

**Patterns of Long-Term Utilization of Medicaid and Food Stamps
by Wisconsin Welfare Leavers**

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KEY FINDINGS

1. Those who left the Wisconsin cash assistance rolls in 1997 were much more likely to take up Food Stamps and Medicaid than were those who left in 1995.
2. Rates of program take-up reported in this paper for Wisconsin are higher than most rates reported in studies of other jurisdictions, even among those who left in 1995.
 - A. One year after exit, mean take-up rates for Food Stamps in most of the studies using administrative data that we summarize were 35 percent; our mean Food Stamp take-up rates 1 year after exit were 38 percent for the 1995 leavers and 59 percent for the 1997 leavers.
 - B. Most of the studies using administrative data indicate that the Medicaid take-up rate for mothers 1 year after leaving cash welfare was about 40 percent, well below our estimated Medicaid coverage rates in the fourth quarter after leaving of 48 percent for the 1995 leavers and 63 percent for the 1997 leavers.
 - C. For children, Medicaid take-up rates 1 year after leaving cash welfare in most studies we summarize were in the range of 50–60 percent, again below our estimated children's Medicaid coverage rates in the fourth quarter after leaving of 62 percent for the 1995 leavers and 82 percent for the 1997 leavers.
3. Eligibility for Food Stamps declined with the passage of time after leaving cash welfare, but participation rates among those who were eligible declined much more quickly. Of those who left in 1995, Food Stamp eligibility levels declined from 96 percent in the first year after leaving to 82 percent in the fourth year. Participation rates among those who were eligible declined from 60 percent at some time in the first year after leaving to 37 percent at some time in the fourth year.
4. Of those eligible for Medicaid, participation rates among 1995 leavers dropped from 73 percent at some time in the first year after leaving to 37 percent in the fourth year among mothers, and from 81 percent at some time in the first year to 55 percent in the fourth year among children.
5. Factors having the largest simulated effects on increasing participation in the **Food Stamp** program among those who were eligible included higher levels and longer periods of eligibility (both the number of quarters eligible and the level of monthly benefits); having larger numbers of children; and maternal employment in a job covered by the Wisconsin Unemployment Insurance system.
6. Factors having the largest simulated effects on increasing **Medicaid** take-up for both mothers and children included higher levels of maternal education; having another adult in the family; and maternal employment in a job covered by the Wisconsin Unemployment Insurance system. After the start of Wisconsin's Children's Health Insurance Program (called BadgerCare in Wisconsin) in July 1999, the presence of more children in the family had a much stronger effect on the probability of Medicaid/BadgerCare take-up than it had had on Medicaid take-up before that time.
7. In a sample of children whose mothers had at some time participated in Wisconsin's W-2 program, those most likely to be uninsured (without either Medicaid or private health insurance) were (a) children who moved at some point during the year and (b) children whose mothers worked for firms that offered health insurance (an unexpected result).

8. The introduction of Wisconsin's BadgerCare program in July 1999 increased eligibility for public health insurance coverage (more so among mothers than among children), but take-up rates among eligible leavers remained approximately constant after the start of BadgerCare.

Abstract

Subsidized medical insurance and food purchases through the Medicaid and Food Stamp programs potentially improve the health and economic well-being of low-income people, but only if eligible participants receive program benefits. Reports of low rates of take-up and decreases in Food Stamp and Medicaid participation rates following passage of welfare reform legislation in 1996 have raised concerns about the health care coverage and nutritional status of low-income people, particularly former recipients of cash welfare. This paper describes the long-term utilization of Food Stamp and Medicaid benefits for two cohorts of welfare recipients who left the cash benefit rolls in Wisconsin. The first cohort consists of those who left cash welfare in 1995 (under an early welfare reform regime); the second cohort consists of those who left welfare 2 years later, in 1997. The paper estimates both initial take-up rates (that is, participation rates among those eligible immediately after exit from cash welfare) and participation rates for extended periods after leaving the rolls. The correlates of the decision to participate in these in-kind benefit programs after ceasing to be a recipient of cash benefits are explored, and participation rates of a variety of prototypical female family heads are simulated. Participation eroded over time after exiting cash welfare in similar patterns for the two cohorts, but the overall level of take-up was substantially higher for the latter (1997) cohort of leavers. The paper also explores the likelihood that those without Medicaid coverage have other health insurance coverage, using another sample from Wisconsin.

I. INTRODUCTION

Welfare caseloads have fallen sharply since enactment of the Temporary Assistance for Needy Families (TANF) block grant in 1996,¹ raising questions about the experiences of those who have left this cash assistance program (“leavers”). Substantial evidence suggests that most women who left welfare under initial reforms found jobs, although most of them did not earn enough to escape poverty (see Loprest, 1999, and U.S. General Accounting Office, 1999a, for reviews of state-specific studies of leavers). This is true both nationally and in Wisconsin, although work participation in Wisconsin has exceeded that in the remainder of the nation (see Cancian et al., 2000a). Early evidence suggested that, upon exiting welfare, leavers substantially reduced their participation in Medicaid and Food Stamps, two means-tested benefit programs that can protect the nutritional status of, and provide access to medical care for, poor women and children.

This paper analyzes the long-term patterns of receipt of Food Stamp and Medicaid benefits for two groups of women who left the cash welfare program in Wisconsin. The first group left the main means-tested cash program, Aid to Families with Dependent Children (AFDC), in late 1995 under welfare reform measures undertaken in the state at that time. The second group left welfare 2 years later, after the implementation of Wisconsin Works (W-2), the state’s TANF program.

The experience of Wisconsin is of particular interest because the state has been a leader in welfare reform. Wisconsin began work-based welfare reforms in the late 1980s and implemented several major reforms in the mid-1990s, before TANF, including a Parental and Family Responsibility initiative in 1994, which covered four counties (including Milwaukee County, by far the state’s largest); the Work

¹In Wisconsin, AFDC/TANF cash reciprocity caseloads fell by 50 percent between December 1996 and December 1997, amplifying a decade-long trend of caseload reductions (from over 100,000 AFDC cases in 1986 to 22,000 AFDC or TANF cases in 1997). After 1997, the cash reciprocity caseload continued to fall and stood at 37,381 cases as of June 2000 (<http://www.acf.dhhs.gov/news/stats/caseload.htm>).

Not Welfare program in two counties in 1995; and the statewide Pay for Performance program in early 1996.²

W-2 took effect over a 7-month period, from September 1997 to March 1998. Under W-2, no assistance is available to families unless they participate in work or work-preparation activities, and assistance is time-limited.³

Concerns about the participation of eligible poor families in the Food Stamp and Medicaid programs have intensified as the number of cash benefit leavers has risen. During the time that these families are receiving cash assistance, Wisconsin's electronic eligibility and benefit system, CARES, assures that the families rather automatically receive a variety of other supports, including Food Stamps and Medicaid. However, after participants leave cash assistance, the automated linkage between cash welfare and these noncash benefits is severed. Owing to Wisconsin's early start in enforcing intensive work obligations, an analysis of the use of Food Stamp and Medicaid benefits by those who left the caseload during the mid-1990s provides evidence on the likely take-up of Medicaid and Food Stamp benefits by those who have left and will leave welfare in other states whose reform programs were implemented later than was the case in Wisconsin. Moreover, a comparison of those who left welfare before the 1996 national reform took effect with those who left under the later, more stringent, work-based policy provides evidence concerning the differential effects of these two policy models on the subsequent use of noncash benefits.

Much public controversy has surrounded Food Stamp and Medicaid usage in Wisconsin. According to the U.S. General Accounting Office (1999b), between August 1996 and August 1998 Wisconsin experienced the fourth largest percentage decrease in the Food Stamp caseload among the 50

²The Parental and Family Responsibility initiative, often called "Bridefare" by the media, was an attempt to modify fertility and family-formation behavior among teens and improve their economic well-being by granting young cohabiting couples liberalized access to AFDC in return for reduced grant increases for second children and increased work obligations for fathers. The Work Not Welfare program introduced strict work requirements and a 2-year time limit on benefits. The Pay for Performance program expanded the strict work requirements to all counties in Wisconsin.

³Ehrle et al. (2001) and Kaplan (2000) discuss the provision and implementation of W-2.

states (a drop of 31.9 percent, from 283,300 to 192,900 cases).⁴ The GAO also reports (1999b) that among children in Wisconsin, the drop from fiscal year 1995 to 1997 was 30.1 percent (from 186,000 to 130,000 children); this is the highest percentage reduction among all states.

Wisconsin also ranked among the top states in the decline of its Medicaid caseload in the mid-1990s. Using edited federal administrative data from the Health Care Financing Administration, Ku and Bruen (1999) report that from 1995 to 1997 Wisconsin had the third largest percentage decrease in the Medicaid caseload among families containing minor children without a disability (a drop of 18.6 percent, from 321,880 to 271,400 cases). As of 1997, 32.9 percent of the poverty population was covered by Medicaid in Wisconsin, compared with the overall U.S. rate of 38.9 percent. Among children the comparable percentages were 51.4 percent in Wisconsin and 57 percent nationally (Urban Institute, 2000, Table 2).

II. WHY PARTICIPATION MATTERS

Increasing evidence suggests that the provision of Food Stamps increases food consumption among program participants and that health insurance, including public health insurance such as Medicaid, increases health care utilization. Evidence is less direct that Food Stamps improve the nutritional quality of recipients' diets or that Medicaid improves the health status of program participants.

Rossi (1998) summarized several studies on the effect of participation in the Food Stamp program. He concluded that Food Stamps have increased food consumption by about 30 cents for each dollar of Food Stamp benefits. For the average Food Stamp household in 1996, Food Stamps thus resulted in increased food expenditures of about \$52 per month.⁵ The evidence on the nutritional effects of

⁴The Wisconsin Legislative Audit Bureau (2000) reported that between March 1995 and July 1999 the number of people receiving Food Stamps dropped by 45.2 percent, or by 147,370 persons.

⁵“By any standard,” says Rossi (p. 38), “this increment is substantial. Assuming that a gallon of milk costs \$3.00, for example, the increase in food expenditures translates into almost 17 gallons of milk, or about 109 8-ounce glasses of milk per person (assuming 2.5 persons per household). . . . It is unrealistic to suppose that the food consumption increment will be composed of any one item of food. These calculations are presented to show that increased consumption can have important substantive effects.”

increased consumption is less robust, although Rossi summarized a number of studies that found Food Stamps yielding nutritional improvement for children between the ages of 1 and 5. The American Dietetic Association (1998) also cited findings that Food Stamps led to improved nutrition among program participants.

