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THE STATE CHILDREN'S HEALTH INSURANCE PROGRAM: PARTICIPATION AND SUBSTITUTION

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1. Introduction:

Over the past 20 years, health care reforms implemented in the United States aimed to assist one of the most vulnerable groups: uninsured children in poor families. In the mid 1980s, the federal government separated Medicaid, a public health insurance program, from the cash assistance program to provide health insurance to more children.[1] They subsequently allowed and eventually mandated state Medicaid eligibility for children in higher income families. Nevertheless, millions of children remained uninsured. In 1997, the State Children's Health Insurance Program (SCHIP) was enacted to improve this situation. Its goal is to provide insurance to children in near-poor working families and prevent privately covered children from switching to public coverage i.e. crowd-out.[2]

This paper analyzes the effects of several changes to the states' public health insurance programs on the insurance coverage of children. These changes include: expanding the income eligibility thresholds to provide coverage to higher income children; using premiums and enrollment fees to share costs with its beneficiaries; imposing a waiting period between the discontinuation of private for public insurance to deter substitution; and presuming eligibility without income verification to rapidly increase enrollment of income-eligible children.[3]

A substantial body of literature focused exclusively on the effects of the public health insurance income eligibility expansions on the insurance coverage of children.[4] To our

[1] The cash assistance program we refer to is Aid to Families in Dependent Children (AFDC). We use the term public health insurance for Medicaid and/or SCHIP.
[2] Near poor families are families with income at about 200 percent of the federal poverty level (FPL). In 2003, 200 percent of FPL is approximately $30,520 for a family of three in the continental United States.
[3] Under presumptive eligibility, qualified personnel can determine the temporary eligibility into the public health insurance program based on the family's declaration of income and the child's age. Qualified personnel may include healthcare providers (medical doctors and staff at community health centers or schools) and caseworkers of other programs (WIC, Head Start, subsidized childcare) (Ross (1997)). Once a child is determined to be presumptively eligible, the child receives the full benefits of the public health insurance program.
[4] Examples of papers that study the Medicaid income eligibility expansions are Currie and Gruber (1996), Cutler and Gruber (1996), Dubay and Keeney (1996), Shore-Sheppard (1997), Yazici and Kaestner (1998), Blumberg,

knowledge, this includes two papers, Cunningham et al. (2002), and Lo Sasso and Buchmueller (2002) that study the effects of the income eligibility expansions caused by the enactment of SCHIP. Both studies find the estimated effect on the take-up of public insurance to be low or at most 10 percent; however, this policy has a large crowd out effect.

Recently, analyses are undertaken to understand the effects of the outreach policies of Medicaid. Currie and Grogger (2002) examines the effects of implementing a number of outreach policies on Medicaid caseloads; however, the paper does not find statistically significant effects.[5] Aizer (2002) examines the effects of advertising campaign, and community based organization assistance on Medicaid enrollment in California. The author finds that these policies have increased the enrollment among Hispanic and Asian Families. With the enactment of SCHIP, states instituted a variety of policies to increase enrollment, prevent substitution of private coverage and share costs with beneficiaries. Nevertheless, there are no studies on the effects of any of these policies except the income eligibility expansions.

Understanding the effects of premiums, waiting periods and presumptive eligibility on the insurance coverage of children is valuable since states are continuously modifying their public health insurance programs (Ross and Cox (2003) and Gill and Guyer (2003)). While instituting premiums helps finance the public program, this may deter some families from enrolling their uninsured children. Employing waiting periods may reduce family's incentives to substitute away from private coverage; however, the uninsured child may also experience a negative health shock that requires medical attention during this waiting period. The costs of treatment may be prohibitive for the family without health insurance. Implementing presumptive

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Durbay and Norton (2000), Ham and Shore-Sheppard (2001) and Card and Shore-Sheppard (2002). Shore-Sheppard (2001) provides a thorough review on the majority of these papers.

[5] These outreach policies include procedures to streamline the application process presumptive eligibility, and outstationing Medicaid eligibility workers. Their paper also studies the effects on health outcomes and use of prenatal care.

eligibility may increase enrollment. Nevertheless, the use of this policy may also enroll ineligible children since income and insurance is not verified during this process. Examining the effects of these policies thus appears to be warranted to design effective public health insurance programs.

We analyze the effects of implementing premiums, presumptive eligibility and waiting periods with the income eligibility expansions. In order to conduct our analysis, we merge information concerning these changes with the data on children from the March Supplement of the Current Population Survey (CPS) covering 1995-2001. We find that income eligibility increases the participation into the public program and decreases uninsurance. We also find that increasing the number of months in the waiting period decreases the take-up of public insurance. Instituting presumptive eligibility increases participation into the public program, yet it decreases the take-up of private insurance. Nevertheless, we are unable to find effects of instituting premiums on these decisions. Our results are robust to the inclusion of the unemployment rate, minimum wage rate, and per capita disposable personal income, and remain qualitatively similar when we test our hypothesis with data aggregated into age, state, and year cells. To further study the effects of premiums, we construct a measure of the net value of public insurance. We find that decreasing this net value decreases public coverage and increases private coverage.

This paper is organized as follows. Section 2 presents an overview of SCHIP. Section 3 presents a discussion of the data and Section 4 presents the main empirical model. Section 5 presents the results and the robustness check of this model. This section also provides the model we use to study the effects of the marginal changes in both premiums and waiting periods, and the corresponding results. Section 6 presents our concluding remarks.

2. Background and Brief Review of the State Children's Health Insurance Program:

The Balanced Budget Act of 1997 enacted Title XXI or the State Children's Health

Insurance Program (SCHIP).[6] Congress allocated a forty billion dollar block grant to be utilized over ten years to extend health insurance coverage to uninsured children who are not eligible for Medicaid. The distribution of the federal funds is only available on a matching basis and the states' specific allocation of funds is determined by a formula based on the estimated number of uninsured children below 200 percent of federal poverty level (FPL). States do not receive federal funds if they adopt income eligibility requirements that are more restrictive than their Medicaid thresholds on June 1, 1997.

Even though states were given until 2000 to implement an SCHIP, 9 states introduced their program in 1997. In 1998, 35 states initiated their SCHIP, while 5 states implemented their programs in 1999. The last 2 states, Hawaii and Washington, implemented their programs in 2000. States are given options to extend Medicaid (M-SCHIP), set up a separate state program (S-SCHIP), or implement both (COMBO). Even after 2000, states are changing their public health insurance programs. During March of 2000 to April of 2002, Maryland, South Dakota and Texas switched to a COMBO, and West Virginia dropped their M-SCHIP.

