Health of Children in Title XXI: Should We Worry?

Ruth E. K. Stein, MD*; Elizabeth Shenkman, PhD‡; Donna Hope Wegener, MA‡; and Ellen Johnson Silver, PhD*

ABSTRACT. Background. Capitation rates for the State Children’s Health Insurance Program (SCHIP) funded under Title XXI of the Social Security Act were based on assumptions about the health care needs of children enrolled in this program. It has been suggested that parents are selective in enrolling children who are, in their opinion, most likely to need care, and that families who do not view their children as needing such care are more likely to ignore opportunities to seek or to maintain enrollment in SCHIP insurance. Thus, there have been concerns that enrollees might have more health conditions than a general population of children.

Objective. The purpose of this study was to test the hypothesis that children in Title XI have more ongoing health conditions than expected by comparing health status data from enrollees in 1 state SCHIP program to a nationally representative sample of children in the United States.

Methods. This study used statewide data obtained in a survey of Florida SCHIP program enrollees and national data obtained on a subset of the children who were assessed in the 1994 National Health Interview Survey (NHIS). We examined health and demographic data collected by means of a structured telephone survey from parents for a random sample of 2432 children 2 to 18 years old who participated in the Florida Healthy Kids Program during the time period of October 1, 1997 through September 30, 1998. We compared these data to information on a national sample of all 26 845 children in the same age range whose health was assessed by the 1994 NHIS, and to a subset of the 6460 children in the NHIS sample whose family income met the eligibility criteria for SCHIP. To do this, we eliminated those children who were receiving Medicaid and those children whose household income levels were known to be above the eligibility level for SCHIP. We also excluded children whose household income was not reported. Thus, effectively this subsample contained a representative sample of children in the United States.

Results. Children in the Florida SCHIP program were more than twice as likely to have chronic health conditions than similarly aged children in the general population or children in the income-restricted national subsample (31% vs 15.9% and 16.7%, respectively) and there also were more SCHIP children with school absences (29% vs 18% and 16.7%, respectively). In contrast, the rating of overall health of SCHIP children was not poorer according to their parents, and they did not have more activity restrictions. Children in Florida SCHIP who had conditions were more likely to experience related consequences within each of 3 domains, and they were nearly 3 times as likely to have all 3 types of consequences (7% in Florida SCHIP sample vs 2.8% and 1.7% in the full national sample and in the income-matched subsample). However, the Florida SCHIP enrollees differed from the age and income-matched national sample in terms of the proportion of Hispanics. Thus, to verify these findings, we weighted the SCHIP sample to match the racial and ethnic proportions found in the national sample and repeated the analyses. The findings were robust, and there was no change in the percentage of children with special health care needs after such weighting.

Conclusions. Overall, the results of these analyses support the notion of adverse selection and retention in the SCHIP program. This is unlikely to be the result of aggressive marketing in enrollment sites that serve children with more medical problems, as Florida health care providers rank third as a source of information about the Title XXI program after family and friends and the schools. In addition, Florida has active outreach and single-page application process for Medicaid and an aggressive program to move children to Title V, which also should minimize the numbers of children with special health care needs enrolled in SCHIP. Nevertheless, these findings suggest that the children being enrolled in Florida’s SCHIP program are not the largely healthy population that was envisioned. If replicated in other SCHIP programs, these findings raise questions about the basic underlying assumptions concerning the health of potential enrollees and could have implications for the long-
Children's Health Insurance Program.

needs, chronic conditions, health status, insurance, State
United States.

tions led to our concern that the distribution of mor-
such costs.3

state, the plans, or the providers who serve enrolled
flation rates for managed care financing. If a more
influence the basic estimates used to develop capita-
tion for the SCHIP legislation and were specifically cited
mechanisms of extending insurance under Title XXI.

As states developed their SCHIP programs, little
information was available to them about the health
care needs of the potential enrollee pool. Assump-
tions about the health care needs of the enrollee pool
influence the basic estimates used to develop capita-
tion rates for managed care financing. If a more
needy or higher cost population than anticipated
were to be enrolled, then the financial underpinnings
of the program might be in jeopardy. These un-
planned expenditures would have to be borne by
the state, the plans, or the providers who serve enrolled
children. These payors may not be able to absorb
such costs.3

It has been suggested that parents are selective in
enrolling children who are, in their opinion, most
likely to need care, and that families who do not
view their children as needing such care are more
likely to ignore opportunities to seek or to maintain
enrollment in SCHIP insurance.4,5 These observa-
tions led to our concern that the distribution of mor-
bidity among enrollees might be skewed. We hy-
pothesized that enrollees might have more health
conditions than a general population of children. The
purpose of this report is to test this hypothesis by
comparing data from SCHIP enrollees in 1 state to a
nationally representative sample of children in the
United States.