The question of what effect health insurance, including Medicaid, has on health care utilization has received much research and policy attention across the United States (Bloom et al., 1997; Davis and Reynolds, 1976; Manning et al., 1987) and in Wisconsin (Wisconsin Bureau of Health Care Information, 2000; Frey, 2001; Soref, 1990). The research consensus is that people without insurance are less likely to receive medical care, although it appears that the effect of insurance coverage on utilization differs by age and measures of health status (Freeman et al., 1990). These findings indicate that individuals often shift in and out of insured status, with many more people uninsured in some months during a year than over the full year; even intermittent (rather than permanent) health insurance coverage reduces utilization (Copeland, 1998). Kogan et al. (1995) find that children with gaps in health insurance coverage are less likely to have a regular source of care, in part because new insurance coverage sometimes requires the use of different providers. Lave et al. (1998) report that longer periods without insurance reduce the likelihood of using health care services. Davidoff et al. (2000) find that the uninsured are no less healthy, but are much less likely to have a usual source of care and more likely to report an unmet medical need and to have delayed seeking care owing to cost. They are also less likely to visit a provider, more likely to have fewer provider visits if they visit at all, and less likely to enter a hospital. Davidoff et al. also report that the uninsured spend more out-of-pocket on health care than do the insured.

Using an annual Wisconsin Family Health Survey (sponsored by the Wisconsin Department of Health and Family Services and conducted by a survey research laboratory at the University of Wisconsin), Holden et al. (2001) were able to confirm many of these results with Wisconsin data. Controlling for such factors as race, age, income, health status, the education of the survey respondent, household structure, and urban/rural residential location, those with no insurance coverage over an entire year were only about one-fourth as likely to have visited a doctor, three-tenths as likely to have had a

check-up, and one-sixth as likely to have visited a dentist as those with insurance coverage for the full year. Those with insurance coverage for part of the year were no less likely to have visited a doctor than those with insurance coverage for the full year, but they were significantly less likely to have visited a dentist, to have had a check-up, or to have had a usual source of medical care.⁶

As a complement to this research, we have analyzed survey data on low-income mothers who participated in the W-2 program. The results from this research provide additional evidence that health insurance coverage affects health care utilization. The survey, part of the Wisconsin Child Support Demonstration Evaluation (CSDE), identified 3,000 mothers to be interviewed twice, once in 1998 and once a year later, in 1999. Both interviews were completed with 82 percent of the mothers. The survey asked questions about insurance coverage, health status, and health utilization for a randomly selected focal child of the mother.⁷

Controlling for numerous factors that could also be related to health care utilization (for example, the child's health status, the number of siblings, the mother's education, the mother's current work status), we found that children aged less than 13 years with (at least some) health insurance coverage were more likely to have made a routine visit to a doctor (that is, a visit not aimed at addressing a specific illness or condition) than were children without health insurance. Similarly, again controlling for other factors, uninsured children older than 2 were significantly less likely to have visited a dentist over the course of the year. However, having insurance (and having routine doctor and dental visits) could not be confirmed to be associated with mothers' reports of an improvement in a child's health from 1998 to 1999.

⁶As with nearly all such research, a potential problem of endogeneity exists: that is, individuals who expect to use more care may be more likely to purchase or apply for coverage. This research did, however, control for the limited measures of health status available from the survey instrument.

⁷A more detailed discussion of this data set is provided in Section XI.

These findings concerning the effects of insurance coverage in the Wisconsin CSDE sample are detailed in Appendix Table A1, which presents probit estimates for routine doctor visits; Table A2, which shows probit estimates for dentist visits; and Table A3, showing improvements in reported health.

III. PRIOR RESEARCH ON NONCASH BENEFIT USE AMONG LEAVERS

The first studies that addressed the take-up of noncash benefits appeared in 1999 and 2000. Based on the Urban Institute's National Survey of America's Families, Zedlewski and Brauner (1999) found that 42 percent of eligible families with children who left welfare after 1995 were receiving Food Stamp benefits when they were surveyed in 1997.⁸ Using the same 1997 survey, Garrett and Holahan (2000) reported that among the same group of post-1995 leavers, just 36 percent of the mothers and 50 percent of the children reported that they were enrolled in Medicaid at the time of the 1997 interview.⁹

A second source of information on the take-up of noncash benefits are state-specific studies of Food Stamp and Medicaid benefit utilization among former welfare recipients. Dion and Pavetti (2000) summarized these studies, reporting on Food Stamp and Medicaid take-up rates 12 months after leaving welfare and distinguishing between studies based on administrative and survey data. Their results are shown in Table 1. Take-up appears somewhat higher in the survey-based studies than in studies based on administrative data.

A third source of information comes from Isaacs and Lyon (2000), who summarized noncash benefit use from leavers studies funded by the U.S. Department of Health and Human Services; most of these studies are based on administrative data. The estimates from these studies are also reported in Table 1. These studies report somewhat lower take-up rates than those found in Dion and Pavetti, but Issacs and

⁸These families had received Food Stamps at some time since the beginning of 1995, were still income-eligible for Food Stamps in 1997, and were former cash welfare recipients

⁹Forty-one percent of the mothers, and 25 percent of the children, had no insurance at all. Another 23 percent of mothers, and 27 percent of children, had private health coverage, and 4 percent of mothers (2 percent of children) received coverage through the military or through Medicare. Garrett and Holahan also reported that only 22 percent of mothers and 47 percent of children were covered by Medicaid if they had exited welfare 1 year or more prior to the interview.

TABLE 1
Food Stamp and Medicaid Take-Up Rates among Welfare Leavers^a

Study	Food Stamp Take-Up ^b	Medicaid Take-Up ^c
Dion and Pavetti (2000); administrative data	30–45%	36 (mother)–64 (child) %
Dion and Pavetti (2000); survey data	29–60%	38–80% (mothers), excluding an outlier estimate of 20% for Missouri
Isaacs and Lyon (2000)	20–40%	15–60%

^a While Issacs and Lyons report lower take-up rates, this variation may be a result of measurement differences among the exit cohorts and the source of data relied on in each study. For a more complete description of the studies reviewed by Dion and Pavetti and Issacs and Lyons, see Appendix B.

^b These studies report on Food Stamp take-up rates 12 months after leaving welfare.

^c These studies report on Medicaid take-up rates 12 months after leaving welfare.

Lyons, in many cases, reviewed different studies than did Dion and Pavetti. In addition, any variation in their findings may be accounted for by intrinsic differences between the studies and type of data examined by each report. Specifically, many of the studies reported on by Dion and Pavetti rely on survey data, as opposed to administrative data, and measured take-up rates for exit cohorts who left cash assistance later than those in the Issacs and Lyons studies.

In Appendix B, we present the results of other studies identified in five recent reports that summarize studies of the take-up of noncash benefits by leavers.¹⁰ While many of the studies include measurements of both Food Stamp and Medicaid take-up rates, each noncash benefit take-up rate has been separately considered in the appendix. Appendix Table B1 presents the Food Stamp studies, Appendix Table B2 the Medicaid studies for mothers, and Appendix Table B3 the Medicaid studies for children.¹¹ The tables identify whether each study was based on administrative or survey data, the state in which the study was undertaken, the exit cohort, the period (or point in time) after exit at which take-up is measured, the population of leavers, the definition of take-up, and the estimated take-up rate.

Table 2 tabulates summary statistics from the several studies summarized in Appendix B.

Considering first the results for Food Stamps (Appendix Table B1), most of the studies identified in the table are based on administrative data and measure take-up at the end of the first year after exit or later. Take-up is defined in all the studies as the proportion of *all* leavers (not *eligible* leavers) who receive Food Stamp benefits. The studies based on administrative data are likely to be the most comparable to our own findings reported below. Among the studies based on administrative data, the mean rate of Food Stamp take-up at least 1 year following exit is 34 percent; the median is also 34 percent. For studies based on survey data, those figures are 48 and 45 percent, respectively. The take-up

¹⁰These reports are Brauner and Loprest (1999), Dion and Pavetti (2000), Office of the Assistant Secretary for Planning and Evaluation (2000, 2001), and Acs and Loprest (2001). While these reports often examine different exit cohorts and data sources, there is considerable overlap in their coverage as they rely on a finite number of studies drawn from 15 states, 2 cities, and the District of Columbia.

¹¹Bibliographic references to all of the studies summarized in Appendix Tables B1 to B3 are presented in Appendix Table B4.

TABLE 2
Summary of Results from Studies of Food Stamp and Medicaid Take-Up among Leavers

	Date after Exit at Which Take-Up Is Measured	Number of Measurements	Administrative Data		Survey Data	
			Mean Take-Up Rate (N)	Median Take-Up Rate (N)	Mean Take-Up Rate (N)	Median Take-Up Rate (N)
Food Stamp Take-Up (Appendix Table B1) ^a	Any time within year after exit	16	55% (15)	57% (15)	88% (1)	88% (1)
	End of first year after exit or later	28	34% (20)	34% (20)	48% (8)	45% (8)
Mother's Medicaid Take-Up (Appendix Table B2) ^b	Any time within year after exit	8	66% (8)	71% (8)	NA	NA
	End of first year after exit or later	25	40% (13)	40% (13)	55% (12)	56% (12)
Children's Medicaid Take-Up (Appendix Table B3) ^c	Any time within year after exit	3	59% (3)	50% (3)	NA	NA
	End of first year after exit or later	14	47% (7)	51% (7)	59% (7)	60% (7)

^aThirteen measurements are omitted from the tabulation because the date at which take-up is measured does not conform to the categories shown, or the sample of observations is of continuous or sanctioned leavers.

^bTwenty-two measurements are omitted from the tabulation because the date at which take-up is measured does not conform to the categories shown, or the sample of observations is of continuous or sanctioned leavers.

^cTwelve measurements are omitted from the tabulation because the date at which take-up is measured does not conform to the categories shown, or the sample of observations is of continuous or sanctioned leavers.

rates measured as any receipt of Food Stamps during the 12 months after exit are substantially higher than those observing take-up at the end of the first year or later. For example, in the studies based on administrative data, the mean and median take-up rates measured as receiving benefits at any time during the first year are 55 and 57 percent, respectively. Both the administrative and survey estimates of take-up rates reported in these studies exceed those reported in Dion and Pavetti (2000) and Isaacs and Lyon (2000), described above.

Appendix Table B2 presents estimates of Medicaid coverage rates for mothers in the leaver units. A total of 33 measurements are summarized in the table; again most are based on administrative data and measure take-up at the end of the first year after exit or later. Among studies based on administrative data, the mean and the median take-up rate at the end of the first year after exit are each 40 percent. Both the mean and median for studies based on survey data are substantially higher than reported for the administrative data studies; these figures are 55 and 56 percent, respectively. For take-up measured as receipt at any time during the first year after exit, the rates are again substantially greater than when measured at the end of the first year; the mean is 66 percent and the median is 71 percent. This suggests that mothers retained coverage in the first months after leaving, consistent with eligibility provisions in Medicaid law, but lost coverage over the course of the year after leaving welfare. Again, the take-up rates reported in these studies exceed those reported in the earlier studies described above.

