Waiting In The Wings: Eligibility And Enrollment In The State Children’s Health Insurance Program

New data from the Medical Expenditure Panel Survey show that 3.1 million children are eligible for coverage under CHIP. Will states enroll them?

by Thomas M. Selden, Jessica S. Banthin, and Joel W. Cohen

Federal initiatives begun in the late 1980s expanded Medicaid coverage, providing insurance to millions of children in low-income families. Nevertheless, overall rates of uninsurance among children have remained high. To help combat this problem, Congress in 1997 passed the State Children’s Health Insurance Program (CHIP), allocating approximately $24 billion over five years to provide health insurance coverage to low-income children who are not already eligible for Medicaid.

CHIP offers states an enhanced matching rate (up to a capped amount) and provides states with considerable flexibility in finding the best ways of identifying and enrolling CHIP-eligible children without crowding out private insurance coverage. States have been given the option of expanding traditional Medicaid, creating separate programs, or implementing combined approaches. Also, states that create new CHIP programs are permitted to impose modest premiums, co-payments, and waiting periods (such as requiring a three-to-six-month period of uninsurance before eligibility for CHIP). States are permitted to set income thresholds that are lower than the maximum allowed under federal law, or they can exceed the federal ceiling by applying generous “income disregards.” In fact, most states are choosing to impose waiting periods and are setting lower income thresholds than are allowed under federal law. Two states, Wyoming and Washington, declined to submit any CHIP plans for the first year.

Given the considerable diversity among states’ plans for CHIP implementation, we have used newly available data from the 1996 Medical Expenditure Panel Survey (MEPS) to simulate CHIP eligibility and enrollment. These data were not available during the debate surrounding CHIP’s enactment, yet they provide what we believe is the best available source of household data on insurance coverage, health status, and socioeconomic characteristics. Our results highlight the critical dependence of CHIP’s success on states’ eligibility rules and outreach efforts.

Data And Methods

The data for our analysis comprise 6,903 children age eighteen and under from the 1996 MEPS. MEPS is a stratified and clustered random sample of households, which, when combined with sample weights, is designed to yield nationally representative estimates for the noninstitutionalized civilian population.
regarding insurance coverage, medical expenditures, and a wide range of other health-related and socioeconomic characteristics.\(^7\)

To make the data as representative of 1999 as possible, we adjust the MEPS sample weights using population growth factors by age, race/ethnicity, and sex.\(^8\) This is important given that the baby-boom “echo” is causing a disproportionate increase in the number of teenagers. Similarly, population growth is projected to be more rapid among Hispanic and black children—who also are more likely to be eligible for CHIP.

Children are considered to have insurance if they held coverage at any time during the survey round (typically, four to five months long). Thus, children are classified as uninsured only if they continuously lacked coverage during the entire round. By examining uninsurance spells of this length, we eliminate transitory periods without coverage, focusing instead on spells that are long enough to have serious adverse health consequences. Because the estimates in this paper are constructed from aged round-level data, they are best interpreted as representative of the first four to five months of 1999.

**SIMULATING ELIGIBILITY.** CHIP eligibility is based in part on being ineligible for Medicaid. For this reason, we begin by simulating Medicaid eligibility following the method used in our previous research.\(^9\) The Medicaid and CHIP simulations both use data on individuals and families regarding age, earned income, marital status, employment status, and family structure.\(^10\) In simulating CHIP eligibility for 1999, we incorporate the federally mandated expansion of Medicaid eligibility to children born after 30 September 1983 in families with incomes under 100 percent of the federal poverty guidelines.

The next step is to apply the CHIP income tests to the remaining sample of Medicaid-ineligible children. We simulate three different scenarios concerning CHIP income thresholds: (1) children eligible using the federal CHIP income limits of 200 percent of the poverty guidelines (or fifty percentage points above the existing state Medicaid threshold, whichever is greater); (2) children eligible if states were to implement income disregards up to 300 percent of the poverty guidelines (as in Connecticut and Missouri); and (3) children eligible under actual state plans approved or submitted as of August 1998.\(^11\)

**SIMULATING CHIP ENROLLMENT.** To simulate CHIP enrollment, we use the sample of Medicaid-eligible children to estimate a multivariate behavioral model of the choice among Medicaid coverage, private insurance coverage, or no insurance. We then apply this model to the CHIP-eligible population to obtain enrollment predictions for CHIP coverage, private insurance, and no coverage. Included in the enrollment model are variables pertaining to the child's age, race/ethnicity, sex, disabilities, and health condition, as well as family-level variables such as family earned income, family composition, the education level and employment status of the family head, U.S. census region, and urban residence. We include both uninsured and privately insured children in our simulation, thereby allowing for the possibility that CHIP coverage will crowd out private insurance.