METHODS

This study used statewide data obtained in a survey of Florida
SCHIP program enrollees and national data obtained on a selected
subset of the children who were assessed in the 1994 National
Health Interview Survey (NHIS). This study was approved by the
University of Florida Health Sciences Center Institutional Review
Board and by the Committee on Clinical Investigations of the
Albert Einstein College of Medicine.

Samples

Florida Sample

Florida’s Healthy Kids Program was established as a result of
1990 legislation that established a nonprofit Florida Healthy Kids
Corporation (FHKC) to administer a comprehensive health insurance
program for uninsured children. The program was designed
to provide coverage to uninsured children who were not enrolled in
Medicaid and whose parents could not afford private insur-
ance. This program was specifically cited in the federal Title XXI
legislation as one of the options that a state could use in designing
its plan. In October 1998 the Healthy Kids program became
the largest component of Florida’s Title XXI initiative. The FHKC
contracts with approved commercial health plans to form the
provider network and to bear financial risk. Currently, children
who are 5 years of age and between 133% to 200% of the federal
poverty level (FPL) and children who are 6 to 19 years of age and
between 101% and 200% of the FPL are eligible for subsidized
premiums. However, at the time this study was conducted, sub-
sidized premiums were available only to children aged 5 and
older and residing in families with incomes <185% FPL. Children
2 to 5 years old also could enroll in the program if they were
siblings of a current enrollee. The subsidized premium at the time
of the study varied from $10.00 to $27.00 per child per month,
depending on the family’s income and county of residence.

Families above 185% FPL could enroll their children and pay
the full premium price per child. The full premium price varied by
Healthy Kids Program site, but was $75 per child per month on
average. Although some children were eligible to buy into the program at higher income levels, <5% of enrollees enrolled the
program on a full cost basis. On the other hand, children could not
enroll in Healthy Kids if they were Medicaid eligible. Currently,
and at the time this study was conducted, Florida’s Title V Chil-
dren With Special Health Care Needs (CSHCN) program used
stringent screening methods to identify children entering the
Healthy Kids Program for potential referral to Title V. Children
with medical conditions severe enough to meet the Title V pro-
gram medical eligibility criteria were transferred to that program.
Thus, effectively this is a sample of non-Medicaid children, whose
family incomes were below 185% of the FPL.

The Florida Healthy Kids sample was constructed using enroll-
ment, claims, and encounter data from the time period of October
1, 1997 through September 30, 1998. This dataset was obtained
prior to the Healthy Kids Program implemented all of its Title
XXI-related changes. The study universe included a total of 62,139
children who were enrolled in the program. From these children,
a random sample of 4350 families was selected to participate in
telephone interviews about their children’s health. Of these, 29% of
families could not be located, and of those located, 21% refused
to participate in the interview. The final Florida SCHIP sample
contained data from 2432 completed interviews.

Survey respondents and nonrespondents were compared in
terms of demographic variables (age, gender, race, ethnicity, fam-
ily income), number of months enrolled in the Healthy Kids Pro-
gram, and the percentage of children using the health care
system. There were no statistically significant differences between
the groups.

National Sample

The national sample we used for comparison was drawn from
the households enrolled in the 1994 NHIS, which is part of an
ongoing set of surveys on health that are conducted by the Na-
tional Center for Health Statistics. In the national sample, respon-
dents were interviewed by trained personnel of the US Bureau of
the Census using standard procedures of the National Center for
Health Statistics.6 This data set contains information on 30,032
children drawn from a national probability sample of noninsti-
tutionalized civilian children living in households. These children
are representative of the 70 million children in the United States.
For purposes of analysis, the national sample was restricted to
children aged 2 to 18 years to make it comparable to the Florida
SCHIP sample. This left 26,845 children in the same age range.