Implementing M-SCHIP provides states with access to an established Medicaid infrastructure, while a disadvantage of instituting an S-SCHIP is the initial costs associated with any new projects. For example, the federal government defines the benefits package of Medicaid. Consequently, states that implement an M-SCHIP can provide this standard package. With S-SCHIP, states have both the burden and freedom to construct a benefits package. The federal government placed one restriction on the S-SCHIP benefits package. States can offer a benefits package that is equivalent to the one given to the dependents of federal or state employees or the commercial benefits plan with the most enrollees in that state.[7]

[6] Rosenbach et al. (2001) provides an extensive review of SCHIP.
[7] States can also give a benchmark-equivalent plan. A benchmark-equivalent plan must have an aggregate actuarial

States have flexibility in sharing the cost of providing SCHIP with its beneficiaries. Specifically, they can institute staggered cost schedules depending on the income of the participant's family. The total out-of-pocket costs (co-pay, deductibles, enrollment fees, premiums, etc) may not exceed five percent of family's income.

Prior to SCHIP, few states imposed premiums to share in the cost of providing public health insurance with its beneficiaries; however, many states are now charging premiums to participants of SCHIP.[8] Table 1 presents part of the variation in the SCHIP premium policies. The upper panel of this table presents the ratio of the number of states that charges premiums to the number of states that instituted an SCHIP for each year from 1997 to 2001. In 1997, one (Tennessee) out of nine states that instituted an SCHIP charged premiums. In 2001, this number increased to 28 states or 55 percent of the states charged premiums to some or all of their SCHIP beneficiaries. The lower half of Table 1 presents the variation in the monthly per child premiums for a family of three with one parent and two children in Fiscal Year 1998 and 2001. In Fiscal Year 1998, the premiums ranged from $4 in California to $65 in Missouri; in 2001, Nevada charged $1.67 and Missouri charged $80.

Ku and Coughlin (1997) studies the effect of charging premiums for public health insurance on the take-up decisions in Hawaii, Minnesota, Tennessee and Washington. The authors find instituting premiums has large negative effects on the take-up of public health insurance.[9] These results and the fact that 17 states plan to expand cost-share for SCHIP during 2003 (Ku (2003)) provide reasons to analyze the effect of imposing premiums in SCHIP.

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value equal to or greater than the plans listed above.

[8] We include enrollment fees as part of premiums. For this paper, we only study the effect of SCHIP premiums. Thus, states such as Minnesota that charges premiums for the standard Medicaid program using Medicaid waivers is not considered in our study.

[9] The authors find that premiums equal to one percent of family's income reduces enrollment by 16 percent and premiums equal to 5 percent of family's income reduces enrollment by 74 percent.

Many children eligible for the public health insurance program do not participate into it. Therefore, income eligibility is not the sole barrier to enrollment. Due to this reason, states are required to reach out and identify children who are eligible and enroll them into the public program. States can use their Medicaid, SCHIP or welfare program funds to support their outreach policies.[10] States are allotted a special five hundred million Medicaid fund to assist in the transition from Aid to Families with Dependent Children (AFDC) and Medicaid to Temporary Assistance to Needy Families (TANF), Medicaid, and SCHIP.[11] States are also allowed to spend up to ten percent of their SCHIP funds for administrative and outreach purposes. States are also permitted to utilize their TANF funds to promote awareness of their public health insurance programs. A partial list of outreach polices are funding community based organizations and/or media to promote awareness; establishing eligibility workers in the community to assist in the application process; and allowing children to be presumptively eligible for the public program.

Specifically, under presumptive eligibility, no income or insurance verification is needed. If the child is deemed presumptively eligible, the child receives full benefits. Table 2 presents the state that used this policy in Fiscal Year 1998 and 2001. 6 states utilized this policy in both years. However, Kentucky, and New York dropped their policy and New Jersey and New Mexico implemented theirs during this period. While this policy may facilitate the enrollment process, privately insured families may use this feature to access the potentially cheaper healthcare for their children. Thus, learning the effects on the insurance take-up decisions is crucial for policy design.

With SCHIP, the federal government was concerned with the possible crowd-out of

[10] Centers for Medicare and Medicaid Services.
[11] Each state's allocation is comprised of a "basic allocation ($2 millions each)" and a "secondary allocation (based on state-specific factors)." The federal matching rates can be different between the two allocations (CMS website).

private insurance. This substitution increases government expenditures, and prevents funds from reaching targeted children. Hence, even children with the access to employer-sponsored dependent benefits are ineligible for public coverage. To further prevent the crowd-out of private insurance coverage, states instituted preventative measures such as waiting periods; employer-sponsored dependent coverage benefits verification systems; and premium assistance programs.[12]

States imposed waiting periods to provide a disincentive to switch from private to public insurance. With mounting private health insurance costs, poor-working families may be unable to afford private coverage. With waiting periods, some children will be left uninsured to become eligible for the public program. This may provide psychological hardship to the parents of these uninsured children.[13] Further, if this child is in need of medical services, the family's financial costs may be overwhelming.

Table 3 presents the variation in waiting periods for Fiscal Year 1998 and 2001. The length of these waiting periods ranges from 1 to 12 months. In Fiscal Year 1998, 16 states imposed this policy. Waiting periods are 6 months or less these states. From 1998 to 2001, 10 states changed their policy. This table presents the state-year variation in the implementation and length of this policy; however, the use of this variation may be problematic. Many states allowed for exemptions if the loss of private coverage is due to "good cause," which is determined on case-by-case bases. Thus, we study both the effects of introducing and monthly changes in the waiting period policy.

3. Data Description:

3.1. Individual Level Data:

We extract a sample of children ages 0 to 19 from the 1996 to 2002 March Annual

[12] Under the premium assistance program, states use SCHIP funds to subsidize the purchase of employer-sponsored health insurance. This policy is not studied in this paper since only two states have this program in place by 2001.
[13] This psychological hardship or disutility may be from the uncertain negative health shocks to this uninsured child.

Demographic files of the Current Population Survey (CPS). The CPS is a nationally representative repeated cross-sectional dataset that contains an average of 60,000 households per year. Starting from 1996, the CPS redesigned the health insurance survey to obtain accurate information regarding the health insurance choices of individuals. We drop children who are reported as the head of a household or the spouse of the head. Also, a child is not included if he or she is not a dependent of a family member or is a parent of another child. We drop children who are not living in a family, and who are reported as married. Since the CPS collects data on insurance coverage and family income for the previous year, we have a sample of 298,671 children covering the years 1995 to 2001.[14]

The descriptive statistics of the individual level data are presented in Table 4. This table presents the mean and standard deviations for the complete sample and by insurance coverages. We find that 20 percent, 68 percent and 16 percent of the sample are observed with public, private and no insurance coverage, respectively.[15] White children are more likely to be privately covered, while black children are more likely to have public insurance. Children born in a foreign country are more likely to be uninsured. Privately covered children are more likely to have two parents; have two or more workers in the household; and have less people reported in fair or poor health. These children are also more likely to live with at least one person who works for a large firm, and are more likely to have parents with higher education.[16] We control for these observed differences in the demographic characteristics in our analysis.

3.2. State Level Data:

[14] Starting in 2000, the CPS began collecting data on the SCHIP take-up of children; however, the take-up figures mirror only the administrative enrollment data for S-SCHIP (Nelson and Mills 2002). The respondents were inquired about the SCHIP coverage of each child in the family if and only if the child was first reported not as a Medicaid beneficiary. Due to this problem, we do not use this data to study the effect of SCHIP policies on SCHIP take-up decisions.