**USING MEDICAID PARTICIPATION TO PROJECT CHIP ENROLLMENT.** Our approach projects CHIP enrollment for 1999 based on the Medicaid expansion experience as of 1996. We believe that this experience is relevant for CHIP because of the substantial overlap between the Medicaid expansion-eligible and CHIP-eligible populations. The Medicaid expansions have been implemented unevenly across states and across age groups within states, so that CHIP-eligible children and Medicaid-expansion children share many of the same characteristics. Indeed, 90 percent of all children who are eligible for CHIP under the state plans would have been eligible for Medicaid rather than CHIP had they lived in states that fully implemented the Medicaid expansions allowed under federal law. The Medicaid experience also may be relevant insofar as 55 percent of all CHIP-eligible children would be covered through Medicaid expansions or Medicaid look-alike coverage under current state plans.
It is also true, however, that CHIP in 1999 may differ from Medicaid in 1996 in ways that our analysis is unable to capture. CHIP application processes may be simplified relative to Medicaid in 1996. Also, the higher federal matching rate for CHIP may provide states with the incentive to minimize application denials for eligible children, a problem believed to be widespread in the Medicaid program. CHIP may well entail less stigma than Medicaid, especially in cases where children would be eligible to enroll in separate state programs, and CHIP outreach in 1999 may be more effective than Medicaid outreach in 1996.

The differences between Medicaid and CHIP that are listed above can be expected to increase CHIP enrollment relative to our projections. However, there also are differences, such as CHIP premiums and waiting periods for children who previously were covered by private insurance, that may have the opposite effect. Many states are charging premiums for at least some children, and although these premiums are in most cases below the maximum levels allowed under federal legislation, low-income families may be very sensitive to the price of coverage. In addition, transitions between private coverage and uninsurance occur with relatively high frequency among low-income families. Although waiting periods tend to reduce the number of children crowded out of private coverage, they also can reduce enrollment among children who would have lost their private coverage even in the absence of the CHIP program.

RESULTS

CHIP ELIGIBILITY. Using the federal maximum CHIP income thresholds, we project that there will be 3.1 million uninsured children eligible for CHIP in 1999 (Exhibit 1). Our forecast is very close to estimates obtained using data from the Current Population Survey (CPS) in earlier years. In addition, we project that there will be 8.8 million children with private insurance who, apart from having private coverage, would qualify for CHIP based on their family incomes.

If we disregard income up to 300 percent of the poverty guidelines, the number of uninsured children who would be eligible for CHIP rises to 5.2 million. Using the current state plans, however, causes our projection to fall to 2.6 million. These results highlight the fact that the total number of children made eligible for CHIP depends critically on the programs that states choose to implement.

Nationwide, teenagers (ages thirteen to eighteen) are projected to represent 30.6 percent of all children age eighteen and under in 1999 (Exhibit 2). In contrast, the share of

<table>
<thead>
<tr>
<th>Eligibility group</th>
<th>N</th>
<th>Population (millions)</th>
<th>Uninsured (millions)</th>
<th>Privately insured (millions)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Children eligible under federal CHIP income thresholds–standard income disregards</td>
<td>1,116</td>
<td>11.87</td>
<td>3.07 (0.34)</td>
<td>8.80 (0.52)</td>
</tr>
<tr>
<td>Children eligible using income thresholds at 300 percent of poverty</td>
<td>2,293</td>
<td>25.71</td>
<td>5.19 (0.44)</td>
<td>20.52 (0.91)</td>
</tr>
<tr>
<td>Children eligible under state plans as of August 1998</td>
<td>855</td>
<td>9.44</td>
<td>2.58 (0.31)</td>
<td>7.55 (0.57)</td>
</tr>
</tbody>
</table>

SOURCE: Authors’ calculations using aged 1996 Medical Expenditure Panel Survey (MEPS) Round 1 data.
NOTE: Standard errors in parentheses were bootstrapped to correct for complex design of the MEPS sample and for sampling error underlying estimation of the multivariate simulation model.

a State plans are from National Governors’ Association (1998). See Note 11 in text.
teenagers in the CHIP-eligible population is significantly higher at 39.4 percent. CHIP-eligible children also are projected to be more heavily Hispanic (29.5 percent) than the general population of children (15.5 percent). They also are more likely to be black (19.9 percent versus 15.9 percent on average in the population); however, this difference is not statistically significant. CHIP-eligible children in our projected sample are less likely than the average child to be in a family in which the family head is unemployed, because the program primarily targets children of the working poor. In addition, CHIP-eligible children are projected to be disproportionately located in the South.