We also constructed a subsample of similarly aged children in
the national data set who were comparable in eligibility to the
children in the Florida SCHIP sample. To do this, we eliminated
those children who were receiving Medicaid and those children
whose household income levels were known to be above the eligi-
bility level for SCHIP. We also excluded children whose
household income was not reported. This left 6460 children in the
eligibility comparable national subsample.
Data

The FHKC provided person level enrollment information for each child. The enrollment files contained information about the number of months the children were enrolled in the program, their age, gender, household size, and family income. Health care use data from October 1, 1998 through September 30, 1999 were used in the analysis.

In addition to the enrollment data, information was collected by means of a structured telephone survey from parents of Florida SCHIP enrollees who were selected into a random subsample of families with children enrolled in the Healthy Kids Program. These interviews were part of a larger project examining various strategies that can be used to identify CSHCN and were conducted by the Institute for Child Health Policy at the University of Florida. The survey took ~35 minutes to complete and included the following: a household enumeration, a demographic section including age, gender, race, ethnicity, income, household size, and selected questions about the child health status. Informed consent was obtained at the time of the interview.

The data set for the national sample was drawn from information in 2 related surveys that were part of the 1994 NHIS. One of these was the 1994 NHIS Core Interview, which provided information on demographic characteristics (eg, child’s age, sex, and ethnicity; family size and income), as well as many of the health-related variables that we analyzed (health status rating, bed days, restricted activity days, school absence). To determine the presence of a chronic condition, items also were extracted from the Core Interview as well as from the NHIS Disability Supplement, an additional survey administered at the same time. These items are described in more detail below. Respondents in both surveys were selected by asking to speak to the person in the household who knew the most about the child’s health. This was typically the child’s mother.

Variables

Identification of Children With Chronic Conditions

In Florida, parents were asked to respond to the Questionnaire for Identifying Children With Chronic Conditions (QuICCC),7 the measure that was used to determine if the child had any chronic health conditions. The QuICCC is a validated questionnaire containing 39-item sequences that ask about consequences of health conditions in children. It not only provides an overall classification of whether the child has a chronic condition, but also yields information about the consequences affecting the child within 3 condition-related domains: 1) functional limitations; 2) dependency on compensatory mechanisms or assistance; and 3) service need or use above and beyond routine care for age.

These 3 consequence domains have been previously described.7 Functional limitations include restrictions on function, activities, or social role in comparison with healthy age peers in the general areas of physical, cognitive, emotional, and social growth and development. Compensatory dependency reflects the use of medications, special diets, medical technology, assistive devices, and/or personal assistance to compensate for or minimize limitation of function, activities, or social role. Service need or use beyond routine care is conceptualized as need for medical care or related services, psychological services, or educational services over and above the usual for the child’s age, or the need for special ongoing treatments, interventions, or accommodations at home or in school.

The 1994 NHIS Core Interview and the NHIS Disability Supplement contained a series of questions about children’s functioning and service use that simulated the QuICCC, and we have developed an algorithm for determining the presence of a chronic condition using these items that has been published previously.8 The questions in the NHIS questionnaires covered 35 of the 39 consequences that are assessed by the QuICCC and they account for 97% of the children who are identified by the full instrument.8

Other Health-Related Characteristics

Both data sets included comparable information on parental ratings of children’s health status (excellent, very good, good, fair, poor), and on school absences, bed days, and restricted activity days in the previous 2 weeks.

Assessment of Severity

The parent interview items described directly above all reflect level of health and can be used to indicate severity. However, we also noted earlier that the QuICCC allows children who are identified as having a chronic condition to be categorized by the type of health consequences that they exhibit—that is, by functional limitations, compensatory dependency, or service use beyond routine care—or by any of the possible combination of these types of consequences.7 In previous work, we have demonstrated that experiencing more types of consequences is associated with higher levels of emotional difficulties in children9 and in their parents.10 We also have shown that there are significant relationships between the number of types of consequences that child experiences and proxy measures of condition severity such as parent-reported health status, limitations of activities, and the perception of parents or others that the child is disabled.11 Therefore, we also examined the numbers of types of consequences experienced as a proxy measure of condition severity in this study.