Concerning estimates of Medicaid coverage for children taken from the more recent studies (Appendix Table B3), the studies based on both administrative and survey data measuring take-up after 1 year following welfare exit indicate mean and median children's coverage rates of 53 to 60 percent. Again, these exceed the estimated rates reported in the earlier studies. Somewhat unexpectedly (at least in comparison to the studies of mothers' Medicaid take-up), the few studies measuring children's Medicaid

take-up at any time during the first year suggest take-up rates only slightly greater than those for children's Medicaid take-up after 1 year.¹²

In sum, then, and to facilitate comparison with our research based on administrative data, reported below, the studies reviewed in Appendix B that are based on administrative data suggest take-up rates at least 1 year after exit of about 34 percent for Food Stamps, about 40 percent for mothers' Medicaid, and about 47 percent for children's Medicaid coverage.

It should be noted that most of the studies summarized in Appendix B measure take-up as the fraction of all leavers who receive benefits, and do not account for eligibility for benefit receipt. Available evidence suggests that program ineligibility is not a significant reason for the relatively low use of both Food Stamps and Medicaid.¹³ Most of the families that have left cash assistance have incomes well under 130 percent of the federal poverty line, the gross income maximum for Food Stamp eligibility.¹⁴ Medicaid has even higher income limits and provides expanded coverage for children.¹⁵

¹²These estimates are based on three studies, of which two are from San Mateo County (CA), which has estimated rates of take-up for Food Stamps and mothers' Medicaid that are also substantially below those of other states and jurisdictions.

¹³Although Daponte, Sanders, and Taylor (1999) found that many households who seemed eligible for Food Stamps based on an initial survey were found to be ineligible after more detailed screening, often owing to assets that exceeded eligibility thresholds, their study included elderly and childless households, not just households demographically similar to welfare leavers.

¹⁴The 1996 Personal Responsibility and Work Opportunity Reconciliation Act (PRWORA) reduced eligibility for Food Stamps for families at the high end of the eligibility range by dropping the basic Food Stamp benefit to 100 percent of the Thrifty Food Plan (from 103 percent) and freezing the standard deduction at 1996 levels. However, these modifications had more effect on overall benefit levels than on the number of eligible families (Zedlewski and Brauner, 1999). PRWORA also eliminated eligibility for legal immigrants who had not accumulated at least 40 quarters of social security coverage or served in the U.S. military. However, the Agriculture Research, Extension, and Education Reform Act of 1998 reinstated Food Stamp eligibility for legal elderly, disabled, and child immigrants who were living in the United States when PRWORA was passed. Those who entered the United States after PRWORA are eligible only for emergency services, unless they obtain citizenship.

¹⁵Under the Family Support Act of 1988, families who received Medicaid in 3 of the last 6 months and left welfare owing to increased earnings retain Medicaid eligibility for 6 months regardless of income. Families that left welfare owing to increased income from child support retain Medicaid eligibility for 4 months after leaving. Both groups receive another 6-month extension if their household incomes (less disregards for child care expenses) do not exceed 185 percent of the federal poverty line. In addition, federal law requires states to provide Medicaid to children under age 6 with family incomes below 133 percent of the federal poverty line and to all children born after September 30, 1983, with incomes below the federal poverty line. Most states have expanded Medicaid coverage (or coverage under the state Children's Health Insurance Program, enacted in 1997) for children well beyond these minimum requirements.

Take-up rates that are well below their potential among leavers in both the Food Stamp and Medicaid programs are not new, and predate recent state welfare reforms. See, for example, Ellwood and Adams (1990),¹⁶ Moffitt and Slade (1997), and Blank and Ruggles (1993). Prior studies concerning the number of leavers and their use of Medicaid and Food Stamps in Wisconsin include Cancian et al. (1999b), based on administrative data,¹⁷ and Wisconsin Department of Workforce Development (1998), using survey data.¹⁸

Some of the recent concern over benefit use among leavers has been prompted less by evidence that their benefit use has declined than by increases in the overall number of leavers. Moreover, if those who left welfare (who at least had the experience of receiving Food Stamps and Medicaid almost automatically while on cash assistance) have such low rates of postwelfare participation, it seems possible that poor families who are eligible for in-kind benefits but never receive cash assistance—presumably a growing population as cash assistance has become less common—have even lower Food Stamp and Medicaid take-up rates.

IV. DATA AND METHODS

Study of benefit take-up is facilitated in Wisconsin by the availability of integrated administrative data on the use of noncash benefits. Since 1994, the state has operated an integrated automated case management system—called the Client Assistance and Re-employment System, or CARES—that merges data on cash welfare benefits, Food Stamp receipt, and Medicaid eligibility and participation. In addition,

¹⁶The patterns reported in this study reflect a substantially different policy regime than that of many earlier studies, since federal legislation in 1988 extended Medicaid eligibility for 12 months after leaving AFDC.

¹⁷This study reported a 46 percent participation rate in the first quarter after exit for Food Stamps and Medicaid among those who left the Wisconsin AFDC program in late 1995 and early 1996 and who remained off for at least five calendar quarters after exit. The proportion participating in both Food Stamps and Medicaid declined to 28 percent by the fifth quarter after exit.

¹⁸This was a survey of 547 randomly selected leavers, with a response rate of 69 percent. It reported on benefit use by those who received cash benefits between January and March 1998 and who had stopped receiving any cash benefits by April 1, 1998. Five to 11 months after leaving, 49 percent were receiving Food Stamps and 75 percent of the leavers or their family members received Medicaid.

the Computer Reporting Network (CRN) system, the precursor of CARES, provides similar information for the period before 1994, useful for constructing an AFDC history for each case. The availability of information on the receipt and level of benefits in each of these programs in the same data system eliminates the need to match participants across the benefit programs. Information on the quarterly earnings of these cases, available from the Unemployment Insurance (UI) system, was then merged with the CARES records.

We use these administrative data to analyze the demographic characteristics and patterns of Food Stamp and Medicaid utilization of two cohorts of single-mother families¹⁹ who left cash assistance in Wisconsin.²⁰ The first cohort consists of those who left the welfare rolls during Wisconsin's initial reform efforts (the last 3 months of 1995), and the later cohort consists of those who left during the early stages of W-2 (the last 3 months of 1997). We count as "leavers" those who exited cash assistance within 3 months of our initial observation (September of 1995 and 1997) and remained off the welfare caseload for at least 2 consecutive months between October and January. There are 7,879 cases in the first (1995) cohort, and 7,828 cases in the second (1997) cohort.

For these two cohorts of nonreturning welfare leavers, we estimate eligibility for Food Stamp and Medicaid benefits by assuming that the earnings reported to the UI system represent a family's quarterly income. Appendix C describes our procedure for identifying those in the samples of leavers who are eligible for Food Stamp and Medicaid benefits. It also provides more detail on the samples of leavers and the variables describing the members of each sample.

¹⁹Our analysis focuses on single-mother families with children. When we refer to the characteristics of "leavers," we are generally referring to the mothers. In administrative terms, a recipient unit (assistance group) is a "case," which may not always be synonymous with "family," owing to various program rules on reciprocity. Because our sample consists of single mothers and their children, we use the term "family" in place of "case" and "mother" or "family head" in place of "case head."

²⁰Since eligibility for legal immigrants under the Food Stamp program changed substantially over this period, and because we are unable to determine if or when immigrants obtain citizenship, we have omitted the 1.8 percent of leavers who were coded as noncitizens at the time of welfare entry in the 1995 cohort, and the 3 percent of leavers who were coded as noncitizens in the 1997 cohort.

Finally, we identify from the administrative data families among the eligible population who chose to receive Food Stamp and Medicaid benefits. By comparing the number of participating families with the number of eligible families, we calculate participation (or take-up) rates for various groups and points of time.

Several important limitations must be kept in mind in interpreting our results. First, our data on benefits and earnings are limited to public assistance benefits received in Wisconsin and earnings reported to the Wisconsin UI system. Hence, we may miss some leavers who move away from Wisconsin and thus underestimate their take-up or earnings.²¹ Second, we have measures of the earnings of other adults living in the household of the leavers if they were officially part of the AFDC or Food Stamp case recorded in the CARES computer system, but not of other income sources, such as property income or income of other adults living in the household but not reported in the CARES system.²² Among the members of our two samples of leavers, these other income sources would have to be substantial (\$2,500–\$3,000 per quarter) to push the typical household past the eligibility threshold for Food Stamps. We thus believe that the degree of overstatement in our estimate of the population of leavers eligible for Food Stamps and Medicaid (and, hence, understatement of participation rates) owing to this factor is not large.²³ A third

²¹For the 1995 cohort of leavers, 17.5 percent of the households had no earnings recorded in the UI system during the first year after exit from AFDC. Of those with no recorded earnings, 48.7 percent (8.4 percent of the entire cohort) also received no other services (AFDC, Food Stamps, or Medicaid), suggesting that they may have left the state. For the 1997 cohort, 15 percent had no reported earnings during the year. Of those with no recorded earnings, 24.3 percent (3.6 percent of the entire cohort) did not receive Food Stamps, Medicaid, or AFDC/TANF.

²²During the first year after exit the percentage of households in which we observe earnings of household members other than the mother range from a low of 8.4 percent in the first quarter after exit to a high of 10.7 percent in the fourth quarter after exit for the 1995 cohort. For the 1997 cohort the range is from 6.9 percent in the first quarter after exit to 10.2 percent in the fourth quarter after exit.

²³Evidence on the proportion of total household income that is accounted for by the earnings of household members is found in Moffitt and Roff (2000) and Isaacs and Lyon (2000). Their estimates indicate that the sum of adult earnings in the households of the leavers accounts for about 75–80 percent of total household income, with public transfer income accounting for nearly all of the remainder. Because we take into account the value of Food Stamps in our measure of income and because we include the earnings of all household members receiving Food Stamps or Medicaid in calculating the pool of eligibles, we conclude that our estimate of the size of the eligible population is not substantially greater than the true pool of eligibles. See also Freedman et al. (2000), which contains information from the National Evaluation of Welfare-to-Work Strategies on the sources of income of leavers, and on the extent to which they live with others with income. Rolston (2000) notes the difficulties inherent in inferring overall family well-being based only on the earnings data available from administrative sources.

limitation is that, because the UI data are quarterly, whereas program eligibility is based on monthly income, we make the simplifying assumption that the household's earnings are equally distributed over the 3-month period.²⁴ Again, this is likely to exaggerate the size of the population of eligibles, leading to understatement of take-up or participation rates. Finally, we do not have information on assets, although Zedlewski and Brauner (1999) indicate that very few families who are income-eligible for noncash benefits would lose eligibility by failing to pass the assets test.