Perhaps as interesting as the characteristics that define CHIP-eligible children are some of the similarities they have with other children. They have only a slightly greater likelihood than children in general of being in families with single parents, and this difference is not statistically significant. Perhaps more importantly, there is virtually no difference between CHIP-eligible children and other children with respect to the frequency of health problems and/or disability.

SIMULATED ENROLLMENT. Total enrollment under the federal eligibility thresholds is projected to be 1.8 million children in the first half of 1999 (Exhibit 3). The corresponding total enrollment under the state plans is 1.5 million children. The federal total includes 1.0 million children who otherwise would have been without coverage during this period, as well as 0.4 million children who would be crowded out of private insurance. However, these projected changes in insurance status are estimated only imprecisely. Moreover, our projections, being based on the Medicaid expansions, do not incorporate waiting periods, which can be expected to reduce CHIP enrollment among those otherwise covered by private insurance. Finally, the total includes our estimate that the availability of CHIP coverage might prevent as many as 0.4 million children from spending down to Medicaid eligibility.

We project that a substantial number of CHIP-eligible children would remain uninsured under either federal or state rules. The implied federal and state CHIP enrollment rates are 47 and 48 percent, respectively—below the 59 percent enrollment rate among Medicaid expansion-eligible children in 1996. The low take-up rates in our model reflect the fact that while the CHIP and Medicaid populations overlap to a considerable extent, CHIP-eligible children are more likely than Medicaid-eligible children are to have precisely those characteristics that are most strongly associated in Medicaid with low enrollment rates.

For instance, in our Medicaid sample family income and having at least one working parent are both negatively associated with

### EXHIBIT 2

| Selected Characteristics Of CHIP-Eligible And All Children, 1999 Projections |
|-------------------------------------------------|-----------------|-----------------|
| Characteristic                                  | CHIP-eligible children | All children   |
| Total population (millions)                     | 3.07             | 76.40           |
| Teenager (ages 13–18)                           | 39.4% (3.5)      | 30.6% (0.7)     |
| Hispanic                                        | 29.5 (4.0)       | 15.5 (0.9)      |
| Black                                           | 19.9 (5.1)       | 15.9 (1.0)      |
| Unemployed family head                          | 7.0 (2.4)        | 14.1 (0.7)      |
| Single-headed family                            | 33.9 (4.7)       | 27.4 (1.0)      |
| Health problem or disability                    | 16.2 (2.4)       | 15.5 (0.5)      |
| South                                           | 49.9 (5.4)       | 34.3 (1.5)      |

SOURCE: Authors’ calculations using aged 1996 Medical Expenditure Panel Survey (MEPS) Round 1 data. 
NOTES: State Children’s Health Insurance Program (CHIP) eligibility was determined assuming federal rules using standard income disregards. Standard errors in parentheses are corrected for complex design of the MEPS sample.
program participation, yet when we compare CHIP-eligible children with Medicaid-eligible children we see that the former are more likely than the latter are to come from families with higher incomes and are far more likely to have a working parent. Similarly, whereas being a minority or having a disability is positively associated with Medicaid take-up, CHIP-eligible children are less likely than Medicaid-eligible children are to be minorities or to have disabilities. Also, while age is negatively associated with Medicaid enrollment, CHIP-eligible children tend to be older than Medicaid-eligible children. Indeed, the CHIP take-up rates derived from our projections are approximately the same as the 44 percent Medicaid take-up rate observed among expansion-eligible teenagers in 1996.22

Our CHIP projections show a possible effect on enrollment of CHIP being targeted solely at children (rather than entire families). Medicaid take-up rates among children in waiver states where Medicaid expansions have covered the entire family are nineteen percentage points higher than among similar children in states where the expansions pertain only to children and pregnant women. Since CHIP eligibility is limited to the children in low-income families, one would therefore expect lower CHIP enrollment rates than if the whole family were made eligible.

