# Chronic Illness Among Poor Children Enrolled in the Temporary Assistance for Needy Families Program

Paul H. Wise, MD, MPH, Nina S. Wampler, DSc, MPH, Wendy Chavkin, MD, MPH, and Diana Romero, PhD, MA

*Objectives.* This study assessed chronic child illness among recipients of Temporary Assistance for Needy Families (TANF) benefits and poor families not receiving benefits.

*Methods.* Data from the 1998 National Health Interview Survey were used to examine chronic child illness, enrollment in TANF, health insurance status, and selected access indicators.

*Results.* One quarter of TANF-enrolled children had chronic illnesses. Unenrolled children were 3 times as likely as TANF-enrolled children to be uninsured. Among the chronically ill, 31.7% of unenrolled and 14.3% of enrolled children experienced gaps in insurance coverage that were associated with access barriers.

*Conclusions.* Welfare policies should consider the effects of chronic illness and gaps in insurance coverage on the health of poor children. (*Am J Public Health.* 2002;92:1458–1461)

The expressed objective of the 1996 Personal Responsibility and Work Opportunity Reconciliation Act was to increase the economic independence of poor families through changes in US welfare policies. Among its many important provisions was the replacement of Aid to Families with Dependent Children with the Temporary Assistance for Needy Families (TANF) program, which imposes maternal work requirements, benefit reductions or terminations for noncompliance with program provisions, and time limits for enrollment.[1]

Despite considerable public debate over the impact of the Personal Responsibility and Work Opportunity Reconciliation Act and its reauthorization, there remains a striking paucity of information on the health status of families affected by this legislation.[2,3] Of particular concern is whether current or proposed welfare provisions adequately account for the special requirements of families affected by serious chronic illness. Such illness in women or their children has been shown to influence the prospects of maternal employment and intensify the need for adequate health insurance.[4–6]

In the present study, we sought to provide some empirical context for public deliberation of the act's reauthorization by examining patterns of TANF participation among a national sample of poor chronically ill children. Specifically, the analyses outlined here describe the extent to which children on TANF experience chronic illness, gaps in insurance coverage, and selected barriers to health care services. In addition, comparative analyses were conducted among children living in poverty but not enrolled in TANF, a group that may increasingly reflect those never enrolled in TANF or those who have lost TANF benefits but whose family income did not rise above the federal poverty level.

## METHODS

### Data Source

The National Health Interview Survey (NHIS) is a national survey of US households conducted each year by the Bureau of the Census and made available by the National Center for Health Statistics.[7] The survey collects information on health status, health service use, and demographic attributes from a sample of the noninstitutionalized civilian population of the United States. We used the 1998 NHIS and focused on information regarding child health characteristics; this information is provided by an adult household member with knowledge of the health status of the child in question. The NHIS provides weighted values based on its sampling structure, allowing nationally representative estimates to be made.

*Income and age.* The NHIS asks about household income for the year before the interview. We included children who were younger than 18 years and who were members of families at or below the official federal poverty level for the year 1997 only; a total of 1987 children met these criteria. Weighted national estimates are presented in the tabulations.

*Welfare participation.* Welfare program participation was confined to enrollment in TANF. The NHIS collects information on TANF enrollment by asking the adult respondent whether the child had received TANF or related public cash assistance payments during the year before the interview.

*Health insurance.* Information on health insurance coverage during the month before the interview was collected for each child. Types of public insurance coverage included Medicaid; state-based insurance programs such as those derived from the State Child Health Insurance Program; and other public programs offering coverage, such as Civilian Health and Medical Program of the Uniformed Services (CHAMPUS) and the Indian Health Service. Children were considered to be privately insured if adults responded affirmatively to a specific question regarding private insurance plans. Gaps in health insurance coverage were considered to exist if children had experienced any time without health insurance during the 12 months before the interview.

*Chronic conditions.* Adult respondents provided information about children's health status. A condition was considered to be present if a physician or other health care professional had ever told the respondent that the child had the condition in question. Chronic conditions included asthma, mental retardation, cerebral palsy, autism, attention deficit disorder, muscular dystrophy, cystic fibrosis, sickle-cell anemia, diabetes, arthritis, and con-

genital heart disease. Other conditions, including some that could be chronic, were not considered to be serious enough to mediate welfare effects and thus were excluded from the analysis.

*Physician visits and access barriers.* The survey collected information on the number of visits the child made in the preceding 12 months to a physician's office, clinic, or other place for health care, excluding emergency departments and inpatient facilities. The survey also asked whether there was any time when the child needed care but did not receive it because the family could not afford the cost. We examined this issue specifically for prescribed medications, mental health services, and dental care. These variables were considered outcome variables and were analyzed in relation to insurance status and TANF enrollment.