[15] The sum of the sub-samples sizes is not equal to the total sample size since a child can be observed with multiple coverage options.

[16] A large firm is defined as having at least 100 employees.

The majority of the data concerning the SCHIP policies are gathered from the Centers for Medicare and Medicaid Services (CMS). The CMS website provides detailed information regarding the state level policies. We utilize the information in the state approved plan and amendments fact sheets, annual reports, and SCHIP evaluation reports to construct the dataset. All missing information is obtained from the state level Medicaid and SCHIP websites and administrative offices.[17] The income eligibility thresholds for the Medicaid program prior to 1997 are extracted from data compiled by Aaron Yelowitz.[18]

The Urban Institute's Welfare Rules Database, and the joint Center for Law and Social Policy and the Center on Budget and Policy Priorities' State Policy Documentation Project are used to construct the AFDC and TANF welfare guarantees for a family of three. David Neumark and Bill Wascher provide the data on state-year minimum wage rates.[19] The Consumer Price Index (CPI) and the unemployment rate are extracted from the Bureau of Labor Statistics. The CPI is the non-seasonally adjusted consumer price index for all urban consumers. We deflate all monetary values to 2001 dollars. The data on the state-year per capita disposable personal income are extracted from the Bureau of Economic Analysis.

4. Empirical Methods for the Main Model:

Studying the effects of the SCHIP's income eligibility expansions is important; however, the states jointly implemented various SCHIP policies. If the variations in the cost-share, crowd-out, and outreach policies are not controlled, the estimates of a model that only studies the income eligibility expansion may be potentially biased. We collected data on many aspects of SCHIP; however, preliminary tests to determine the effects of a comprehensive list of these policies proved to be difficult. Due to this reason and the issue of collinearity, we take a less

[17] We are grateful to the staff of the CMS and state level offices for their help in constructing our dataset.
[18] We are grateful to Janet Currie, Jonathan Gruber, Aaron Yelowitz for providing this dataset.
[19] We gratefully thank David Neumark and Bill Wascher for providing their minimum wage dataset.

ambitious approach. Rather than characterizing every aspect of SCHIP, we estimate the effects of one component of the four major policies: income eligibility, premiums, presumptive eligibility and waiting periods.

We analyze the effects of these policies by using the linear probability model. Our specification is

$$INSURANCE_{ifst} = \beta_0 + \beta_1 INCOMEELIG_{ifst} + \beta_2 PREMIUM_{st} + \beta_3 PRESUMPTIVE_{st} \qquad (1)$$
$$+ \beta_4 WAITING_{st} + X_{ifst}\delta + \beta_5 TANF_{st} + State_s + Time_t + \varepsilon_{ifst}.$$

The dependent variable $INSURANCE_{ifst}$ represents the type of health insurance coverage for the i^{th} child in family f in state s in year t. The three types of health insurance coverage are public, private and no coverage.[20] The variables of interest are $INCOMEELIG_{ifst}$, $PREMIUM_{st}$, $PRESUMPTIVE_{st}$ and $WAITING_{st}$. $INCOMEELIG_{ifst}$ is an indicator for the income eligibility for the public program. We construct $INCOMEELIG_{ifst}$ by using the child's age, family's income and the eligibility standards for the public program, the details are in the appendix.[21] The other three policy variables $PREMIUM_{st}$, $PRESUMPTIVE_{st}$ and $WAITING_{st}$ are indicators for the premiums, presumptive eligibility, and waiting periods policies, respectively.[22]

X_{ifst} is a set of demographic controls, including the child's age (indicators for ages 1-19); race (indicators for white and black); sex (male); origin (foreign birth); the number of parents in the household (indicators for two parent households and single male parent household); the

[20] We characterize a child as a participant into the public health insurance program if the child is reported as a Medicaid, SCHIP or "other government program" beneficiary. We characterized a child as having private coverage if the child is reported to have any private health insurance. If a child is reported to have no insurance, we characterize that child as uninsured.

[21] Culter and Gruber (1996), Currie and Gruber (1996), Ham and Shore-Sheppard (2001) and Lo Sasso and Buchmueller (2002) use the same technique to construct income eligibility. We gratefully thank Anthony Lo Sasso and Thomas Buchmueller for providing their income disregards data.

[22] Specifically, if a state instituted a policy in that fiscal year, we considered that state to have this policy for that calendar year.

number of people in the household; the number of people in the household that is in poor or fair health; the number of people in the household that works (indicators for no workers and 1 worker); whether someone in the household works in a large firm (greater than 100 employees); the MSA residency (residence in a modified metropolitan statistical area); and the parents' education (indicators for less than high school graduate; high school graduate; associate degree and some college; and four year college graduate).[23]

To control for the possible policy endogeneity problem, we include $State_s$ and $Time_t$ or state and time fixed effects. These variables control for unobserved state and time fixed factors that may influence both policies and insurance take-up behavior. ε_{ifst} is the error component.

Our dependent variables vary at the individual level; however, the variation in the policy variables is only between child's age-state-year cells. Thus, the precision of the estimated effects of the policy variables will tend to be overstated. To account for this problem, we utilize the approach first presented by Moulton (1986). Specifically, we allow the error term to be correlated between child's age-state-year cells.

Another concern for this analysis is that changes in the welfare or cash assistance program may bias the estimates of interest. SCHIP was passed one year after the Personal Responsibility and Works Opportunity Reconciliation Act of 1996 (PRWORA), which transformed AFDC to TANF. Under TANF, welfare policies were implemented to end the dependence on public assistance and promote work. This caused a reduction in welfare caseloads and this might also affect the health insurance take-up decisions. While $State_s$ and $Time_t$ control for the fixed state and time level differences in TANF policies, we include the deflated value of the maximum welfare guarantees for a family of three to directly control for the monetary

[23] The set of controls is similar to Lo Sasso and Buchmueller (2002).

benefits of the welfare program.

Furthermore, the ordinary least squares (OLS) estimates of the effect of being income-eligible for the public health insurance program is potentially biased. One potential source of bias is from unobservables such as the unobserved health status of the parents or the child. These unobserved factors may affect both the income eligibility and the insurance take-up behavior. For example, unobserved individual characteristics can reduce the family's labor supply and income, which may increase both income eligibility and participation into the public health insurance program. This unhealthy child can also reduce the probability of being privately covered through the loss of employer-sponsored health insurance, which may increase being observed with no insurance. Another source of bias is errors in reported income and the corresponding constructed eligibility measure. To address these problems, we use the "simulated eligibility" as our instrumental variable (IV), which is established by Currie and Gruber (1996), and Cutler and Gruber (1996). This IV uses the variations in the income eligibility rules that are established across the age of child-state-year cells as the source of variation. The appendix presents the procedure we used to construct the IV.