On balance, these limitations suggest that we may report populations of eligible recipients in the two cohorts that are somewhat larger than the true eligible populations. They also suggest that our estimates of benefit receipt may be somewhat too low, because benefits granted by states other than Wisconsin are not captured. Both of these effects would lead to estimated take-up or participation rates that are biased downward. However, because these gaps in coverage or receipt do not appear to be substantial, we judge that the extent to which our reported participation rates lie below the true rate of coverage is not large.

V. THE WELFARE CASELOAD, LEAVERS, AND NONCASH BENEFIT RECIPIENTS: NUMBERS AND CHARACTERISTICS

A. The Welfare Caseload and the Sample of Leavers: 1995 and 1997

Table 3 shows the size and the characteristics of the welfare caseload and the population of leavers forming the 1995 and 1997 cohorts. In September 1995, there were 48,197 AFDC participants; by September 1997 this had fallen to 19,738 cases. The 7,879 cases who left welfare in 1995 constituted 16 percent of the AFDC participants at that time; the 7,828 leavers in 1997 constituted 40 percent of the caseload then (see below).²⁵

²⁴This may result in overestimates of the population ever eligible, and some inaccuracy in defining the period of eligibility. For example, we may declare a family to be eligible for the entire period when they are only eligible for 1 or 2 months, or find a family not eligible when they are eligible for a part of a quarter.

²⁵Our sample includes both those who did and who did not return to welfare within the next calendar year (after being off the rolls for 2 consecutive months).

TABLE 3
Characteristics of the AFDC-Regular Caseload in Wisconsin – U.S. Citizens Only

	1995		1997	
	All Cases	Leavers	All Cases	Leavers
Total (N)	48,197	7,879	19,738	7,828
%		16.3		39.7
Region				
Milwaukee	55.0	38.9	75.7	56.3
Other urban	29.1	36.4	16.8	29.7
Rural	15.9	24.7	7.5	14.1
Mother's Age				
18–24	36.3	32.3	38.0	38.4
25–29	23.9	24.1	22.5	23.4
30–39	32.2	34.9	30.6	30.3
40+	7.6	8.7	8.9	7.9
Education				
<11 years	22.8	18.0	27.3	22.6
11 years	19.7	15.0	25.8	22.3
12 years	42.9	48.3	37.1	42.0
>12 years	14.6	18.6	9.8	13.1
Race				
White	41.4	54.5	22.9	35.9
African American	43.3	30.9	59.6	45.7
Hispanic	6.2	5.9	6.8	7.3
Other	3.1	3.2	2.5	3.6
Unknown	6.1	5.5	8.2	7.5
Number of Own and Foster Children				
1	39.1	46.9	33.1	35.6
2	30.0	30.3	29.2	30.1
3+	30.9	22.8	37.7	34.3
Age of Youngest Child				
<1	18.4	14.5	23.7	27.1
1	17.0	13.9	17.6	16.8
2	13.0	12.6	11.1	10.0
3 to 5	24.2	26.0	21.6	20.8
6 to 11	19.5	22.5	18.7	18.3
12 to 18	7.8	10.4	7.4	6.9
Other Household Members				
Other children only	2.4	1.7	3.9	3.0
Other adults only	20.4	23.0	17.9	19.0
Other adults and other children	7.3	8.0	7.1	7.2

(table continues)

TABLE 3, continued

	1995		1997	
	All Cases	Leavers	All Cases	Leavers
Child on SSI	9.2	6.4	11.8	8.8
Start of Current Spell (months before Sept. 1995/1997) ^a				
0–3	14.7	27.6	17.3	21.1
4–6	6.7	10.3	10.0	11.9
7–9	5.2	6.5	6.8	7.7
10–12	4.4	5.4	5.2	6.1
13–18	7.1	7.0	6.3	6.6
19–24	6.1	5.2	4.5	4.7
>24	55.9	38.0	49.9	41.9
Number of Months Received Welfare in Previous Two Years ^a				
6 or less	9.7	15.9	8.5	12.6
7–12	9.0	13.3	9.3	11.8
13–18	12.0	17.0	14.5	16.4
19–24	69.3	53.8	67.7	59.2
Number of Quarters with Earnings in Previous Two Years ^a				
None	27.7	13.9	20.4	12.6
1–3	32.3	29.1	34.9	33.8
4–7	29.8	37.5	35.0	39.7
8	10.2	19.4	9.7	13.9
Total Earnings in Previous Two Years ^a				
<\$500	38.1	20.1	31.8	21.4
\$500–\$2,499	19.0	15.7	22.3	21.7
\$2,500–\$7,499	21.1	25.5	24.5	28.2
\$7,500 or more	21.7	38.7	21.5	28.7

^aSample for the 1995 cohort includes mothers who were 18 or older in October 1993 (N = 44,716 total and 7,452 leavers); sample for the 1997 cohort includes those 18 or older in October 1995 (N = 17,854 total and 7,113 leavers). Previous two years is October 1993 through September 1995 for the 1995 cohort, and October 1995 through September 1997 for the 1997 cohort.

The characteristics of Wisconsin welfare recipients in 1995 differed substantially from those of recipients in 1997. In 1997 (relative to 1995) a higher share of the caseload lived in Milwaukee (76 percent compared to 55 percent), were nonwhite (77 percent compared to 59 percent), lacked a high school degree (53 percent compared to 43 percent), had a child on SSI (12 percent compared to 9 percent), and cared for three or more children (38 percent compared to 31 percent). These comparisons suggest that, over time, the caseload had become more heavily populated by families with substantial barriers to labor market participation and success. However, offsetting this is the fact that the 1997 caseload had relatively more women whose current welfare stay was less than one year (39 percent compared to 31 percent) and with some work experience during the prior 2 years (80 percent compared to 72 percent).

These changes in the caseload have implications for the characteristics of the leavers in these two years. Compared to the 1995 leavers, a higher proportion of those who left in 1997 had background characteristics that made them less likely to achieve self-sustaining employment.²⁶ More of the 1997 leavers:

- lacked a high school degree (45 percent vs. 33 percent of the 1995 leavers),
- cared for more children (34 percent with three or more children vs. 23 percent),
- had very young children (27 percent with a child under age 1 vs. 15 percent),
- lived in Milwaukee County (56 vs. 39 percent), and
- had a current welfare stay of more than 2 years (42 percent versus 38 percent).

In other respects, however, the employment-related prospects of those leaving welfare in 1997 were similar to, or only a little worse than, those leaving in 1995. The 1997 leavers had only modestly less work experience in a recent period (14 percent with earnings in all quarters in the prior 2 years vs. 19 percent), and slightly fewer were without work experience during the prior 2 years (13 percent vs. 14 percent).

²⁶These comparisons among leavers are discussed more fully in Cancian et al. (2000a, 2000b).

B. Leavers Eligible for Food Stamp and Medicaid Benefits

Using information on the earnings of leavers, their household income, their family size, the ages of their children, and the eligibility standards included in the Food Stamp and Medicaid programs, we estimated the population of the leavers who were eligible for benefits in these two programs during extended periods after exiting cash assistance (see Appendix C). Table 4 indicates the number and percentage of the leaver families that were eligible for Food Stamps and Medicaid benefits for at least one quarter during the first year after exiting welfare, among both the 1995 and 1997 cohorts.²⁷ As we have defined eligibility, only about 2–7 percent of the leavers in either of these cohorts were ineligible for these noncash benefits during the first year after leaving cash assistance. Hence, the characteristics of the eligible population are very similar to those of the population of leavers.

C. Families Receiving Food Stamp and Medicaid Benefits in the First Year after Exiting

Table 5 presents the Food Stamp and Medicaid participation rates during the first year after leaving cash assistance of leavers with various characteristics. These take-up rates measure the number of families receiving benefits relative to the number of eligible families (defined as being eligible for benefits for at least one quarter [see footnote 24]). In both cohorts, the annual participation rate in the Medicaid program exceeded that in the Food Stamp program. For example, among the 1995 eligible leavers, only 60 percent chose to take up Food Stamp benefits during the first year after exiting cash assistance, while over 72 percent of the eligible leavers received Medicaid coverage. More important, the participation rate of the 1997 cohort substantially exceeds that of the 1995 cohort for both programs. For the Food Stamp program, the participation rate rose by 22 percentage points from the 1995 to the 1997 cohort; Medicaid participation rates rose by about 12 percentage points.

²⁷Our estimation of program eligibility is done on a quarterly basis. Hence, the annual eligibility rates reported here are defined as the proportion of leaver families that are eligible for at least one quarter during a year. Our estimates of quarterly eligibility rates are, therefore, smaller than these annual rates.

TABLE 4
Number (Percentage) of Cases Eligible for Food Stamps and Medicaid
in at Least One Quarter of First Year after Leaving, 1995 and 1997 Cohorts

	1995	1997
Food Stamps	7,549 (95.9%)	7,683 (98.2%)
Medicaid		
Mother	7,284 (92.6)	7,461 (95.7)
Any child	7,607 (96.5)	7,605 (97.2)

TABLE 5
Take-Up Rates for Food Stamps and Medicaid among Cases Eligible
in First Year after Leaving Cash Assistance, 1995 and 1997 Cohorts

	1995	1997
Food Stamps	4,545 (60.2%)	6,328 (82.4%)
Medicaid		
Mother	5,297 (72.7)	6,329 (84.8)
Any child	6,146 (80.8)	7,043 (92.6)

Table 6 shows demographic data on families that received benefits. In both the 1995 and the 1997 cohorts, participation rates in the Food Stamp program in the first year after exit were higher for families with characteristics that would seem to constrain their efforts to achieve economic independence. These characteristics include:

- living in Milwaukee,
- being an older mother,
- being a mother without a high school degree,
- being nonwhite,
- having three or more children.

In addition, those families with more connection to public assistance and labor market institutions (more intense welfare participation and more quarters of earnings in the prior two years) and those who were eligible for greater amounts of Food Stamp benefits also had higher participation rates.

In general, these patterns are also seen for participation in the Medicaid program, although some differences exist. For example, unlike the case for Food Stamps, families living in rural counties had higher Medicaid participation rates than those living in urban counties, as did white families and families headed by mothers with more education.

Table 7 presents the Medicaid take-up rates for children with various family characteristics.²⁸ Most of the patterns are similar to those for the mothers' Medicaid take-up and for the families participating in Food Stamps. However, a few patterns are slightly different. Whereas older children were those most likely to take up benefits in the 1995 cohort, the youngest children were the most likely to receive Medicaid in the 1997 cohort. Whereas children whose mothers were white were the most likely to receive benefits in the 1995 cohort, this was not the case for children in the 1997 cohort. Not surprisingly, if a child's mother or sibling received Medicaid, or if the family received Food Stamps during the year, the child was also more likely be covered by Medicaid than a child from a family with no ties to the

²⁸Since Medicaid eligibility is determined at the individual, as opposed to the family, level, it is possible that some children in a family are eligible for Medicaid while others are not.