### Multivariate Analysis

Multivariate logistic regression models were constructed to measure the impact of TANF enrollment on physician visits and the selected access barriers. We assessed health insurance coverage by comparing public insurance coverage (Medicaid, state-based plans, CHAMPUS, Indian Health Service) and no insurance coverage with the referent private insurance group. Children with chronic illnesses were compared with children without such illnesses. Children's age was also entered into the models. Models were constructed with SUDAAN[8] statistical software, which accounted for the complex sampling framework of the NHIS.

## RESULTS

### Chronic Illness

Approximately 22% of the studied children were reported to have some form of chronic illness (Table 1). The most prevalent of these conditions was asthma, accounting for almost 30% of the chronic illness reported. Twenty-eight percent of all children with chronic illness were reported to have more than 1 chronic condition, and 11% had more than 2 such conditions.

Table 1 also suggests that more than one quarter of the TANF-enrolled children were reported as having chronic illnesses. This prevalence rate proved to be significantly higher than the rate for the unenrolled group (21.5% vs 25.6%; $P<.01$). However, more than 1 in 5 poor children not enrolled in TANF also were reported to suffer from some form of chronic illness. There were no significant differences between the 2 groups in types of conditions reported.

**TABLE 1—Chronic illness Among Poor Children, by TANF Enrollment Status: United States, 1998**

| | No Illness, No.[a] (%) | Chronic Illness, No.[a] (%) | Total, No.[a] |
|---|---|---|---|
| No TANF | 5359 (78.6) | 1477 (21.5) | 6836 |
| TANF | 2138 (74.4)[b] | 736 (25.6)* | 2874 |

*Note.* TANF = Temporary Assistance for Needy Families.
[a]In thousands.
[b]Difference between no TANF and TANF at $P<.01$.

**TABLE 2—Insurance Coverage Among Poor Children, by TANF Enrollment Status: United States, 1998**

| | Private, % | Medicaid, % | State Based, % | Other Public, % | Uninsured, % | Total, % |
|---|---|---|---|---|---|---|
| No TANF | 22.9 | 43.1 | 2.7 | 2.4 | 28.9 | 100 |
| TANF | 5.4[a] | 79.2[a] | 3.5[b] | 2.9[b] | 9.1[a] | ...[c] |

*Note.* TANF = Temporary Assistance for Needy Families.
[a]Difference between no TANF and TANF at $P<.01$.
[b]Difference between no TANF and TANF not significant.
[c]Does not equal 100 owing to rounding.

### Health Insurance Coverage

During the year under study, the majority of poor children were covered by Medicaid (Table 2). Eighteen percent of children had private insurance, primarily through employer-based plans; 3% were covered by state-based programs, including the State Child Health Insurance Program; and 3% had other public insurance. More than 23% of all studied children were reported to have had no insurance for the month before the interview.

There were major differences between children enrolled in TANF and their unenrolled counterparts in regard to health insurance coverage. Unenrolled poor children were more likely to have private insurance than were TANF-enrolled children ($P<.01$), although Medicaid coverage was still the most common form of insurance coverage for this group.

Importantly, poor children not enrolled in TANF were more than 3 times as likely as those enrolled in TANF to be uninsured ($P<.001$). Indeed, among the unenrolled children under study, 28.9% had been uninsured for at least part of the month before the interview. Nine percent of children enrolled in TANF were reported to have experienced a gap in insurance coverage over the previous month.

### Gaps in Coverage and Chronic Illness

Data on parents' reports of gaps in health insurance coverage of their children during the 12 months before the interview are presented in Table 3. These reports of insurance gaps were stratified by whether the child was reported to have a chronic illness. The data suggest that poor children without chronic illnesses were significantly more likely to have experienced a gap in insurance coverage than were children with chronic illnesses ($P<.01$). However, not being enrolled in TANF was strongly associated with a gap in coverage for children with and without chronic illnesses. Indeed, among unenrolled children with chronic disorders, almost one third experienced gaps in coverage, more than double the rate among enrolled chronically ill children ($P<.001$).

**TABLE 3—Gaps in Poor Children's Insurance Coverage During Previous 12 Months, by Chronic Illness and TANF Enrollment Status: United States, 1998**

| | No Illness, % | | Chronic Illness, % | | Total, % | |
|---|---|---|---|---|---|---|
| | Gaps | No Gaps | Gaps | No Gaps | Gaps | No Gaps |
| No TANF | 39.8 | 60.2 | 31.7 | 68.3 | 38.0 | 62.0 |
| TANF | 13.5[a] | 86.5[a] | 14.3[a] | 85.73[a] | 86.2[a] | 13.8[a] |

*Note.* TANF = Temporary Assistance for Needy Families.
[a]Difference between no TANF and TANF at $P < .01$.