To view these projections from a different perspective, it is useful to calculate the crowd-out rates implied by our simulations. Although federal statutes require states to implement safeguards to prevent crowd-out, our simulations, based as they are on the Medicaid experience, do not account for such controls. Using federal eligibility thresholds, the implied crowd-out rate is 24 percent (21 percent under state rules).23 Thus, while our enrollment projections are consistent with crowd-out rates that fall approximately at the midpoint of the range of estimates in the Medicaid crowd-out literature, actual CHIP crowd-out rates may be lower than those predicted by our model.24

**Policy Implications**

We project that during the first half of 1999, 3.1 million uninsured children will be eligible for CHIP under the maximum federal income thresholds—approximately one of every four uninsured children nationwide. For this reason, we believe that CHIP provides an important opportunity for providing health insurance to children in low-income families who otherwise would be uninsured. Indeed, if one adds these 3.1 million uninsured CHIP-eligible children in 1999 to the 4.7 million uninsured children who were eligible for but not enrolled in Medicaid in 1996, we see that public programs are now in place to cover nearly two-thirds of all uninsured children in the country.

To make this many children eligible for

**EXHIBIT 3**

Simulated State Children’s Health Insurance Program (CHIP) Enrollment (Millions), By Eligibility Criteria And Baseline Insurance Status, 1999 Projections

<table>
<thead>
<tr>
<th>Eligible under federal CHIP program</th>
<th>Eligible under state plans as of August 1998*</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHIP enrollees by original insurance status</td>
<td></td>
</tr>
<tr>
<td>Uninsured</td>
<td>1.03 (0.30)</td>
</tr>
<tr>
<td>Privately insured</td>
<td>0.44 (0.37)</td>
</tr>
<tr>
<td>Medicaid medically needy</td>
<td>0.36b</td>
</tr>
<tr>
<td>Total</td>
<td>1.83 (0.21)</td>
</tr>
<tr>
<td>CHIP-eligible children remaining uninsured</td>
<td>2.04 (0.26)</td>
</tr>
<tr>
<td></td>
<td>1.69 (0.21)</td>
</tr>
</tbody>
</table>

**Source:** Authors’ calculations using aged 1996 Medical Expenditure Panel Survey (MEPS) Round 1 data.

**Note:** Standard errors in parentheses were bootstrapped to correct for complex design of the MEPS sample and for sampling error underlying estimation of the multivariate simulation model.

a State plans are from National Governors’ Association (1998). See Note 11 in text.

b Because this estimate is based on Medicaid administrative data, no standard error is provided. See Note 19 in text.
CHIP, however, states must expand eligibility to income levels above those in their current plans. Under current state plans, we project that only 2.6 million uninsured children will be eligible for CHIP. This number may grow over time, however. Some states are expanding CHIP eligibility in phases and have limited their initial income thresholds to levels lower than those allowed under federal law. In subsequent years these states may well extend eligibility to more children. Indeed, the federal legislation allows states to extend CHIP eligibility to more than five million uninsured children by applying more aggressive income disregards.

Of course, making children eligible for public coverage is only the first step. Our enrollment simulation and analysis reveal that CHIP-eligible children frequently have characteristics that are associated with low enrollment rates among Medicaid-eligible children. In comparison to Medicaid-eligible children, CHIP-eligible children tend to be older; less concentrated among minorities; and more likely to be in two-parent, working families with higher levels of education and higher incomes. Also, children only (not their parents) would be eligible to enroll in CHIP. Based on the Medicaid experience, these factors suggest that states may have difficulty enrolling uninsured children into CHIP, thereby highlighting the importance of states’ decisions regarding outreach, premiums, waiting periods, and application procedures.

Of course, it can be risky to extrapolate directly from the Medicaid expansions to CHIP. On the one hand, actual CHIP enrollment may be greater than our Medicaid-based projections since CHIP may entail less stigma than Medicaid. On the other hand, CHIP enrollment also may be lower than we project if waiting periods are long or if the CHIP premiums dissuade parents from enrolling their children.

Perhaps the most important factor influencing both CHIP and Medicaid enrollment is the effectiveness of outreach efforts. Since 1996, the year of our data, states have been experimenting with and implementing a wide range of methods to improve Medicaid outreach. Successful initiatives include school-based enrollment, streamlined application processes, and mass media campaigns. In addition, the 1999 White House budget proposal seeks $900 million in federal funding over five years to help improve Medicaid outreach. Many of the more successful Medicaid outreach strategies may be directly applicable to CHIP. Moreover, the two programs may complement each other, with improved Medicaid outreach helping to identify more CHIP-eligible children and vice versa. Together, Medicaid and CHIP clearly offer the potential to substantially increase access to health insurance for children in low-income families. The challenge now is to get the eligible children enrolled.