We also estimate the models above at aggregated levels. These regressions take the form:

$$INSURANCE_{ast} = \beta_0 + \beta_1 INCOMEELIG_{ast} + \beta_2 PREMIUM_{st} + \beta_3 PRESUMPTIVE_{st} \qquad (2)$$

$$+ \beta_4 WAITING_{st} + X_{ast}\delta + \beta_5 TANF_{st} + State_s + Time_t + \varepsilon_{ast},$$

where $INSURANCE_{ast}$ represents the fraction of children with a specific type of health insurance (public, private, and uninsurance) for age group *a* (ages 0 to 18) in state *s* in year *t*. The number of cells is equal to 6783 (seven years [1995 to 2001] * 51 states [50 states and DC] *19 ages [0 to 18]. The minimum, maximum and average number of observations within each cell are 4, 333,

and 42.8, respectively.[24] $INCOMEELIG_{ast}$ is the proportion of children who are income eligible for the public program. We construct $INCOMEELIG_{ast}$ by taking the average eligibility for each cell group. The other three policy variables $PREMIUM_{st}$, $PRESUMPTIVE_{st}$ and $WAITING_{st}$ are indicators for the existence of these policies, while X_{ast} is the averages for the demographic variables for each cell group.

5. Results of the Main Model and Extensions:

5.1 Main Models:

Table 5 presents the results of our models in three panels. The upper, middle, and lower panels present the estimates of the effects on the take-up decisions of public, private, and no insurance, respectively. Each panel presents the findings of three models. Column 1 and 2 presents the results of the ordinary least squares (OLS) and the IV models with only the income eligibility policy and the demographic controls, respectively. Column 3 presents the IV estimates of our preferred models, which includes all four policy variables and column 4 presents the estimates of the group level regression. The table also provides the t-statistics for the IV from the first stage. All regressions are weighted.

Comparing the estimates of the OLS and IV models, we find that the estimates in the IV models on both the public and private insurance take-up decisions are smaller in magnitude, and the estimates of uninsurance switches signs.[25] These results suggest that the instrument is controlling for some of the measurement errors and endogeneity. Including the indicators for the

[24] We excluded cells with less than 30 observations and tested our hypothesis. With these cells excluded, the total number, minimum, maximum and average number of observations within each cell are 3211, 30, 333, and 67.0, respectively. Our results remain qualitatively similar and statistically significant at conventional levels with only one exception. In particular, the effect of presumptive eligibility indicator on being uninsured became counterintuitive (switched signs). Currently, it is unclear whether this phenomenon is due to the exclusion of over half of our cells or for other reasons. Since this is beyond the scope of this paper, we leave this to future research.

[25] While not reported, this phenomenon holds when all four policy variables are jointly estimated.

premium, presumptive eligibility, and the waiting period policies generally do not qualitatively affect the coefficient estimates of the effects of the income eligibility policy.[26]

Income eligibility increases the probability of being covered by public health insurance by 5.6-6.1 percent. This is smaller than the findings of 7.2 percent by Cunningham et al. (2002) and 8.1 percent of Lo Sasso and Buchmueller (2002).[27] Implementing premiums reduces public health insurance take-up by 0.5 percent; however, it is only statistically significant at 11.3 percent. Employing a presumptive eligibility policy increases the probability of being publicly covered by 2.7 percent, while a waiting period is found to reduce the take-up by 0.9 percent. The estimates are sizeable when compared to the effect of income eligibility. Specifically, the impact of using presumptive eligibility is about 48 percent, and the effect of implementing a waiting period is 16 percent of the effect of income eligibility.

Income eligibility for the public program reduces the probability of being privately insured by 1.8-2.0 percent. Employing presumptive eligibility reduces the probability of being privately insured by 0.9 percent or 50 percent of the effect of the income eligibility expansions. However, we cannot find an effect of instituting a premium or waiting period policies.

Income eligibility reduces the probability of uninsurance by 2.8-3.1 percent. These estimates are about half of the magnitude of that found by Lo Sasso and Buchmueller (2002) at 7.5 percent. Nevertheless, we cannot find an effect of implementing a premium, presumptive eligibility or waiting period policies on the rate of uninsurance.

From these coefficient estimates, we are able to calculate the rate of crowd-out. The previous literature outlines two methods to calculate the crowd-out rate. One procedure is to

[26] Nevertheless, the effect of being income-eligible on the private coverage decision becomes insignificant at conventional levels. The p-value of this estimate is now 15.2 percent.
[27] Cunningham et al (2002) used a different dataset and empirical techniques for their analysis. The disparity in the findings between Lo Sasso and Buchmueller (2002) and ours may be from different selected samples.

divide the marginal decrease in private coverage by the marginal increase in public coverage. The other procedure is one minus the marginal decrease in no coverage divided by the marginal increase in public coverage.[28]

We estimate that being income-eligible crowds out private coverage by 32 to 50 percent. These estimates are similar to Cutler and Gruber (1996), Cunningham et al. (2002) and Lo Sasso and Buchmueller (2002). Implementing presumptive eligibility increases the take-up of public health insurance; however, the estimated crowd-out rate is 33 percent. While this policy is considered as an effective outreach tool (Ross (1997), Klein (2003), and Agency for Healthcare Research and Quality (website)), it is important to consider the costs of providing temporary coverage and benefits to ineligible children. Klein (2003) reports that in Fiscal Year 2001, about 24 percent of the children that were presumptively determined to be eligible for Nebraska's M-SCHIP were later found to be ineligible.

Our estimates remain qualitatively similar when group level regression models are utilized. Comparing columns 3 and 4 for the public insurance take up model, all four policy variables of interest are now statistically significant at the 1 percent level. For the private insurance participation model, the income eligibility, premium, and waiting period policies are now estimated with precision but not the presumptive eligibility policy. However, the estimated effect of the presumptive eligibility policy on the take up of private health insurance is qualitatively similar. Results on being uninsured are qualitatively similar to that of the individual level regression.

We also calculate the rate of crowd out of private health insurance brought out by the increase in public health insurance coverage for the group level models. The estimated crowd out rates are 36 and 64 percent, which is similar to previous models. Therefore, the findings from the

[28] The marginal probabilities of the effects of a given policy should sum to zero.

group level regressions support our findings from the individual level models.

5.2 Inclusion of Other Economic Indicators (Robustness Check):

The estimates of the four policy variables may be potentially biased due to possible unobserved factors that effect both policies and insurance coverage decisions. There are concerns that states enacted and continuously modify their public health insurance programs to meet the local economic conditions. State with population with relatively high income may institute different public assistance policies compared to state with relatively poorer population. While the time and state fixed effects controls for some of these unobservables, time varying state specific factors may influence both the states' public health insurance policies and the insurance coverage of individuals. For a robustness test, we include the state-year minimum wage rates, real value of per capita personal disposable incomes and unemployment rates.[29]

Columns 1, 4 and 7 of Table 6 present the results of our preferred models of public, private, and no insurance take-up, respectively, while columns 2, 5 and 8 present the results of the models that include the three additional macroeconomic variables. Columns 3, 6 and 9 provide the group level models with the additional macroeconomic variables.