**TABLE 4—Adjusted Odds Ratios for Models Examining the Relationship of Insurance Coverage, Chronic Illness, and TANF Enrollment Status With Selected Access Indicators**

| | Odds Ratio (95% Confidence Interval) | | | |
|---|---|---|---|---|
| | Seen by Physician in Past Year | Cannot Afford Medications | Cannot Afford Mental Health Services | Cannot Afford Dental Health Services |
| Public insurance[a] | 2.24 (1.70, 2.96) | 0.48 (0.30, 0.77) | 0.41 (0.19, 0.90) | 0.31 (0.21, 0.47) |
| No insurance[a] | 0.83 (0.51, 1.56) | 5.00 (2.79, 8.83) | 2.99 (1.09, 8.18) | 4.50 (2.69, 7.52) |
| Illness | 4.11 (2.66, 6.34) | 4.47 (2.89, 6.91) | 5.00 (2.43, 10.34) | 2.86 (1.66, 4.91) |
| TANF | 1.52 (1.08, 2.15) | 0.98 (0.58, 1.66) | 1.10 (0.46, 2.61) | 0.875 (0.48, 1.60) |

*Note.* All models include insurance coverage, presence of chronic illness, TANF enrollment status, and age of child.
TANF = Temporary Assistance for Needy Families.
[a]Referent group = private insurance.

### Medical Visits and Access to Care

Bivariate analyses showed that 78.4% of children enrolled in TANF and 64% of unenrolled children had had at least 1 physician visit in the preceding year. Children enrolled in TANF were also less likely than their unenrolled counterparts to have had difficulty affording medications (4% vs 7%; $P<.05$), mental health care (2.5% vs 1.7%; $P=.06$), and dental services (11% vs. 6%; $P<.01$). However, these differences were strongly associated with chronic illness, age, and insurance status. Therefore, multivariate models were constructed to assess the relationship between visitation and access problems (dependent variables) and TANF enrollment, insurance status, and chronic illness after age had been taken into account.

As can be seen in Table 4, public insurance coverage (Medicaid, state-based, and other public plans) was associated with a significant increase in physician visitation relative to private insurance coverage (odds ratio [OR]=2.24; 95% confidence interval [CI]=1.70, 2.96; $P<.001$). Being uninsured, however, was not significantly related to physician visitation. The presence of a chronic illness was strongly related to physician visitation in this group of poor children (OR=4.11; 95% CI=2.66, 6.34; $P<.001$). Enrollment in TANF was associated with physician visitation even after insurance coverage and illness had been entered into the model (OR=1.52; 95% CI=1.08, 2.15; $P<.05$).

Adult caretakers of children with public health insurance coverage were significantly less likely than caretakers of privately insured children to report being unable to afford medications (OR=0.48; 95% CI=0.30, 0.77; $P<.01$), mental health services (OR=0.41; 95% CI=0.19, 0.90; $P<.05$), and dental care (OR=0.31; 95% CI=0.21, 0.47; $P<.01$). In addition, caretakers of children without health insurance reported significantly more problems affording the costs of medications (OR=5.00; 95% CI=2.79, 8.83; $P<.001$), mental health services (OR=2.99; 95% CI=1.09, 8.18; $P<.05$), and dental care (OR=4.50; 95% CI=2.69, 7.52; $P<.001$) than did caretakers of privately insured children.

Similarly, the presence of a chronic illness was strongly associated with being unable to afford the selected elements of care. This relationship was generally maintained for both asthma and developmental conditions, although the numbers available for study were too small to permit more refined, condition-specific analyses. Interestingly, TANF enrollment had no significant effect on the examined indicators of access once illness and insurance status had been entered into the model.

## DISCUSSION

The findings of this analysis suggest that approximately 1 in 4 children enrolled in TANF during the study year had some form of chronic illness. Moreover, poor children enrolled in TANF tended to have more chronic illnesses than did their unenrolled counterparts. Chronic illness in children can be an important barrier to sustained maternal employment.[4–6] Even when women are themselves healthy and able to work, chronic illness in their children can make it difficult for them to obtain and keep a job. Appropriate child care for children with chronic illnesses may also be difficult to obtain (see the Romero et al.[9] and Smith et al.[10] articles elsewhere in this issue). Our findings help provide an empirical context for assessing emerging federal proposals that would force states to reduce flexibility in work provisions for mothers regardless of the health status of their children.