Data Analyses

We compared the data obtained from the random sample of statewide Florida SCHIP program enrollees with the data obtained on children assessed in the 1994 NHIS. We calculated summary statistics (eg, means, standard deviations, proportions) on the study variables for each sample separately. We then employed χ² tests to examine differences in proportions for categorical variables and 1-way analyses of variance to examine differences in means for continuous variables. Initial comparisons were conducted using the 2 age-matched samples and then further comparisons to the Florida sample were made using only the subsample of the NHIS population that also reflected Florida’s SCHIP financial eligibility. This allowed us to ascertain if any differences that we might find in the overall comparisons were in fact related to the Title XXI program’s financial eligibility requirements. Unless noted otherwise, all reported differences were statistically significant at P ≤ .01.

RESULTS

Table 1 shows the demographic characteristics of the Florida SCHIP sample and the national samples. The first comparison is with the whole age-matched national sample and the second with the age- and income-matched sample. There were consistent differences in most demographic characteristics, except for gender, and virtually all were statistically significant in comparing these large samples. However, only the differences in the percentages of parents who identified the child as Hispanic and in the mean household sizes were substantial. Parental ratings of health status and the percentages of children with bed days and restricted activity days were similar across the samples, but fewer children were reported to have excellent health in the income-matched national sample than in the Florida SCHIP sample. There were more SCHIP children with school absences.

The first row in Table 2 gives the overall proportions of the Florida and national populations identified by the QuICCC or QuICCC-based algorithm as having a chronic condition. Looking at the children in Florida SCHIP sample, 31% were identified as having a condition by the QuICCC. In contrast, the QuICCC-like items in the NHIS accounted for identification of 15.9% of the national population of children in the same age range. An even smaller percentage (14.6%) was identified by the QuICCC in the NHIS subsample of non-Medicaid families whose incomes were <185% of the FPL. Thus, children in the Florida SCHIP program were almost twice as likely to be identified as having a chronic condition as those identified either in the age-truncated or in

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TABLE 1. Demographic and Health-Related Characteristics of All Children in the Florida SCHIP and National Samples

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Florida Sample</th>
<th>National Sample</th>
<th>Income-Matched National Sample</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total surveys</td>
<td>2432</td>
<td>26 845</td>
<td>6460</td>
</tr>
<tr>
<td>Age of child (mean and SD)†</td>
<td>10.22 ± 3.54</td>
<td>9.22 ± 4.6</td>
<td>9.4 ± 4.5</td>
</tr>
<tr>
<td>Gender‡</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>53%</td>
<td>51.2%</td>
<td>50.4%</td>
</tr>
<tr>
<td>Female</td>
<td>47%</td>
<td>48.8%</td>
<td>49.6%</td>
</tr>
<tr>
<td>Mean family income (SD)</td>
<td>$18 015 ± $8078</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>Mean household size (SD)†</td>
<td>3.93 ± 1.22</td>
<td>4.5 ± 1.5</td>
<td>4.85 ± 1.7</td>
</tr>
<tr>
<td>Mean number of mo enrolled (SD)</td>
<td>9.26 mo ± 3.47</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>Race*†</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>White</td>
<td>65%</td>
<td>63.6%</td>
<td>57.0%</td>
</tr>
<tr>
<td>Black</td>
<td>15%</td>
<td>17.0%</td>
<td>17.3%</td>
</tr>
<tr>
<td>Other</td>
<td>20%</td>
<td>19.4%</td>
<td>25.7%</td>
</tr>
<tr>
<td>Hispanic*‡</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>31%</td>
<td>14%</td>
<td>19.2%</td>
</tr>
<tr>
<td>No</td>
<td>69%</td>
<td>86%</td>
<td>80.8%</td>
</tr>
<tr>
<td>Parent’s perception of child health status‡</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Excellent</td>
<td>49%</td>
<td>51%</td>
<td>45.8%</td>
</tr>
<tr>
<td>Very good</td>
<td>28%</td>
<td>27.6%</td>
<td>28.9%</td>
</tr>
<tr>
<td>Good</td>
<td>19%</td>
<td>18.3%</td>
<td>22.3%</td>
</tr>
<tr>
<td>Fair</td>
<td>3%</td>
<td>2.7%</td>
<td>2.7%</td>
</tr>
<tr>
<td>Poor</td>
<td>0.5%</td>
<td>0.4%</td>
<td>0.3%</td>
</tr>
<tr>
<td>Percentage with bed days in past 2 wk*</td>
<td>5%</td>
<td>5.9%</td>
<td>5.6%</td>
</tr>
<tr>
<td>Percentage with restricted activity days in past 2 wk</td>
<td>9%</td>
<td>9.9%</td>
<td>8.9%</td>
</tr>
<tr>
<td>Percentage with missed school days in past 2 wk†</td>
<td>22%</td>
<td>7.9%</td>
<td>6.8%</td>
</tr>
</tbody>
</table>

SD indicates standard deviation; NA, not available. * National sample differs from Florida sample; P < .01. † Matched sample differs from Florida sample; P < .01.