Including the three economic indicators generally does not affect the results of the SCHIP policy variables. All of the variables of interest that are measured with precisions remain so. Also, including these additional controls increase the precision of the estimate of a waiting period policy. This policy statistically significantly increases the probability of uninsurance by .6 percent. This provides further evidence that public health insurance is crowding out private coverage. Our estimates of the group level models remain fairly similar with the inclusion of the

[29] A generalized procedure to control for all unobserved state and time varying factors would be to use the full set of state-year interaction terms. However, this set of interactions would absorb the effects of all other variables that vary only by state and year. Since our policy variables mainly contain state-year variations, we do not utilize this set of interactions.

additional macroeconomic variables.

5.3 Analysis of the Marginal Effects of Premiums and Waiting Periods:

Implementing premiums and waiting periods are found to only reduce the public health insurance take-up rate by less than 1 percent. Given these findings and the variation in these policies, we further study the effects of marginal changes in both the premium and waiting period policies on the insurance coverage of children.

Studying the marginal effects of premiums is problematic. The premiums charged to the i^{th} child cannot be utilized directly. Many states instituted sliding scale premiums with no premiums charged for Medicaid. Also, children in families with high-income brackets are not eligible for the public health insurance program. Thus, children in families with either low or high incomes would both be calculated to pay zero premiums. We construct a measure of the value of the public health insurance program. The following regression model is used for this analysis.

$$INSURANCE_{ifst} = \beta_0 + \beta_1 NETVAL_{ifst} + \beta_2 PRESUMPTIVE_{st} + \beta_3 WAITINGMON_{st} \quad (2)$$
$$+ X_{ifst}\delta + \beta_4 TANF_{st} + State_s + Time_t + \varepsilon_{ifst}$$

where $NETVAL_{ifst}$ is the net real value of public health insurance and $WAITINGMON_{st}$ is the number of months in the waiting period. All remaining variables are the same as those used in (1). We also include the three macroeconomic variables.

We construct $NETVAL_{ifst}$ using the following equation.

$$NETVAL_{ifst} = \sum_{j=1}^{12} INCOMEELIG_{ifstj}\left(GROSSVAL - PREMIUMS_{ifstj}\right) \quad (3)$$

where $INCOMEELIG_{ifstj}$ is the monthly income eligibility into the public health insurance program for the i^{th} child in family *f*, in state *s*, in month *j* in year *t*, $GROSSVAL$ is the fixed gross

value of public health insurance and $PREMIUMS_{ifstj}$ is the monthly real value of premiums paid.

To properly value public health insurance is difficult since the value of public health insurance is different for each family for a number of reasons.[30] We adapt a procedure utilized by Cutler and Gruber (1996), and Gruber and McKnight (2002). They use healthcare expenditure data from the 1987 National Medical Expenditure Survey (NMES). Nevertheless, healthcare expenditures may potentially be different a decade later, thus we utilize the total healthcare expenditures from the 1996 – 1999 Medical Expenditure Panel Survey (MEPS) as the $GROSSVAL$. We weigh and deflate these yearly expenditures to obtain national real estimates and average the values across years to construct a fixed $GROSSVAL$.[31] As a result, any variation in $NETVAL_{ifst}$ will be from $INCOMEELIG_{ifstj}$ or $PREMIUMS_{ifstj}$.

This model potentially suffers from the same biases as equation (1). Both income eligibility and the premiums paid for the i^{th} child is potentially endogenous and suffer from measurement error problems. We correct these problems by utilizing a similar technique. Specifically, we randomly draw 500 children for each age group for each year. We then calculate the average net value of public health insurance for each age-state-year cell as our IV. A similar model is constructed at the group level to compare our findings with those at the individual level.

Table 7 presents the results. Instituting presumptive eligibility is found to increase public health insurance take-up by 3 percent and reduce private coverage by 1.2 percent at the individual level. Group level regression results show that this policy increase public coverage by 2.6 percent but the effect on private coverage is not found. These findings are similar to the previous model. Moreover, a $100 decrease in the net value of public health insurance has

[30] Specifically, the value will depend on the risk aversion, offerings of employer-sponsored health insurance, and preferences.

[31] $GROSSVAL$ is approximately equal to 1281.10.

similar effect as the implementation of premiums in the previous model. This decrease in the net value of the public program from a $100 increase in premiums decreases public health insurance take-up by 0.5 percent and increases the take-up of private coverage by 0.3 percent at the individual level. With the group level regression models, we find a $100 increase in premiums decreases public health insurance take-up by 0.01 percent, and increases the take-up of private coverage and uninsurance by 0.003 percent and 0.002 percent. Individual level results of increasing waiting periods by six months leads to a 0.72 percent decrease in the participation into public health insurance, while group level results show a 1.2 percent decrease in the participation into public health insurance and a 0.6 percent decrease of private coverage.

Ku and Coughlin (1997), Families USA (2001), and Ku (2003) all caution against implementing premiums for the public health insurance program. Specifically, premiums would adversely impact the individual's decision to enroll into the public health insurance program. While, we find premiums reduce the take-up of public health insurance, the magnitude of the estimates does not provide strong evidence for this concern.

6. Conclusion:

This paper jointly estimates the effects of four SCHIP policies on the take-up of public, private, and no insurance. To our knowledge, no papers study the effects of these major public health insurance policies. We estimate the effects of being income-eligible for the public health insurance program and use an instrument to produce unbiased estimates. We also estimate the effects of premiums, waiting periods and presumptive eligibility.

We find that income eligibility for the public program increases the probability of being publicly covered and reduces the probability of uninsurance. We also find high rates of crowd-out for income eligibility, which covers the previous literature. Including the three additional

policy variables only qualitatively affect the precision of the effect of income eligibility on the private coverage decisions. Reducing the net value of the public health insurance through premiums decreases public and increases private coverage. Further, the presumptive eligibility policy increases the public coverage rate and decreases the private coverage rate. Lastly, increasing the waiting period is found to reduce public coverage. Results from regression models using group level data further support our findings from the individual level data. In addition, the premium policy is now found to decrease public and increase private insurance coverage. In the net value model, the waiting period policy is found to increase private insurance coverage.

The findings have important policy implications since states are continuously revising their public health insurance programs. In 2002, two more states adopted presumptive eligibility (Ross and Cox (2003)). Further, states are obtaining waivers from the federal government to restructure their cost-share policies (Gill and Guyer (2003)). Nevertheless, additional analysis is nessesary. While we find premiums have a small but statistically significant effect on the public insurance take-up decision, it may be crucial to examine the impact of the total cost-share package including co-pays, deductibles and premiums. The effectiveness of instituting a waiting period is small in magnitude and it is costly to administer this policy (Agency for Healthcare Research and Quality (website)). State may need to consider other crowd-out measures. Finding that presumptive eligibility reduces private coverage may also provide a justification to study the possible crowd-out effects of other outreach policies. Therefore, further research may be essential to fully understand the effects of the cost-share, crowd-out and outreach policies.