TABLE 6
Take-Up Rates of Eligible Leaver Families in Year after Exit from Cash Assistance by Characteristic –
U.S. Citizens Only

	Food Stamps		Any Child Received Medicaid		Mother Received Medicaid	
	1995	1997	1995	1997	1995	1997
Total eligible (N)	7,549	7,683	7,607	7,605	7,284	7,461
% taking up benefit	60.2	82.4	80.8	92.6	72.7	84.8
Region						
Milwaukee County	65.6	86.4	78.6	93.1	71.8	84.8
Rural counties	57.0	73.8	83.7	92.9	74.9	86.4
Other urban counties	56.8	78.7	81.1	91.7	72.2	84.1
Mother's Age						
18–24	55.5	78.7	80.0	92.8	72.9	85.1
25–29	57.5	85.9	78.5	93.3	70.2	86.3
30–39	65.1	84.5	82.7	91.9	74.8	83.6
40+	65.6	81.8	83.0	92.5	70.9	83.9
Mother's Education						
<12 years	62.5	84.0	77.7	92.3	68.7	85.0
12 years	59.6	81.4	82.0	92.7	74.6	84.1
>12 years	57.4	79.6	83.1	93.4	75.2	86.6
Mother's Race						
White	56.0	76.8	82.5	92.6	74.3	84.9
African American	67.6	87.4	79.2	92.6	71.4	84.3
Hispanic	61.7	84.8	75.9	92.5	70.1	87.2
Other	61.9	83.0	82.9	93.8	72.1	86.2
Number of Children in Household						
1	55.9	73.3	80.3	91.1	72.9	82.8
2	61.6	84.9	82.0	93.2	73.3	86.1
4	65.4	89.1	81.3	94.4	73.1	86.2
4	67.8	88.4	78.4	93.1	70.1	83.9
5 or more	73.9	91.5	78.6	92.6	65.2	87.2
Age of Youngest Child						
<1 year	53.3	78.5	79.4	93.4	68.3	84.0
1 years	56.6	82.1	76.6	91.7	69.3	84.4
2 years	59.0	83.5	81.7	92.9	74.4	85.3
3–5 years	62.9	85.0	81.5	93.1	74.7	87.9
6–11 years	63.4	85.8	82.7	92.6	75.9	85.1
12–18 years	62.3	79.4	81.6	89.8	69.6	78.6

(table continues)

TABLE 6, continued

	Food Stamps		Any Child Received Medicaid		Mother Received Medicaid	
	1995	1997	1995	1997	1995	1997
Child on SSI	60.1	83.4	84.0	93.1	69.2	83.6
Number of Months Received Welfare in Previous Two Years						
6 or less	47.2	68.1	69.6	88.1	60.7	76.2
7–12	56.2	76.1	77.6	91.5	68.8	85.1
13–18	65.2	83.4	84.8	91.7	77.1	83.7
19–24	64.0	87.4	84.2	94.4	76.3	87.4
Number of Quarters with Earnings in Previous Two Years						
None	48.0	76.9	64.1	86.6	51.2	78.3
1–3	58.3	81.8	78.3	92.3	70.9	85.8
4–7	62.8	83.7	84.7	93.4	77.2	85.6
8	67.2	85.2	88.8	96.5	83.9	86.3
Received Food Stamps during Year	NA	NA	97.8	99.0	90.3	91.9
Maximum Monthly Food Stamp Eligibility						
\$25 or less	29.4	44.8	NA	NA	NA	NA
\$26–\$50	50.0	69.0	NA	NA	NA	NA
\$51–\$100	58.0	76.6	NA	NA	NA	NA
\$101–\$250	60.4	77.6	NA	NA	NA	NA
\$251–\$500	64.4	88.2	NA	NA	NA	NA
More than \$500	73.8	91.9	NA	NA	NA	NA

TABLE 7
Medicaid Take-Up Rates of Eligible Leaver Children in Year after Exit from Cash Assistance by
Characteristic – U.S. Citizens Only

	Children up to Age 6		Children Aged 6 to 13/15		Children Aged 13/15 to 18	
	1995	1997	1995	1997	1995	1997
Total eligible (N)	6,139	8,234	6,079	8,247	2,725	1,554
% taking up benefit	80.0	93.1	79.9	91.7	83.4	90.2
Region						
Milwaukee County	76.7	93.3	78.3	92.1	82.2	91.5
Rural counties	84.3	93.0	84.0	92.1	85.5	88.4
Other urban counties	80.2	92.9	79.1	90.7	83.8	87.8
Mother's Age						
18–24	79.6	93.0	76.7	91.8	NA	NA
25–29	78.5	93.5	77.5	92.1	73.8	NA
30–39	82.4	92.5	82.1	91.4	83.3	90.3
40+	88.4	95.9	82.1	92.1	85.1	90.4
Mother's Education						
<12 years	76.0	92.1	76.6	91.7	82.8	89.2
12 years	81.9	94.0	81.1	91.4	82.4	90.0
>12 years	83.2	94.0	82.9	92.6	87.2	94.3
Mother's Race						
White	82.6	93.7	82.2	91.4	84.6	87.4
African American	76.7	93.0	78.0	91.7	82.9	92.1
Hispanic	72.4	92.7	76.7	93.9	78.3	92.0
Other	86.2	93.8	81.6	91.5	82.7	89.7
Number of Children in Household						
1	77.6	89.6	77.6	90.1	78.6	84.8
2	81.8	93.6	82.0	91.1	81.5	90.2
3	81.4	95.0	79.8	92.4	87.3	92.1
4	79.2	93.3	76.4	91.8	84.9	92.4
5 or more	78.5	93.4	82.0	91.7	83.7	89.3
Age of Youngest Child						
<1 year	77.0	92.7	76.8	91.4	90.3	91.7
1 years	76.7	92.6	70.4	89.9	84.5	85.6
2 years	82.1	92.9	79.2	93.2	86.0	94.5
3–5 years	83.8	94.7	79.9	91.9	82.4	88.2
6–11 years	NA	NA	81.7	92.0	83.7	92.6
12–18 years	NA	NA	NA	92.0	82.3	88.4

(table continues)

TABLE 7, continued

	Children up to Age 6		Children Aged 6 to 13/15		Children Aged 13/15 to 18	
	1995	1997	1995	1997	1995	1997
Child on SSI	82.2	91.3	85.8	92.1	85.8	87.3
Number of Months Received Welfare in Previous Two Years						
6 or less	68.7	89.5	63.3	81.7	73.9	84.3
7–12	76.6	91.6	73.8	90.5	82.4	91.4
13–18	81.6	92.7	85.9	91.6	87.7	89.7
19–24	84.8	94.6	82.9	93.2	84.4	91.1
Number of Quarters with Earnings in Previous Two Years						
None	62.5	85.4	63.1	84.4	67.9	83.3
1–3	78.5	93.1	77.6	91.1	81.0	89.7
4–7	85.2	94.8	84.1	92.9	86.1	90.2
8	89.0	96.3	87.6	96.2	89.7	97.1
Household Received Food Stamps during Year	96.2	98.5	96.9	97.7	95.5	94.6
Another Child Received Medicaid	97.2	98.7	97.9	98.4	96.3	94.9
Mother Eligible for Medicaid	81.4	93.5	81.3	92.0	82.9	90.0
Mother Received Medicaid	98.3	99.1	98.9	98.9	97.9	96.8
Mother Worked during Year						
Did not work	55.0	77.9	52.0	75.9	59.2	81.5
Worked 1–3 quarters	87.1	95.7	85.3	93.7	84.3	89.2
Worked all four quarters	86.9	96.3	87.7	95.6	91.0	94.5
Mother Worked for Firm Offering Health Insurance	86.6	96.0	87.4	94.6	89.2	91.7

NA: Sample size less than 30.

public benefit system. Also, children whose mothers worked during the year were much more likely to take up benefits than those whose mothers did not work. This is true even for children whose mothers worked for a firm that offered health insurance to at least some of its employees. Employers and/or employee-benefits personnel may both provide these mothers with better information about their Medicaid eligibility and encourage them to take up the publicly provided benefits.

VI. BENEFIT RECEIPT AFTER LEAVING WELFARE AMONG TWO COHORTS

Table 8 shows the Food Stamp and Medicaid participation and benefit patterns of our two cohorts during their first 2 years after leaving welfare. Table 9 shows these patterns for calendar years 1998 and 1999, the third and fourth years after leaving for the 1995 cohort.²⁹

A. Cash Assistance Receipt among Leavers

The first row in each panel of Tables 8 and 9 shows the percentage of leavers who returned to cash assistance status after leaving the rolls. About 29 percent of the 1995 leavers returned to cash assistance during the first year, and this rate decreased steadily to less than 5 percent 4 years after exit. For the 1997 cohort, the percentage returning at some point during the first year was somewhat lower, 25 percent, decreasing to 20 percent in year 2. The dollar amount of cash assistance received by those with benefits increased over time within a cohort and between cohorts, reflecting the greater generosity of grants for most participating families than had been the case under AFDC.

B. Food Stamp Participation and Benefit Patterns

We look first at the 1995 cohort. Among all of the families who left AFDC in 1995, 96 percent were eligible to receive Food Stamps in at least one quarter of the first year (Table 8). This high rate of eligibility drifted down to 92 percent in the second year (Table 8) and to 87 percent by the fourth year

²⁹Hence, the estimates for the 1997 cohort in the bottom panel of Table 9 duplicate those in the bottom panel of Table 8.