TABLE 2. Demographic and Health-Related Characteristics of Children Identified by the QuICCC in the Florida SCHIP and National Samples

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Florida Sample</th>
<th>National Sample</th>
<th>Income-Matched National Sample</th>
</tr>
</thead>
<tbody>
<tr>
<td>Percent identified*†</td>
<td>31%</td>
<td>15.9%</td>
<td>14.6%</td>
</tr>
<tr>
<td>Age of child (mean and SD)</td>
<td>10.12 ± 3.4</td>
<td>10.1 ± 4.3</td>
<td>10.5 ± 4.2</td>
</tr>
<tr>
<td>Gender‡</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>56%</td>
<td>58.9%</td>
<td>57.9</td>
</tr>
<tr>
<td>Female</td>
<td>44%</td>
<td>41.1%</td>
<td>42.1</td>
</tr>
<tr>
<td>Mean family income (SD)</td>
<td>$18 238 ± $8455</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>Mean household size (SD)†</td>
<td>3.82 ± 1.1</td>
<td>4.3 ± 1.4</td>
<td>4.6 ± 1.6</td>
</tr>
<tr>
<td>Race*†</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>White</td>
<td>69%</td>
<td>68.1%</td>
<td>68.8%</td>
</tr>
<tr>
<td>Black</td>
<td>13%</td>
<td>17.2%</td>
<td>14.3%</td>
</tr>
<tr>
<td>Other</td>
<td>18%</td>
<td>14.7%</td>
<td>17.0%</td>
</tr>
<tr>
<td>Hispanic*‡</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>25%</td>
<td>14.0%</td>
<td>12.7%</td>
</tr>
<tr>
<td>No</td>
<td>75%</td>
<td>86.0%</td>
<td>87.3%</td>
</tr>
<tr>
<td>Parent’s perception of child health status‡</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Excellent</td>
<td>37%</td>
<td>31.2%</td>
<td>29.4%</td>
</tr>
<tr>
<td>Very good</td>
<td>29%</td>
<td>27.7%</td>
<td>27.6%</td>
</tr>
<tr>
<td>Good</td>
<td>25%</td>
<td>29.4%</td>
<td>33.2%</td>
</tr>
<tr>
<td>Fair</td>
<td>7%</td>
<td>9.5%</td>
<td>8.5%</td>
</tr>
<tr>
<td>Poor</td>
<td>1%</td>
<td>2.2%</td>
<td>1.3%</td>
</tr>
<tr>
<td>Percentage with bed days in past 2 wk†</td>
<td>8%</td>
<td>11.5%</td>
<td>11.7%</td>
</tr>
<tr>
<td>Percentage with restricted activity days in past 2 wk</td>
<td>17%</td>
<td>18%</td>
<td>16.7%</td>
</tr>
<tr>
<td>Percent with missed school days in past 2 wk†</td>
<td>29%</td>
<td>14.3%</td>
<td>12.5%</td>
</tr>
</tbody>
</table>

SD indicates standard deviation; NA, not available. * National sample differs from Florida sample; P < .01. † Matched sample differs from Florida sample, P < .01; these comparisons refer to QuICCC-identified children only.

the SCHIP income eligibility-matched national samples.
The remainder of Table 2 compares demographic and health-related characteristics across the 3 samples using only those children who were identified by the QuICCC in each sample. Again, household
sizes were smaller in the SCHIP sample than in either national sample and there were more children of Hispanic ethnicity, but differences in age were less pronounced. Among children with chronic conditions, those in the Florida SCHIP group had better parent-rated health status and they were less likely to stay in bed because of illness, but they experienced more school absences than similar children in either of the national samples. The Florida and national groups did not differ significantly in proportions with restricted activity days in the past 2 weeks.

As noted above, both age and income-matching criteria had previously been applied in selecting the study samples. Because the Florida SCHIP enrollees also differed from the age and income-matched national sample in terms of race and ethnicity, the SCHIP sample was weighted to match the racial and ethnic proportions found in the national sample and the analyses repeated. There was no change in the percentage of CSHCN after such weighting. These results are not shown, but are available from the authors on request.