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Appendix: Construction of Income Eligibility and Instrumental Variable:

The income eligibility thresholds of the public health insurance program vary by the child's age, state of residence, and month of observation. Table A.1 presents the SCHIP implementation dates and the variation in the income eligibility thresholds for an infant (age 0) and an 18 year old for June of 1996, 1998, 2001. 46 of the 51 states did not implement their SCHIP in January and only 18 states implemented their SCHIP by April. The introduction of SCHIP did not change the eligibility thresholds for infants considerably; however, the change on older children is quite significant. Specifically, the gap between the eligibility thresholds for infants and 18 year olds is reduced or disappeared. Like the previous literature, we use the age of child-state-year variation to identify the effect of the income eligibility expansions on the insurance take-up decisions.

Since the month of birth for each child is unknown, we assign a random birth month drawn from the uniform distribution. We construct the age of each child for every month of the previous year. This procedure dropped 3318 out of 13,508 or 25 percent of the infants. Next, we use the child's monthly age, family's yearly income in terms of the FPL, public health insurance monthly income disregards and eligibility policies to determine the eligibility.[32] We regarded a child to be eligible for that year if the child was eligible for at least 7 months of the year.

To construct the instrumental variable, we select 500 children in each age group for each year in the CPS. For the 9,500 children in each year, we determine the child's income eligibility for each state using the procedure described above. Next, we calculate the fraction of children that are income-eligible for each age-state-year cell and merge this information to our sample.

[32] We assumed a child to be ineligible for a particular month if the child's monthly age was negative or 19.

Table 1
Description of the SCHIP Premiums

	1997	1998	1999	2000	2001
The Number of States with Premiums for their SCHIP/The Number of States with SCHIP	1/9	17/44	23/49	27/51	28/51

	Range of Premiums	
State	**FY 1998**	**FY 2001**
Alabama	5.00	4.17-5.00
Alaska	N/A	0
Arizona	10.00-20.00	10.00-20.00
Arkansas	N/A	0
California	4.00-9.00	4.00-9.00
Colorado	9.00-30.00	9.00-30.00
Connecticut	30.00	30.00
Delaware	N/A	5.00-12.50
DC	N/A	0
Florida	7.50	7.50
Georgia	0	7.50-15.00
Hawaii	N/A	0
Idaho	0	0
Illinois	15.00-30.00	15.00-30.00
Indiana	0	10.00-24.75
Iowa	0	10.00
Kansas	0	5.00-7.50
Kentucky	0	0
Louisiana	N/A	0
Maine	5.00-20.00	5.00-20.00
Maryland	0	18.75-23.50
Massachusetts	10.00	10.00
Michigan	5.00	5.00
Minnesota	0	0
Mississippi	0	0
Missouri	65.00	54-80**
Montana	0	0
Nebraska	0	0
Nevada	N/A	1.67-8.33
New Hampshire	0	20.00-40.00
New Jersey	7.50	7.50-50.00
New Mexico	N/A	0
New York	9.00-13.00	9.00-15.00
North Carolina*	N/A	4.17
North Dakota	N/A	0
Ohio	0	0
Oklahoma	0	0
Oregon	0	0
Pennsylvania	0	0
Rhode Island	0	0
South Carolina	0	0
South Dakota	0	0
Tennessee	7.55-17.36	7.56-17.36

Texas	0	7.50-9.00
Utah	0	0
Vermont	N/A	25
Virginia	N/A	15.00
Washington	N/A	10.00
West Virginia	0	0
Wisconsin	N/A	.03***
Wyoming	N/A	0

Source: Centers for Medicare and Medicaid Services and various State Level Offices.

Note: The upper panel of this table presents the total number of states that instituted a premium and the total number of states that instituted an SCHIP at any time during the year. The lower part of the table presents the range of the monthly premiums paid per child for a family of three (parent and two children) with two eligible children for Fiscal Year 1998 and 2001. The premiums are reported in current dollars. N/A means states did not implement an SCHIP for that Fiscal Year.

* North Carolina does not charge a monthly premium; however, the state charges an annual enrollment fee of 50 dollars which we consider as a premium for this state.

** Missouri converted their premium policies from a flat fee to a sliding scale system.

*** 3% of income.

Table 2
SCHIP Presumptive Eligibility Policy for Fiscal Years 1998 and 2001

State	1998 Presumptive Eligibility	2001 Presumptive Eligibility
Alabama	0	0
Alaska	N/A	0
Arizona	0	0
Arkansas	N/A	0
California	0	0
Colorado	0	0
Connecticut	0	0
Delaware	N/A	0
Dist. of Col.	N/A	0
Florida	0	0
Georgia	0	0
Hawaii	N/A	0
Idaho	0	0
Illinois	0	0
Indiana	0	0
Iowa	0	0
Kansas	0	0
Kentucky	1	0
Louisiana	N/A	0
Maine	0	0
Maryland	0	0
Massachusetts	1	1
Michigan	0	0
Minnesota	0	0
Mississippi	0	0
Missouri	0	0
Montana	0	0
Nebraska	1	1
Nevada	N/A	0
New Hampshire	1	1
New Jersey	0	1
New Mexico	N/A	1
New York	1	0
North Carolina	N/A	0
North Dakota	N/A	0
Ohio	0	0
Oklahoma	0	0
Oregon	0	0
Pennsylvania	0	0
Rhode Island	0	0
South Carolina	0	0
South Dakota	0	0
Tennessee	0	0
Texas	1	1
Utah	0	0
Vermont	N/A	0

Virginia	N/A	0
Washington	N/A	0
West Virginia	0	0
Wisconsin	N/A	0
Wyoming	N/A	0

Source: Centers for Medicare and Medicaid Services and various State Level Offices.

Note: This table presents the variation in the states' presumptive eligibility policies for Fiscal Year 1998 and 2001. N/A means states did not implement an SCHIP for that Fiscal Year. Presumptive eligibility is an outreach policy which allows children to be eligible for the public health insurance program based on the family's declaration of income level without verifying it first.

Table 3
SCHIP Waiting Period in Months for Fiscal Years 1998 and 2001

State	1998	2001
Alabama	3	3
Alaska	N/A	12
Arizona	6	6
Arkansas	N/A	6
California	3	3
Colorado	3	3
Connecticut	6	6
Delaware	N/A	6
Dist. of Col.	N/A	0
Florida	0	0
Georgia	0	3
Hawaii	N/A	0
Idaho	0	0
Illinois	3	3
Indiana	0	3
Iowa	0	6
Kansas	0	0
Kentucky	6	8
Louisiana	N/A	0
Maine	3	3
Maryland	6	0
Massachusetts	0	0
Michigan	6	6
Minnesota	0	0
Mississippi	0	0
Missouri	6	6
Montana	0	3
Nebraska	0	0
Nevada	N/A	6
New Hampshire	0	6
New Jersey	6	6
New Mexico	N/A	0
New York	0	0
North Carolina	N/A	2
North Dakota	N/A	6
Ohio	0	0
Oklahoma	0	0
Oregon	6	6
Pennsylvania	0	0
Rhode Island	4	6
South Carolina	0	0
South Dakota	0	3
Tennessee	0	0
Texas	0	3
Utah	3	3
Vermont	N/A	1
Virginia	N/A	6

Washington	N/A	4
West Virginia	6	6
Wisconsin	N/A	3
Wyoming	N/A	1

Source: Centers for Medicare and Medicaid Services and various State Level Offices.