TABLE 8
Benefit Receipt of Leavers in Two Years after Exit – U.S. Citizens Only (1999 dollars)

	Quarter before Exit	1st Quarter after Exit	2nd Quarter after Exit	3rd Quarter after Exit	4th Quarter after Exit	5th Quarter after Exit	6th Quarter after Exit	7th Quarter after Exit	8th Quarter after Exit	Year after Exit	Two Years after Exit
1995											
All Leavers (N=7,879)											
Receiving AFDC/TANF	100.0%	17.6%	18.5%	17.9%	16.2%	14.1%	13.0%	11.0%	7.1%	29.1%	18.2%
Mean AFDC/TANF amount for recipients	\$1,136	\$674	\$885	\$947	\$992	\$1,008	\$1,017	\$1,032	\$1,095	\$2,100	\$2,565
Cases receiving Food Stamps	90.3%	45.9%	43.3%	39.6%	37.6%	34.3%	32.2%	30.0%	27.6%	57.7%	43.2%
Cases eligible to receive Food Stamps	100.0	90.9	88.9	87.7	84.7	86.3	83.5	82.7	78.5	95.9	92.3
Eligible cases receiving Food Stamps	90.3	50.5	48.8	45.2	44.4	39.8	38.6	36.3	35.2	60.2	46.9
Mean Food Stamp amount for recipients	\$590	\$445	\$478	\$493	\$488	\$476	\$480	\$461	\$473	\$1,369	\$1,355
Caseheads receiving Medicaid	99.8%	58.1%	55.2%	52.8%	47.7%	37.2%	32.9%	27.4%	22.8%	67.3%	44.7%
Caseheads eligible to receive Medicaid	99.8	85.2	82.5	81.3	79.2	73.9	69.3	66.7	61.0	92.6	83.3
Eligible caseheads receiving Medicaid	100.0	68.1	66.9	65.0	60.2	50.3	47.4	41.1	37.4	72.7	53.6
Children receiving Medicaid	100.0%	72.8%	68.2%	65.9%	61.9%	55.8%	52.5%	49.6%	47.2%	79.4%	62.8%
Children eligible to receive Medicaid	100.0	96.3	94.9	94.4	92.2	91.0	88.5	87.4	84.3	98.6	94.8
Eligible children receiving Medicaid	100.0	75.6	71.9	69.8	67.1	61.3	59.3	56.8	56.0	80.6	66.3
Eligible children receiving Medicaid, by age											
<1 year	100.0%	79.8%	85.9%	90.9%	92.5%	94.3%	93.7%	93.2%	93.4%	97.7%	99.3%
1–5 years	100.0	72.4	67.7	65.6	62.4	56.2	54.4	53.0	52.7	78.7	64.6
6–14 years	100.0	77.3	73.5	71.0	68.4	61.7	59.2	55.8	54.5	80.3	64.3
15–18 years	100.0	79.0	75.8	75.0	72.1	66.8	63.3	59.5	58.6	83.6	68.9

(table continues)

TABLE 8, continued

	Quarter before Exit	1st Quarter after Exit	2nd Quarter after Exit	3rd Quarter after Exit	4th Quarter after Exit	5th Quarter after Exit	6th Quarter after Exit	7th Quarter after Exit	8th Quarter after Exit	Year after Exit	Two Years after Exit
1997											
All Leavers (N=7,828)											
Receiving AFDC/TANF	100.0%	13.6%	16.5%	17.3%	15.3%	12.8%	12.3%	11.7%	10.0%	25.0%	19.9%
Mean AFDC/TANF amount for recipients	\$1,170	\$1,069	\$1,321	\$1,303	\$1,248	\$1,183	\$1,134	\$1,148	\$1,163	\$3,114	\$2,724
Cases receiving Food Stamps	91.8%	72.2%	66.4%	62.1%	59.3%	57.8%	55.5%	54.0%	53.4%	80.8%	68.8%
Cases eligible to receive Food Stamps	99.9	96.4	94.5	92.8	90.1	92.5	90.4	89.2	86.7	98.2	96.1
Eligible cases receiving Food Stamps	91.8	74.9	70.3	66.9	65.8	62.4	61.4	60.5	61.6	82.4	71.6
Mean Food Stamp amount for recipients	\$702	\$663	\$609	\$583	\$584	\$576	\$568	\$567	\$553	\$1,967	\$1,814
Caseheads receiving Medicaid	99.5%	71.7%	68.7%	67.3%	63.3%	58.4%	54.9%	57.1%	58.9%	81.2%	71.3%
Caseheads eligible to receive Medicaid	99.5	91.0	89.1	87.9	84.0	83.4	79.5	96.6	95.3	95.7	92.9
Eligible caseheads receiving Medicaid	100.0	78.8	77.1	76.6	75.4	70.1	69.0	59.1	61.8	84.8	72.8
Children receiving Medicaid	100.0%	88.1%	85.7%	84.3%	81.9%	79.7%	78.0%	76.8%	75.7%	91.9%	85.0%
Children eligible to receive Medicaid	100.0	98.9	98.7	98.2	97.0	97.2	96.2	98.7	98.2	99.6	99.5
Eligible children receiving Medicaid	100.0	89.1	86.9	85.9	84.4	82.0	81.1	77.8	77.1	92.2	85.4
Eligible children receiving Medicaid, by age											
<1 year	100.0%	91.2%	90.8%	94.9%	95.6%	95.9%	96.2%	95.0%	95.3%	99.0%	98.8%
1-5 years	100.0	89.1	86.6	85.1	83.2	81.0	79.7	79.1	78.7	92.6	86.3
6-14 years	100.0	89.4	87.3	86.3	84.9	81.9	81.2	76.5	75.3	91.7	84.2
15-18 years	100.0	85.4	83.5	84.0	82.8	79.6	79.1	72.0	72.9	90.6	82.9

TABLE 9
Benefit Receipt of Leavers during Calendar Years 1998 and 1999 – U.S. Citizens Only (1999 dollars)

	1st Quarter 1998	2nd Quarter 1998	3rd Quarter 1998	4th Quarter 1998	1st Quarter 1999	2nd Quarter 1999	3rd Quarter 1999	4th Quarter 1999	1998	1999
1995										
All Leavers (N=7,879)										
Receiving AFDC/TANF	4.9%	4.2%	4.3%	3.5%	2.8%	2.4%	2.7%	2.4%	7.6%	4.7%
Mean AFDC/TANF amount for recipients	\$1,229	\$1,319	\$1,220	\$1,158	\$1,104	\$1,087	\$1,087	\$1,079	\$2,743	\$2,386
Case receiving Food Stamps	27.3%	24.9%	23.8%	23.4%	22.9%	21.9%	21.9%	22.0%	35.6%	32.0%
Cases eligible to receive Food Stamps	82.1	79.0	77.8	73.2	80.2	76.5	75.8	72.4	88.9	87.0
Eligible cases receiving Food Stamps	33.2	31.5	30.6	32.0	28.6	28.7	28.9	30.4	40.1	36.9
Mean Food Stamp amount for recipients	\$450	\$427	\$420	\$413	\$413	\$398	\$407	\$391	\$1,193	\$1,112
Caseheads receiving Medicaid	21.5%	20.9%	21.4%	21.1%	20.7%	20.3%	24.2%	27.2%	29.8%	33.5%
Caseheads eligible to receive Medicaid	63.2	61.0	61.1	58.3	62.3	59.7	88.8	86.4	74.9	91.8
Eligible caseheads receiving Medicaid	34.1	34.3	35.0	36.1	33.2	34.0	27.2	31.5	39.7	36.5
Children receiving Medicaid	46.2%	45.2	45.5	43.9	42.9	42.6	43.4	43.9	54.3	52.6
Children eligible to receive Medicaid	86.5	84.4	83.7	80.4	83.7	81.4	93.4	91.9	91.7	96.1
Eligible children receiving Medicaid	53.4	53.6	54.4	54.5	51.3	52.3	46.5	47.8	59.2	54.7
Eligible children receiving Medicaid, by age										
<1 year	93.2%	91.8%	93.5%	95.4%	94.3%	94.0%	91.4%	94.3%	98.8%	98.3%
1–5 years	51.5	52.1	53.5	54.2	52.3	52.6	54.2	57.1	62.1	64.8
16–14 years	51.4	51.2	51.9	51.3	47.6	49.0	42.3	43.4	55.2	50.0
15–18 years	54.8	56.4	56.9	57.7	53.4	55.4	41.0	41.9	59.7	49.7

(table continues)

TABLE 9, continued

	1st Quarter 1998	2nd Quarter 1998	3rd Quarter 1998	4th Quarter 1998	1st Quarter 1999	2nd Quarter 1999	3rd Quarter 1999	4th Quarter 1999	1998	1999
1997										
All Leavers (N=7,828)										
Receiving AFDC/TANF	13.6%	16.5%	17.3%	15.3%	12.8%	12.3%	11.7%	10.0%	25.0%	19.9%
Mean AFDC/TANF amount for recipients	\$1,069	\$1,321	\$1,303	\$1,248	\$1,183	\$1,134	\$1,148	\$1,163	\$3,114	\$2,724
Receiving Food Stamps	72.2%	66.4%	62.1%	59.3%	57.8%	55.5%	54.0%	53.4%	80.8%	68.8%
Cases eligible to receive Food Stamps	96.4	94.5	92.8	90.1	92.5	90.4	89.2	86.7	98.2	96.1
Eligible receiving Food Stamps	74.9	70.3	66.9	65.8	62.4	61.4	60.5	61.6	82.4	71.6
Mean Food Stamp amount for recipients	\$663	\$609	\$583	\$584	\$576	\$568	\$567	\$553	\$1,967	\$1,814
Caseheads receiving Medicaid	71.7%	68.7%	67.3%	63.3%	58.4%	54.9%	57.1%	58.9%	81.2%	71.3%
Caseheads eligible to receive Medicaid	91.0	89.1	87.9	84.0	83.4	79.5	96.6	95.3	95.7	92.9
Eligible caseheads receiving Medicaid	78.8	77.1	76.6	75.4	70.1	69.0	59.1	61.8	84.8	72.8
Children receiving Medicaid	88.1%	85.7%	84.3%	81.9%	79.7%	78.0%	76.8%	75.7%	91.9%	85.0%
Children eligible to receive Medicaid	98.9	98.7	98.2	97.0	97.2	96.2	98.7	98.2	99.6	99.5
Eligible children receiving Medicaid	89.1	86.9	85.9	84.4	82.0	81.1	77.8	77.1	92.2	85.4
Eligible children receiving Medicaid, by age										
<1 year	91.2%	90.8%	94.9%	95.6%	95.9%	96.2%	95.0%	95.3%	99.0%	98.8%
1-5 years	89.1	86.6	85.1	83.2	81.0	79.7	79.1	78.7	92.6	86.3
6-14 years	89.4	87.3	86.3	84.9	81.9	81.2	76.5	75.3	91.7	84.2
15-18 years	85.4	83.5	84.0	82.8	79.6	79.1	72.0	72.9	90.6	82.9

(Table 9). The decline in eligibility for Food Stamps is expected, as some mothers who leave welfare increase their success in the labor market or change family composition in ways that lead to higher incomes and a loss of eligibility. If the income and other eligibility criteria are sufficiently generous, loss of eligibility may be viewed as a successful transition out of welfare.

The participation rates among those eligible were lower than the eligibility rates. Whereas 60 percent of eligible 1995 leavers received Food Stamp benefits during all or a portion of the first year after leaving, only 47 percent of the eligible families were beneficiaries during the second year after leaving. In years 3 and 4 after leaving, these annual participation rates fell to 40 and then to 37 percent. When this participation rate is calculated on a quarterly basis (see footnote 27), only 51 percent of the eligible families participated in the first quarter after exit, and this rate fell continuously over time. By the 8th quarter after exit, the participation rate among eligibles had fallen to 35 percent, and to 30 percent by the 16th quarter after leaving cash assistance.

These low and rapidly declining Food Stamp participation rates among those eligible—from 60 percent in the first year after leaving to 37 percent by the fourth year—are disturbing. They suggest that, at least for this early cohort, a lack of knowledge regarding the availability of support, the failure of welfare administrators to inform eligible families of the available options, the perceived costs of application, or the active discouragement of eligible families from benefit reciprocity may have suppressed participation. A corollary is the need for increased outreach efforts designed to provide assistance to those families for whom the program is designed.