We also classified children by the types of condition-related consequences that they experienced; that is, by whether they had functional limitations, were dependent on a compensatory mechanism or personal assistance to function, or had special service needs or use, as a result of their chronic conditions. As shown in the distributions in Table 3, the Florida sample had higher percentages of children in most, but not all, categorizations by types of consequences. Significantly higher proportions of children in the Florida SCHIP program had each type of consequence (any functional limitations, any use of compensatory mechanisms, and any service use or need), but the most impressive difference was in their greater dependence on compensatory mechanisms or assistance. In the Florida SCHIP sample, 22% depended on compensatory mechanisms or assistance (alone or in combination with another type of consequence) compared with 5.4% of the overall national sample and only 4.2% of the eligibility-matched sample.

To examine whether the children in the Florida sample and national samples were comparable in the severity of their conditions, we then examined the numbers of different types of consequences (functional limitations, dependency on compensatory mechanisms, or service use or need) they experienced. Not only were significantly higher percentages of the Florida SCHIP sample identified in each category of 1, 2, and 3 consequences, but among those in the most severe group (those with 3 types of consequences), there was a 2 to 3 times higher proportion of identified children in the SCHIP population than in either the age-matched or income-matched national samples.

**DISCUSSION**

These findings demonstrate greater numbers of children with special health needs in the Title XXI program than would be expected from the national data. Children in Healthy Kids, the Florida SCHIP program, were more than twice as likely to have chronic health conditions than similarly aged children in the general population or children in the income-restricted national subsample. This finding was maintained even after weighting the Florida SCHIP sample to match the racial and ethnic mix of children in the national sample. Even if these data

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**TABLE 3.** Numbers and Types of Condition Consequences Experienced by Children in the Florida and National Samples

<table>
<thead>
<tr>
<th>Category</th>
<th>Florida Sample</th>
<th>National Sample</th>
<th>Income-Matched National Sample</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N = 2432 (%)</td>
<td>N = 26 845 (%)</td>
<td>N = 6460 (%)</td>
</tr>
<tr>
<td>Total % meeting the QuICCC</td>
<td>31</td>
<td>15.9</td>
<td>14.6</td>
</tr>
<tr>
<td>Percentage identified by 1 component</td>
<td>16</td>
<td>7.3</td>
<td>7.3</td>
</tr>
<tr>
<td>Functional limitation only</td>
<td>4</td>
<td>3.0</td>
<td>3.3</td>
</tr>
<tr>
<td>Compensatory device only</td>
<td>9</td>
<td>1.0</td>
<td>0.9</td>
</tr>
<tr>
<td>Service use/need beyond routine care</td>
<td>3</td>
<td>3.4</td>
<td>3.1</td>
</tr>
<tr>
<td>Percentage identified by 2 components</td>
<td>7</td>
<td>5.7</td>
<td>5.6</td>
</tr>
<tr>
<td>Functional limitation and compensatory device</td>
<td>1</td>
<td>0.5</td>
<td>0.6</td>
</tr>
<tr>
<td>Functional limitation and any service use/need beyond routine care</td>
<td>1</td>
<td>4.1</td>
<td>4.0</td>
</tr>
<tr>
<td>Compensatory device and any service use/need beyond routine care</td>
<td>5</td>
<td>1.1</td>
<td>1.0</td>
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<tr>
<td>Percentage identified by all 3 components</td>
<td>7</td>
<td>2.8</td>
<td>1.7</td>
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<tr>
<td>Percentage with any functional limitation</td>
<td>13</td>
<td>10.4</td>
<td>9.6</td>
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<tr>
<td>Percentage with any compensatory device</td>
<td>22</td>
<td>5.4</td>
<td>4.2</td>
</tr>
<tr>
<td>Percentage with any service use/ need beyond routine care</td>
<td>16</td>
<td>10.4</td>
<td>9.8</td>
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NA indicates not available.
were adjusted to take into account the fact that the QuICCC-like algorithm has only a 97% identification rate compared with the instrument used for the Florida SCHIP sample, the percentage of children who would be likely to be identified by the full QuICCC nationally would be 16.4%, which is still quite different from the percentage identified among Florida SCHIP enrollees. Children in the Florida SCHIP sample also were more likely to have each type of condition consequence—especially dependency on compensatory mechanisms and assistance—and they were almost 3 times more likely to have all 3 types of consequences. In addition, children in the Florida sample were twice as likely as children in the national sample to have had a school absence. Despite the greater likelihood of having an ongoing condition, the SCHIP sample’s health was not rated poorer by their parents, nor was there a greater proportion having activity limitations. This is not surprising given that most parents rate the health of children with disabilities and chronic conditions as good to excellent. Moreover, we noted that the Florida SCHIP sample has a higher percentage of children whose functioning is compensated through personal assistance or assistive devices. This may contribute to the lower than expected rates of activity restrictions in this group.