Note: This table presents the variation in the states' waiting period policies for Fiscal Year 1998 and 2001. N/A means states did not implement an SCHIP for that Fiscal Year. We present the number of months of the waiting period, where it is the number of months a child needs to wait between the discontinuation of private coverage and eligibility for public coverage.

Table 4
Descriptive Statistics of the Sample of Children

Variable	All		Public		Private		Uninsured	
	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.
Age of Child	8.376	5.465	6.998	5.238	8.659	5.432	8.681	5.604
Male	0.513	0.500	0.510	0.500	0.513	0.500	0.519	0.500
Race								
White	0.821	0.383	0.702	0.457	0.862	0.345	0.781	0.414
Black	0.122	0.328	0.230	0.421	0.089	0.284	0.146	0.353
Other	0.056	0.230	0.068	0.251	0.049	0.216	0.073	0.261
Foreign Born Child	0.055	0.228	0.057	0.232	0.036	0.186	0.131	0.338
Household Type								
Two Parents Household	0.716	0.451	0.434	0.496	0.811	0.391	0.633	0.482
Male Parent	0.048	0.215	0.052	0.222	0.040	0.195	0.081	0.273
Female Parent	0.236	0.425	0.514	0.500	0.149	0.356	0.286	0.452
Workers in Household								
No Workers in Household	0.049	0.215	0.180	0.384	0.009	0.096	0.052	0.222
1 Worker in Household	0.301	0.459	0.430	0.495	0.257	0.437	0.350	0.477
2+ Workers in Household	0.650	0.477	0.390	0.488	0.734	0.442	0.598	0.490
Number of People in Household	4.521	1.507	4.734	1.828	4.402	1.303	4.782	1.805
Number of People in Household with Fair or Poor Health	0.255	0.675	0.541	0.958	0.161	0.516	0.337	0.777
At least one worker works in a large firm (>100 employees)	0.687	0.464	0.493	0.500	0.776	0.417	0.553	0.497
Education of Parents								
Father (if exists)								
Less than High School	0.359	0.480	0.694	0.461	0.226	0.418	0.532	0.499
High School Graduate	0.235	0.424	0.175	0.380	0.256	0.436	0.226	0.418
Some College	0.194	0.395	0.090	0.287	0.233	0.423	0.147	0.354
College Degree	0.135	0.342	0.028	0.166	0.180	0.384	0.061	0.239
Master and Higher Degree	0.078	0.268	0.012	0.107	0.105	0.307	0.033	0.180
Mother (if exists)								
Less than High School	0.213	0.409	0.400	0.490	0.118	0.323	0.384	0.486
High School Graduate	0.307	0.461	0.339	0.473	0.299	0.458	0.320	0.466
Some College	0.274	0.446	0.214	0.410	0.309	0.462	0.207	0.406

College Degree	0.152	0.359	0.037	0.189	0.201	0.401	0.070	0.256
Master and Higher Degree	0.054	0.226	0.009	0.094	0.073	0.261	0.019	0.135
MSA Residence	0.768	0.422	0.746	0.435	0.772	0.420	0.762	0.426
Sample Size	298671		59998		203605		47327	
Percentage of Health Insurance Coverage			20%		68%		16%	

Source: The 1996-2002 March CPS.

Note: The sum of the sub-samples sizes is not equal to the total sample size since a child can be observed with multiple coverage options. The first column presents the descriptive statistics for the full sample of children. The next three columns present the descriptive statistics for children observed in each coverage option.

Table 5
The Effects of SCHIP on Health Insurance Coverages

Public Health Insurance Coverage	(1)	(2)	(3)	(4)
	OLS	IV	IV	GROUP IV
Income Eligibility	0.231	0.061	0.056	0.077
	[0.003]***	[0.012]***	[0.012]***	[0.011]***
Premium			-0.005	-0.010
			[0.003]	[0.003]***
Presumptive Eligibility			0.027	0.023
			[0.005]***	[0.005]***
Waiting Period			-0.009	-0.012
			[0.004]**	[0.004]***
Private Health Insurance Coverage				
Income Eligibility	-0.215	-0.020	-0.018	-0.028
	[0.003]***	[0.012]*	[0.013]	[0.013]**
Premium			0.001	0.007
			[0.004]	[0.004]*
Presumptive Eligibility			-0.009	-0.006
			[0.005]**	[0.006]
Waiting Period			0.002	0.008
			[0.004]	[0.004]**
No Health Insurance Coverage				
Income Eligibility	0.013	-0.031	-0.028	-0.028
	[0.003]***	[0.011]***	[0.012]**	[0.012]**
Premium			-0.002	-0.003
			[0.003]	[0.003]
Presumptive Eligibility			-0.005	0.0003
			[0.004]	[0.005]
Waiting Period			0.005	0.002
			[0.004]	[0.004]
First stage t-statistics for IV		63.97	62.48	73.00

Notes: All regressions include 298,671 children from the March CPS covering years 1995-2001. We control for real value of TANF benefit, number of workers in the household (indicators for no workers, 1 worker, excluding 2+ workers), whether workers work for a large firm (>100 employees), number of people in the household, number of parents in the household (indicators for two parents, male parent, excluding female parent), education of parents (categorical indicators for 12th grade, high school graduate, some colleges, college, excluding master and higher degree), number of people in the household with fair or poor health, race dummies, gender, MSA residence indicator, foreign birth indicator for child, dummies for age 1-18, year and state dummies. All regressions are weighted using CPS sampling weights.

Column 4 provides the group instrumented regression results with the 6,782 observations. Robust standard errors are used to correct for clustering in age-state-year cells for the individual level regressions. * significant at 10%; ** significant at 5%; *** significant at 1%

Table 6
Robustness Check

	Public			Private			Uninsured		
	Individual	Robust	Group	Individual	Robust	Group	Individual	Robust	Group
Income Eligibility	0.056	0.056	0.079	-0.018	-0.017	-0.025	-0.028	-0.029	-0.033
	[0.012]***	[0.012]***	[0.011]***	[0.013]	[0.013]	[0.013]**	[0.012]**	[0.011]**	[0.012]***
Premium	-0.005	-0.005	-0.010	0.001	0.003	0.008	-0.002	-0.005	-0.006
	[0.003]	[0.003]	[0.003]***	[0.004]	[0.004]	[0.004]**	[0.003]	[0.003]	[0.003]
Presumptive Eligibility	0.027	0.029	0.024	-0.009	-0.009	-0.004	-0.005	-0.004	-0.002
	[0.005]***	[0.005]***	[0.005]***	[0.005]**	[0.005]**	[0.006]	[0.004]	[0.004]	[0.006]
Waiting Period	-0.009	-0.009	-0.014	0.002	0.001	0.006	0.005	0.006	0.005
	[0.004]**	[0.004]**	[0.004]***	[0.004]	[0.004]	[0.004]	[0.004]	[0.004]*	[0.004]
Includes 3 additional controls:	no	yes	yes	no	yes	yes	no	yes	yes

Notes: All regressions include 298,671 children from the March CPS covering years 1995-2001. Group regression includes 6,782 observations. We control for real value of TANF benefit, number of workers in the household (indicators for no workers, 1 worker, excluding 2+ workers), whether workers work for a large firm (>100 employees), number of people in the household, number of parents in the household (indicators for two parents, male parent, excluding female parent), education of parents (categorical indicators for 12th grade, high school graduate, some colleges, college, excluding master and higher degree), number of people in the household with fair or poor health, race dummies, gender, MSA residence indicator, foreign birth indicator for child, dummies for age 1-18, year and state dummies. All regressions are weighted using CPS sampling weights.