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NOTES


3. States allow certain amounts to be netted out of income before testing for program eligibility. Amounts disregarded in this way typically include child care costs, transportation to and from work, and child-support receipts.


6. For full details of our methodology, see T. Selden, J. Banchin, and J. Cohen, Projecting Eligibility and Enrollment for the State Children’s Health Insurance Program, Pub. no. 99-R025 (Rockville, Md.: AHCRP, 1998), available from the authors or the AHCPR Web site (www.meps.ahcpr.gov/nmes/papers). We subset the sample to exclude children in families with elderly members or active-duty military personnel, where we define families as the household members who would be eligible for coverage under most family health insurance policies. Although some CHIP-eligible children may be in families headed by elderly persons, we do not yet have access to the pension and other retirement income data that would enable eligibility simulation for these cases. In total, we exclude observations representing approximately 0.5 million uninsured children nationwide, some of whom may be eligible for Medicaid or CHIP.


10. Throughout the analysis we treat family income as exogenous, whereas families may in reality adjust their incomes to gain CHIP eligibility. On the one hand, CHIP may free the families of some Medicaid-enrolled children to earn more income without losing access to publicly subsidized coverage for their children. On the other hand, some higher-income families may reduce their earnings if by doing so they are able to gain eligibility to CHIP. In both cases, the number of CHIP-eligible children would increase relative to our projections. The implicit assumption in our analysis, however, is that the value of the CHIP benefit would be too small to induce substantial numbers of additional families to respond in these ways.

11. In the first scenario we disregard child care payments of $100 (1996 dollars) per month per child age ten and under in families where the family head and all other members over age eighteen are employed (up to a maximum of $250 per family). Also, we subtract from earned income $90 per month of employment-related expense for each employed adult.

State plans are from NGA, Implementation of Title XXI. In total, forty-seven states plus the District of Columbia had plans that were sufficiently developed to be included (including Wyoming and Washington, which decided not to participate in CHIP in the first year). The remaining three states were assigned the modal plan, whereby CHIP eligibility was simulated for all Medicaid-ineligible children age eighteen and under in families with incomes (net of standard disregards) below 185 percent of the poverty guidelines. For states where income disregards were not specified, we applied the same disregards that we used to simulate the federal CHIP program.


13. Also, Medicaid allows retroactive enrollment (thereby covering the preenrollment expenditures for a particular episode of care), whereas non-Medicaid CHIP programs typically do not. This might induce some families to enroll in CHIP, whereas they might not have enrolled in a
plan with retroactivity.


16. All standard errors in this paper are corrected for the complex design of the MEPS sample.


18. Exhibit 2 uses the CHIP population defined by applying the federal income thresholds to family incomes net of the standard disregards defined in Note II.

19. This is a very rough estimate obtained from data on the number of medically needy children (Health Care Financing Administration, *Medicaid Program Statistics*, HCFA 2082 Report, www.hcfa.gov/medicaid/mstats.htm, 1998) with the MEPS distribution by family income of children with health problems and/or disabilities. For additional details, see Selden et al., *Projecting Eligibility and Enrollment*.

20. To compute implied take-up rates, we use the enrollment projections from Exhibit 3 to divide (1) the total number of CHIP enrollees by (2) total CHIP enrollees plus CHIP-eligible children who remain uninsured (2.04 million). An alternative approach would be to calculate the take-up rate as the percentage of otherwise uninsured children who enroll. That approach, however, would ignore children switching from other sources of insurance and would be inconsistent with take-up rate estimates for the Medicaid population. The 59 percent enrollment rate for Medicaid expansion-eligible children is reported in Selden et al., “Medicaid’s Problem Children.”


22. Selden et al., “Medicaid’s Problem Children.”

23. To compute the crowd-out rate, we use the simulated enrollment figures presented in Exhibit 3 to divide (1) the change in the number of children covered by private insurance (0.44 million) by (2) the total number of CHIP enrollees (1.83 million).


26. For more on the effect that CHIP may have on Medicaid take-up, see Ullman et al., *The State Children’s Health Insurance Program*. 

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HEALTH TRACKING: TRENDS