Among the families that received Food Stamp benefits, average quarterly benefits drifted down slowly over the 4 years after leaving cash assistance, from about \$475 during the first year after exit to about \$400 in the fourth year after exit. This is consistent with a small increase in family income.

For the 1997 leavers, the pattern of eligibility is similar to that of the 1995 cohort, but at an even higher level—98 percent in the first year after leaving and 96 percent in year 2. The higher eligibility rates reflect the somewhat more vulnerable characteristics of this later cohort.

Among the eligible families in the 1997 cohort, Food Stamp participation rates are substantially above those in the 1995 cohort. Whereas 60 percent of eligible families in the 1995 cohort participated in the first year after leaving and 47 percent in the second, the corresponding percentages for the 1997 cohort were 82 and 72 percent in the first and second years after leaving. For the 1997 cohort, the percentage of eligible families participating in the Food Stamp program during the first quarter after leaving was 75 percent (compared to 51 percent for the 1995 cohort). By the 8th quarter after exit, participation among eligible families fell to 62 percent (compared to 35 percent for the 1995 cohort). A possible explanation for this trend is the lower income of those who left cash benefits in 1997,³⁰ suggesting that a higher proportion of them would be eligible for benefits, and would receive larger amounts of Food Stamp benefits if they participated in the program.³¹

Among the 1997 cohort of families that received Food Stamps, quarterly benefits averaged about \$610 during the first year after exit, drifting down to about \$565 in the second year after exit. This compares with a nearly constant average quarterly benefit amount of about \$475 per family in the first year after exit for the 1995 cohort.

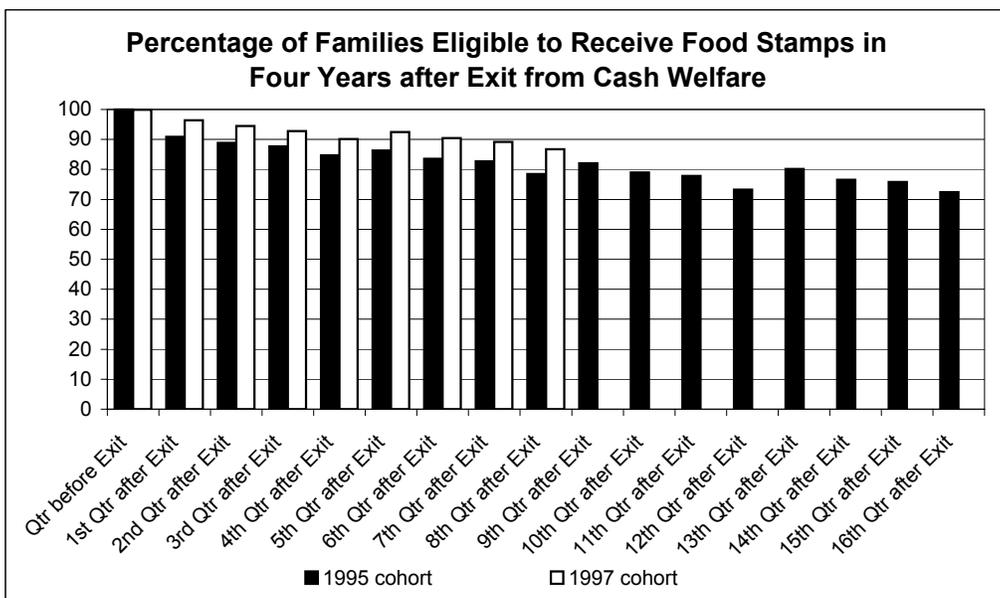
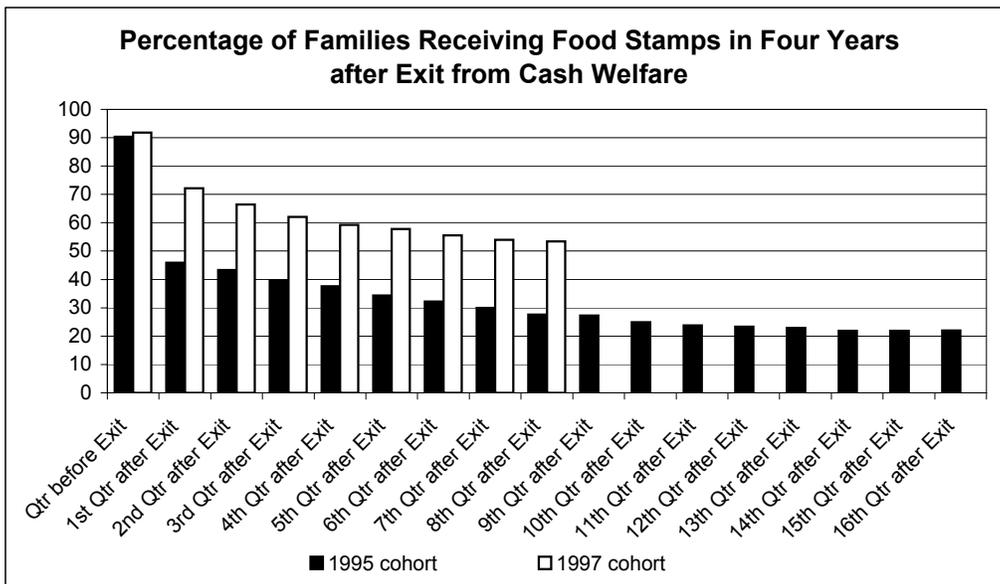
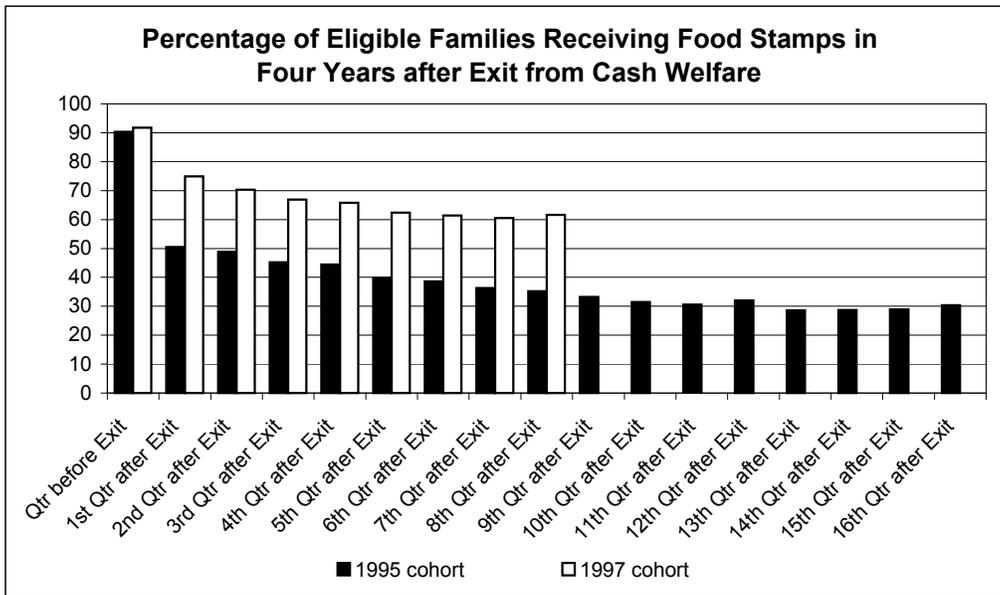
Figure 1 displays these quarterly Food Stamp participation rates for both the 1995 and 1997 cohorts. This figure also shows the percentage of all leavers who received Food Stamp benefits and the percentage of all leavers who were eligible.

In sum, a substantially higher proportion of the 1997 group of leavers received Food Stamp benefits in the 2 years after leaving than did the 1995 group. Of those in the 1997 cohort who received benefits, the average monthly benefit ranged from \$30 to \$75 more than for the 1995 cohort. In constant

³⁰In a related paper examining earnings and income, earnings and income among leavers in the later cohort are found to be substantially lower than in the early cohort (Cancian et al., 2000a).

³¹Because a somewhat lower percentage of women in the later cohort returned to cash assistance (see first row, last column, of each panel) at some time during the 12 months following exit—25 percent versus 29 percent—it is not likely that the increase in Food Stamp take-up is attributable to a return to cash benefits and the implicit connection (no longer automatic under TANF, but still structural) to Food Stamps which cash benefits entail. About 18 percent of leavers receive cash benefits in most of the four quarters after leaving in the 1995 group. This percentage falls to about 15 percent in the 1997 group. Among those who return, the amount of cash benefits received is about \$1,000 per year higher in the second cohort than in the first, an increase of about 50 percent between the first and second cohorts.

FIGURE 1
Food Stamp Receipt of Leavers in the Quarters after Exit - U.S. Citizens Only



1998 dollars, the average Food Stamp benefit (among those receiving Food Stamps) over the year after exit was 44 percent higher in the 1997 cohort than in 1995 cohort (\$1,967 versus \$1,369).³²

Wisconsin appears to have been successful in substantially increasing the Food Stamp participation of eligible families in later cohorts of leavers, relative to the very low participation rates observed for early leavers from cash assistance. This, together with increases in Food Stamp benefits, has resulted in the Food Stamp program playing a stronger safety-net role for later cohorts of leavers than was the case for the early leavers. Although our estimates indicate a surge in take-up rates among the more recent cohort, the reasons for this are not well understood. The increase in take-up for new leavers from 1995 to 1997, together with the low and decreasing take-up rates of the 1995 cohort in 1997 and 1998, suggests heightened attention by program administrators to in-kind benefit take-up by those who left the cash assistance rolls between 1995 and 1997.

C. Medicaid Participation for Mothers and Children

In this section, we describe Medicaid coverage of income-eligible leavers. Because the Medicaid eligibility criteria—and hence the participation patterns—are different for case heads (mothers) and for children, we present these results separately.

Mothers

Tables 8 and 9 also present evidence on Medicaid participation patterns among income-eligible mothers. Consider first the pattern of income eligibility. For the 1995 cohort, 93 percent of mothers were eligible for Medicaid coverage during some quarter of the first year after leaving. This fell to 83 percent in the second year after leaving, and to 75 percent in the third year. In the fourth year after leaving, 1999, the new Wisconsin health care program with expanded eligibility criteria and benefits, BadgerCare, went into effect. In that year, the percentage of eligible 1995 leavers rose to 92 percent.

³²The differences are generally smaller when controlling for family size [\$1,043 versus \$953 (9 percent) for families with one child; \$1,728 versus \$1,366 (27 percent) for families with two children, and \$2,818 versus \$1,943 (45 percent) for families with three or more children], but they are substantial nonetheless.

