelihood of being either uninsured or having public coverage, given changes in the state eligibility limits. Thus, the model estimates the average response across all children, both eligible and non-eligible, with the expectation that larger changes in eligibility will have a stronger effect on uninsurance and public insurance coverage rates. Since Cutler and Gruber use variation in state-level eligibility to instrument for estimated eligibility, the identification strategy is very similar. The use of state-level policy changes, rather than actual changes in eligibility, has also been used by Yelowitz (1995) to estimate changes in women's labor supply and welfare participation in response to expanded Medicaid eligibility, relative to AFDC eligibility.

The model also includes a binary variable indicating if the state had expanded public health insurance coverage for parents with incomes above the federal poverty level. This variable is only measured for children with household income below 200% FPL in order to assess whether these expansions had an additional impact on insurance status for the targeted children.

Data on children from the March CPS Supplement representing years 1996-2000 is used to estimate the following linear probability model regression:

$$Prob(cov=1) = \alpha + \beta_1 EligLimit + \beta_2 ParentExp + \beta_3 X + \beta_4 State + \beta_5 Year \qquad (1)$$

The dependent variable, prob(Cov), is defined as either the probability of being uninsured, or the probability of having public insurance, estimated separately. 'X' is a vector of socioeconomic controls including dummy variables for the child's age, race, and Hispanic ethnicity, as well as dummy variables representing the type of family (both parents present, mother only, father only, or neither parent present). 'X' also includes the number of persons in the family, as well as the squares of this variable. Finally, 'X' includes dummy variables for poverty level groupings, based on the ratio of family income, relative to the poverty level (<50%FPL, 50-100%FPL, 100-150%FPL, 150-200%FPL, 200-250%FPL, 250-300%FPL, 300-350%FPL, and >350%FPL). Together, these will account for any changes in the likelihood of being uninsured (or having public coverage) which are attributable to changes in the characteristics of families in the United States. Thus, to the extent that the number of children being covered by employer-sponsored coverage increases over this period, this may in part be explained by changes in the proportion of families in each income grouping. The inclusion of state and year dummy variables will account for differences in the likelihood of being uninsured due to economy-wide effects specific to

particular years and due to state-level differences which are unrelated to the SCHIP expansions.

One potential problem with the model described is the possibility of endogenous regressors. In the estimation model, the key relationship addressed is the effect of changes in child and parent eligibility for public insurance on the uninsurance rates for children. However, these policy changes may have been made in response to the states' previous experience with uninsurance rates. If this is the case, then the policy changes, themselves, are endogenous leading to biased estimates of the changes in uninsurance rates. Cutler and Gruber discuss this possibility, but do not correct for it, since most of the changes in eligibility are in response to federal mandates, not to state options. However, the expansions made under SCHIP are not due to federal mandates. As a result, analysis of the SCHIP expansions may be more susceptible to policy endogeneity than previous expansions to Medicaid.

Another possible source of endogeneity exists if changes in eligibility limits for public health insurance affect not only the insurance status of children, but also their observed demographic characteristics. While this would obviously not affect the child's characteristics, such as age or race, it is possible that there is an effect on the family income. For children who gain access to public insurance, this may affect the labor-force participation or work effort of their parents. Thus, changes in eligibility for public health insurance may affect both family income and a child's health insurance status simultaneously.

## RESULTS

The coefficients and standard errors for the linear probability model results are shown in Table 2. The coefficients indicate that states with expanded eligibility for public health insurance had a significant reduction in the child uninsured rate and a significant increase in public health insurance participation, after accounting for changes related directly to the expansions for children. This suggests that expanded parent coverage did enhance children's participation in these programs, encouraging further decreases in uninsured rates for children.

In order to more easily interpret the impact of the parent expansions, two sets of fitted values are calculated from the regression equations. The first is simply the fitted values based on actual data, while the second fitted value is based on no parent expansions with all other variables held constant. The average difference in these estimates for the 2001 sample is then calculated, representing the estimated change in child uninsured rates (and public coverage rates) which can be attributed directly to the parent expansions. The results, shown in Table 3, indicate that the parent expansions can be attributed to a decrease in uninsured rates of 0.48 percentage points, and an increase in Medicaid/SCHIP participation of 0.79 percentage points.

Thus, the data shows that expanded parent coverage does enhance child coverage outcomes. However, the enhanced drop in child uninsured rates accounts for only 61% of the enhanced increase in Medicaid/SCHIP coverage, indicating a crowd-out rate of 39%. In other words, an estimated 39% of the children gaining Medicaid/SCHIP coverage would have been covered under private policies in the absence of expanded parent coverage. This would imply that there must be additional sources of crowding out for the parents themselves. More research on this topic is needed to fully understand the financial impact of these expansions in terms of the overall increase in public health insurance costs, relative to the net gain in lower uninsured rates.