There are a number of limitations to this study. First, the data represent the status of children assessed through slightly different methods at slightly different periods of time. The differences might underestimate the morbidity of the children in the national sample, because the national data were collected first and there is some evidence of a gradual increase in morbidity over time.12,13 However, the rate of increase would be unlikely to explain the magnitude of the differences found in the rates of identification of ongoing conditions. Additionally, although surveys employed probability sampling, the selection was population-based in the case of the NHIS and enrollee-based in the SCHIP sample, and the Florida sample also had a higher rate of refusals to participate. We cannot know whether the respondents in the SCHIP sample were more likely than nonresponders to have children with chronic conditions. However, the utilization and sociodemographic comparisons suggested no significant differences between the SCHIP responders and nonresponders in terms of other health variables. Moreover, the age and income restrictions on the NHIS data set increased the comparability of the study samples with little change in the pattern of differences.

Another potential source of bias is the larger proportion of Hispanics in the Florida SCHIP sample compared with the national sample. Here, however, the bias probably works in the opposite direction of the finding that the Florida SCHIP sample has more chronic conditions. Children with chronic conditions who are also black or Hispanic may be under-identified relative to white or non-Hispanic children using survey-based screening tools such as the QuICCC and others.14–16 Therefore, once again, the rates in Florida would be expected to be lower than in the national sample.

Finally, it is likely that there were some children in the national sample who were not receiving Medicaid despite financial eligibility. It was not possible to identify or exclude them from these analyses, and we do not know how this might have affected our findings. However, as children receiving Medicaid tend to have poorer health and more chronic conditions, eliminating any misclassified children from the national sample would be likely to increase rather than decrease the differences between this group and the Florida SCHIP sample.

Overall, the results of these analyses support the notion of adverse selection and retention in the Florida SCHIP program. Although another potential limitation of this study is that we did not measure actual health care costs or utilization in this study, we confirmed the hypothesis that SCHIP enrollees might have more health conditions than a general population of children. If replicated in other SCHIP programs, these findings raise questions about the basic underlying assumptions concerning the health of potential enrollees. Capitation rates based on normative populations may under reimburse for the needs of children actually being served in SCHIP.

One explanation may be that families selectively enroll their children in this program when they view them as needing care. In Florida, this is unlikely to be a result of aggressive marketing in enrollment sites that serve children with more medical problems such as hospital emergency departments or inpatient units. Unlike other states, where health care providers are the primary recruitment source, Florida health care providers rank third as a source of information about the Title XXI program after family and friends and the schools. In addition, Florida has active outreach and single-page application process for Medicaid, and an aggressive program to move children to Title V, which also should minimize the numbers of CSHCN enrolled in SCHIP.

Although the Healthy Kids Program has expanded dramatically, there were still estimated to be 120 000 uninsured and potentially eligible children at the time of the study.17 A higher rate of enrollment among the general population may reduce this disparity. However, it may be that as long as SCHIP remains a voluntary program, families will continue to be selective purchasers of health insurance for their children. The comparisons of statewide data to the national samples suggest that the children being enrolled in SCHIP are not the largely healthy population that was envisioned. As it is well-known that special needs children have higher health care use and charges than those without special needs,18 this could have important implications for the long-term fiscal viability of the current SCHIP program.

**ACKNOWLEDGMENTS**

This research was funded in part by the Department of Health and Human Services, Maternal and Child Health Bureau, Division of CSHCN, grant H93 MC 00064.
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Health of Children in Title XXI: Should We Worry?
Ruth E. K. Stein, Elizabeth Shenkman, Donna Hope Wegener and Ellen Johnson Silver

*Pediatrics* 2003;112:e112

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