Columns labeled "Individual" provide the regression results of the preferred models, while columns labeled "Robust" control for the unemployment rate, minimum wage rate and real value of the per capita disposable personal income in each state year combination. Columns labeled "Group" are robust results for group regression.
Robust standard errors are used to correct for clustering in age-state-year cells for the individual level regressions.
* significant at 10%; ** significant at 5%; *** significant at 1%

Table 7
Net Value and Monthly Waiting Periods Model

	Public		Private		Uninsured	
	Individual	Group	Individual	Group	Individual	Group
Net Value i	0.005	0.0001	-0.003	-0.00003	-0.001	-0.00002
	[0.001]***	[0.00001]***	[0.001]**	[0.00001]**	[0.001]	[0.00001]*
Presumptiv	0.030	0.026	-0.012	-0.004	-0.004	-0.003
	[0.005]***	[0.005]***	[0.005]***	[0.006]	[0.004]	[0.006]
Waiting pe	-0.0012	-0.0020	0.0005	0.001	0.0003	0.0004
	[0.001]*	[0.001]***	[0.0008]	[0.001]*	[0.0007]	[0.001]
First stage	57.98	66.02	57.98	66.02	57.98	66.02

Notes: All regressions in columns labeled "Individual" include 298,671 children from the March CPS covering years 1995-2001. Columns labeled "Group" are group regression results including 6,782 observations. We control for real value of TANF benefit, number of workers in the household (indicators for no workers, 1 worker, excluding 2+ workers), whether workers work for a large firm (>100 employees), number of people in the household, number of parents in the household (indicators for two parents, male parent, excluding female parent), education of parents (categorical indicators for 12th grade, high school graduate, some colleges, college, excluding master and higher degree), number of people in the household with fair or poor health, race dummies, gender, MSA residence indicator, foreign birth indicator for child, dummies for age 1-18, year and state dummies. We also include the real value of the minimum wage rate, the real value of the per capita personal disposable income, and unemployment rate. All regressions are weighted using CPS sampling weights.

Robust standard errors are used to correct for clustering in age-state-year cells for the individual level regressions. * significant at 10%; ** significant at 5%; *** significant at 1%

Table A.1
Implementation Dates and Maximum Income Thresholds for June 1996, 1998 and 2001 for infants and 18 year olds

		Infants (age 0)			age 18		
State	Date Implemented	1996	1998	2001	1996	1998	2001
Alabama	Feb-98	185	133	200	0	100	200
Alaska	Mar-99	133	133	200	0	59	200
Arizona	Jul-98	250	140	200	0	32	200
Arkansas	Oct-98	133	200	200	0	200	200
California	Mar-98	200	200	250	0	100	200
Colorado	Apr-98	133	185	185	0	185	185
Connecticut	Oct-97	185	185	300	0	185	300
Delaware	Feb-99	185	185	200	100	100	200
Dist. of Col.	Oct-98	185	185	200	0	36	200
Florida	Apr-98	185	185	200	100	185	200
Georgia	Sep-98	185	185	235	100	100	235
Hawaii	Jan-00	300	185	200	300	100	200
Idaho	Oct-97	133	160	150	0	160	150
Illinois	Jan-98	133	133	200	0	133	185
Indiana	Oct-97	150	150	200	0	100	200
Iowa	Jul-98	185	185	200	0	37	200
Kansas	Jul-98	150	150	200	0	100	200
Kentucky	Jul-98	185	185	200	100	33	200
Louisiana	Nov-98	133	133	200	0	12	200
Maine	Jul-98	185	185	200	125	125	200
Maryland	Jul-98	185	185	200	0	100	200
Massachusetts	Oct-97	185	200	200	0	200	200
Michigan	Apr-98	185	200	200	0	200	200
Minnesota	Sep-98	275	275	280	0	275	275
Mississippi	Jul-98	185	185	200	0	34	200
Missouri	Oct-97	185	300	300	0	300	300
Montana	Jan-98	133	150	150	0	150	150
Nebraska	Apr-98	150	150	185	0	100	185
Nevada	Oct-98	133	133	200	0	34	200
New Hampshire	May-98	185	365	365	185	185	365
New Jersey	Feb-98	300	200	350	0	200	350
New Mexico	Mar-99	185	185	235	185	185	235
New York	Apr-98	185	185	250	0	185	250
North Carolina	Oct-98	185	185	200	0	100	200
North Dakota	Oct-98	133	133	140	0	48	140
Ohio	Jan-98	133	150	200	0	150	200
Oklahoma	Dec-97	185	185	185	0	28	100
Oregon	Jul-98	133	133	170	100	100	170
Pennsylvania	Jun-98	185	185	235	0	39	235
Rhode Island	Oct-97	185	250	250	0	250	250
South Carolina	Aug-97	185	185	185	0	150	150
South Dakota	Jul-98	133	133	200	100	100	200
Tennessee	Oct-97	185	200	200	0	200	200
Texas	Jul-98	185	185	200	0	47	200
Utah	Aug-98	133	133	200	0	100	200

Vermont	Oct-98	225	225	300	0	225	300
Virginia	Oct-98	133	133	200	100	100	200
Washington	Jan-00	200	200	250	200	200	250
West Virginia	Jul-98	150	150	200	150	100	200
Wisconsin	Apr-99	185	185	185	0	54	185
Wyoming	Apr-99	133	133	133	0	57	133

Source: The dates of implementation are from the Centers for Medicare and Medicaid Services. The figures in 1996 are from Aaron Yelowitz's dataset. The figures in 1998 and 2001 are extracted from the Centers for Medicare and Medicaid Services and various State Level Offices.

Note: This table provides the month and year in which SCHIP was first implemented. If a state implemented an M-SCHIP and S-SCHIP at different times, we provide the earlier date. Also, the numbers presented are the income eligibility thresholds of the public health insurance program (Medicaid or SCHIP) in terms of the percentage of the federal poverty level for infants and children who are age 18. The 1996 figures represent the Medicaid income eligibility thresholds, and the 1998 and 2001 figures represent the highest income eligibility thresholds for Medicaid or SCHIP.