Finally, while the results presented here suggest that parent expansions have enhanced child coverage outcomes for Medicaid and SCHIP programs, there may be other explanations for this result. For example, states that chose to expanded public health insurance coverage for parents may reflect the fact that these states were very aggressive in lower uninsured rates. As such, they may have also had stronger promotion for their child expansions, smoother application processes, or other common factors that explain these results. Since these other factors are not modeled here, the estimated enhancement effects could be due to other similarities in state programs with expanded parent coverage.

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**Table 1: States with Parent Expansions for Family Incomes Above 100%FPL**

| State | Year Expansion First Measured* |
|---|---|
| Arizona | 2001 |
| California | 1996 |
| Connecticut | 1996 |
| Delaware | 1996 |
| Hawaii | 1996 |
| Iowa | 1998 |
| Maine | 1997 |
| Massachusetts | 1997 |
| Minnesota | 1996 |
| Missouri | 1999 |
| Nevada | 1997 |
| New Hampshire | 2000 |
| New Jersey | 2000 |
| New York | 2001 |
| Oregon | 1996 |
| Rhode Island | 1997 |
| South Carolina | 1998 |
| Tennessee | 1996 |
| Vermont | 1996 |
| Washington | 1996 |
| Wisconsin | 1999 |

*As represented in the data, such that 1996 is the earliest year indicated, even for pre-existing expansions

**Table 2: Linear Probability Model Estimation Results** Other Covariates include age, state, and year indicators. Sample size: 266,333 Observations. Source: Author's calculations, March CPS, 1997-2002. *Sig. at 95% confidence; **Sig. at 99% confidence.

| Dependent Variable | Uninsured Coefficient (Std. Error) | Medicaid/SCHIP Marginal Effect at Mean Value |
|---|---|---|
| Child Eligibility %FPL | -0.000114** | 0.0000876** |
| | (0.0000319) | (0.0000329) |
| Near-poor Parent Exp. | -0.0301634** | 0.0497223** |
| | (0.0053496) | (0.0060987) |
| White | -0.0414025** | -0.0285641** |
| | (0.0057819) | (0.005955) |
| Black | -0.0308847** | 0.0269702 |
| | (0.0068149) | (0.0072104) |
| Other Race | (omitted) | (omitted) |
| Hispanic | 0.1040748** | 0.028378** |
| | (0.0039491) | (0.0039838) |
| # in Family | -0.0594967** | 0.0055405 |
| | (0.0060444) | (0.0062489) |
| # in Family Squared | 0.0045419** | 0.0007002 |
| | (0.0006772) | (0.007037) |
| Presence of Parents: | | |
| Both Present | -0.2032373** | -0.1176847** |
| | (0.0104631) | (0.0105021) |
| Mother Only | -0.2476678** | 0.0255931** |
| | (0.0095683) | (0.0095152) |
| Father Only | -0.1637848** | -0.0650464** |
| | (0.0107807) | (0.0105698) |
| Neither Present | (omitted) | (omitted) |
| Poverty Level Groups: | | |
| 0-50% FPL | 0.1649125** | 0.4924624** |
| | (0.0067871) | (0.0074083) |
| 50-100% FPL | 0.1617726** | 0.4361193** |
| | (0.0056181) | (0.0063875) |
| 100-150% FPL | 0.1699698** | 0.2565505** |
| | (0.0051315) | (0.0056981) |
| 150-200% FPL | 0.1324093** | 0.1242918** |
| | (0.0046796) | (0.0046979) |
| 200-250% FPL | 0.0819678** | 0.0696158** |
| | (0.0039072) | (0.0037362) |
| 250-300% FPL | 0.0423446** | 0.0318988** |
| | (0.0033619) | (0.003183) |
| 300-350% FPL | 0.0253991** | 0.0161665** |
| | (0.0033296) | (0.0028702) |
| >350% FPL | (omitted) | (omitted) |

**Table 3: Estimated Health Insurance Coverage Rates, 2001 Sample**

| Dependent Variable | Uninsured | Medicaid/SCHIP |
|---|---|---|
| Estimated Coverage Rates: | | |
| With Parent Expansions | 12.84% | 22.84% |
| Without Parent Expansions | 13.32% | 22.05% |
| Change due to Parent Expansions | -0.48 | 0.79 |

Source: Author's calculations, March CPS, 1997-2002.

## ENDNOTES

[1] This adjustment did not noticeably change any of the results reported.

[2] These data are from the March CPS surveys collected in 1997-2002.