Although the Personal Responsibility and Work Opportunity Reconciliation Act eliminated the long-standing administrative linkage of cash assistance and Medicaid, the findings of this study suggest that TANF-enrolled children were far more likely to have had health insurance than were unenrolled poor children. We could not identify specific determinants of this disparity, including whether the unenrolled children were fully eligible for TANF, had been terminated from TANF, or had ever applied for TANF. However, enrollment in TANF may raise enrollees' awareness of the Medicaid program and, in many settings, facilitate Medicaid enrollment. Nevertheless, the high rates of uninsured children among non-TANF poor families are of

major concern. Accordingly, welfare policies that include strong efforts to enroll *all* eligible children in Medicaid programs or the State Child Health Insurance Program would be useful.

Newacheck et al.[11,12] have clearly documented that the combination of chronic illness and lack of health insurance can result in serious unmet health care needs. Our study highlights the relevance of this fact to current welfare deliberations by documenting particularly serious gaps in health insurance coverage among poor chronically ill children not enrolled in TANF. Moreover, these gaps were associated with serious financial barriers to obtaining prescribed medications and other elements of comprehensive health services.

The present findings suggest that the main reason for this beneficial TANF effect was the association of TANF with higher rates of health insurance coverage. Indeed, families with public health insurance for their children, primarily Medicaid, experienced even fewer problems affording costs of the studied elements of care than did poor families covered by private insurance. The problems faced by the poor families not enrolled in TANF also raise questions regarding welfare policies that attempt to prevent families from enrolling in TANF even if they are eligible. These "diversion" programs may not make special provisions for families with chronically ill children or facilitate adequate health insurance coverage.

Our findings should be interpreted with some caution. The accuracy of parental reports of childhood illness and health care use should always be viewed critically. However, the parental report variables included in this study have been examined extensively and used constructively to assess child health care needs.[11,12] Defining chronic illness in children can also be problematic, and prevalence estimates have varied accordingly.[13,14] In addition, reduced contact with health care providers among children without health insurance could result in underestimations of the prevalence of chronic conditions. Our use of conditions that are likely to be both chronic and serious would tend to minimize, although not eliminate, this concern.

The NHIS has been used extensively to examine a variety of health issues, but it contains relatively little information about families' experiences with TANF and other public benefit programs. Particularly because enrollment in such programs can be highly dynamic, the survey questions used in this study may not accurately reflect complex patterns of program participation over the course of any given year. Analysis of subsequent years is also essential. Given the important interactions between welfare policies and health, the lack of rich integrated data sets that include both welfare and health variables should be addressed urgently as part of the welfare reauthorization process.

In summary, our findings emphasize the importance of health concerns to the development of effective welfare policies. The requirements of clinical conditions among poor children and their parents remains a critical determinant of familial need as well as familial capacity. The present findings underscore the vulnerability of poor families with chronically ill children to welfare policies that preclude or terminate TANF benefits but do not adequately ensure access to health insurance or the necessities of life. ■

## About the Authors

*Paul H. Wise is with the Department of Pediatrics, Boston Medical Center and Boston University School of Medicine, Boston, Mass. Nina S. Wampler is with the Division of American Indian and Alaska Native Programs, University of Colorado Health Science Center, Denver. Wendy Chavkin and Diana Romero are with the Heilbrunn Department of Population and Family Health, Mailman School of Public Health, Columbia University, New York City.*

*Requests for reprints should be sent to Paul H. Wise, MD, MPH, Boston Medical Center, Department of Pediatrics, Maternity-4, One Boston Medical Center Pl, Boston, MA 02118 (e-mail: pwise@bu.edu).*

*This article was accepted May 24, 2002.*

## Contributors

P.H. Wise developed the analytic plan, interpreted the data, and wrote the manuscript. N.S. Wampler assisted in developing the analytic plan, conducted the computerized analyses, and edited the manuscript. W. Chavkin and D. Romero assisted in developing the analytic plan and in editing the manuscript.

## Acknowledgments

This research was supported in part by funding from the Ford Foundation, the General Service Foundation, the Maternal and Child Health Bureau, the Moriah Fund, the Office of Population Affairs, the Open Society Institute, and the Peabody Foundation.

The authors thank Madeline Howard for her assistance in preparing the manuscript.

## Human Participant Protection

Ethical clearance for analysis of the National Health Interview Survey was provided by the institutional review board of the Boston University School of Medicine.

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