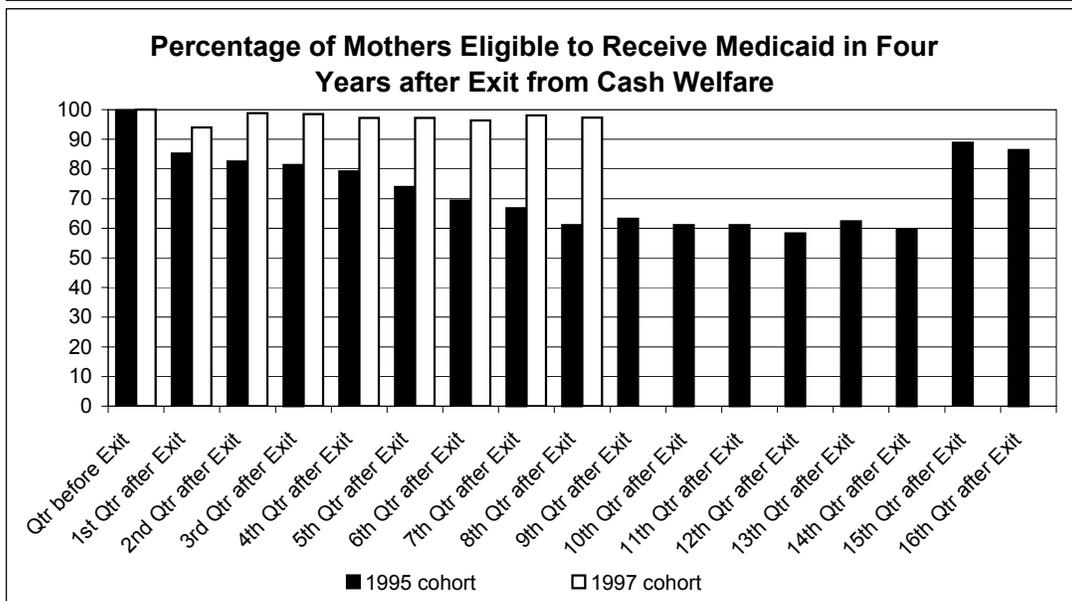
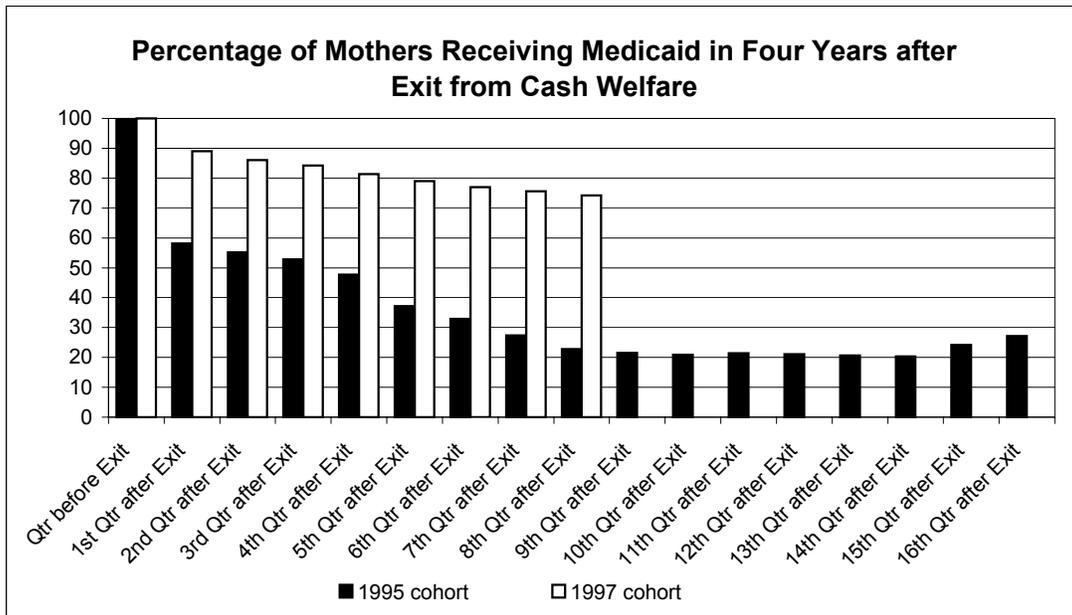
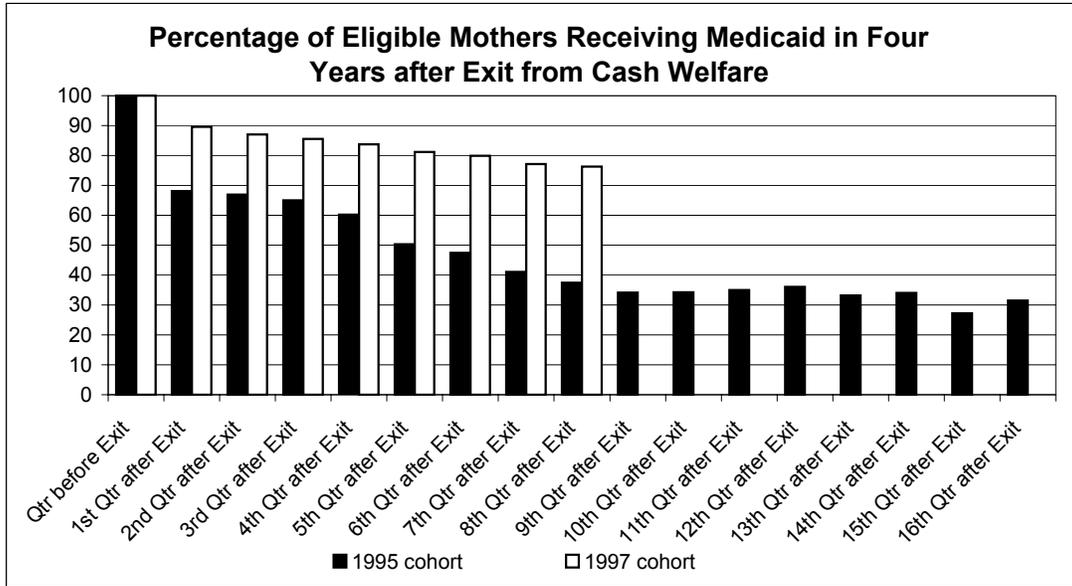
About 73 percent of the 1995 leavers who were income-eligible for at least one quarter were covered by Medicaid during the first year after leaving.³³ This figure dropped to 54 percent in the second year after leaving cash assistance, to 40 percent in the third year, and to 37 percent in the fourth year. When this participation rate is calculated on a quarterly basis (see footnote 27), 68 percent of the eligible mothers were covered by Medicaid in the first quarter after exit, and this rate fell continuously over time. By the 8th quarter after exit, only about 37 percent of income-eligible mothers were covered, and by the 16th quarter after leaving cash assistance only 32 percent were covered.

Again, the low rate of Medicaid coverage among mothers is disturbing, but the rate did increase for the 1997 cohort relative to the 1995 cohort. The eligibility rate for mothers in the 1997 cohort was 96 percent in the first year after leaving, dropping only slightly, to 93 percent, in the second year (1999), when BadgerCare went into effect. For the 1997 cohort, 85 percent of those who were income-eligible for at least one quarter in the first year after leaving were covered by Medicaid at some point during that first year, and 73 percent of eligibles were covered in the second year. These percentages compare with 73 and 54 percent, respectively, for the 1995 cohort. In the first quarter after leaving, 79 percent of income-eligible mothers were covered. This fell to 62 percent during the 8th quarter after leaving.

Figure 2 displays the quarterly eligibility patterns for the 1995 and 1997 cohorts, together with coverage rates for all leavers and eligible leavers. The spike in the coverage rates in the last two quarters of 1999 (quarters 15 and 16 after leaving for the 1995 cohort; quarters 7 and 8 for the 1997 cohort) is striking in both Table 9 and the bottom panel of Figure 2. For the 1995 cohort, the eligibility rate rose from 60 percent in quarter 14 to 89 percent in quarter 15, and, for the 1997 cohort, from 80 percent in quarter 6 to 97 percent in quarter 7. These spikes appear to reflect the major change in the Wisconsin Medicaid program effective July 1, 1999, when the Medicaid program was supplemented by the more

³³Medicaid coverage refers to obtaining a card showing Medicaid eligibility, not necessarily receipt of services under the program.

FIGURE 2
Medicaid Receipt of Leaver Mothers in the Quarters after Exit - U.S. Citizens Only



generous state program, BadgerCare, which incorporated higher income eligibility cutoffs and other provisions expanding coverage, consistent with the State Children's Health Insurance Program (SCHIP).³⁴

Children

The patterns of Medicaid participation among children who were income-eligible are also shown in Tables 8 and 9. In both cohorts, nearly all children in the families of welfare leavers were eligible for Medicaid benefits during at least one quarter of each of the years after exit from cash assistance. In the 4 years after leaving, no fewer than 92 percent of children in the 1995 cohort were eligible for Medicaid. Essentially all of the children of the 1997 cohort were eligible in the 2 years after exit.

For the 1995 cohort, about 81 percent of children who were income-eligible for at least one quarter were covered by Medicaid during the first year after leaving. This percentage dropped to 66 percent in the second year after leaving cash assistance, to 59 percent in the third year, and to 55 percent in the fourth year. When this participation rate is calculated on a quarterly basis (see footnote 27), 76 percent of the eligible children were covered by Medicaid in the first quarter after exit, and this rate fell steadily over time. By the 8th quarter after exit, only about 56 percent of income-eligible children were covered, and by the 16th quarter after leaving cash assistance only 48 percent were covered.

Again, the coverage rates among eligibles are substantially higher in the 1997 cohort—92 percent of children who were income-eligible for at least one quarter in the first year after leaving were covered by Medicaid at some point during that first year, and 85 percent of eligibles were covered in the second year. These percentages compare with 81 and 66 percent, respectively, for the 1995 cohort. In the first

³⁴BadgerCare changed eligibility for Medicaid in the following ways: (1) children over age 5 can enroll in BadgerCare with a family income up to 185 percent of the federal poverty line; the previous eligibility limit for school-aged children was 100 percent; (2) adults who are not pregnant and have minor children can enroll in BadgerCare with a family income up to 185 percent of the poverty line; the previous income limit varied by family size but was approximately 50 percent of the federal poverty line; (3) children under age 6 and pregnant women received Medicaid coverage up to 185 percent of the poverty line before BadgerCare, and income maximums for program entry for these groups did not change under BadgerCare (however, BadgerCare allows all who have entered the program to remain on it until their incomes exceed 200 percent of the poverty line); (4) families with incomes above 150 percent of the poverty line pay a monthly premium equal to about 3 percent of their income (however, if the family does not elect BadgerCare coverage, pregnant women and children below age 6 in the family can receive Medicaid coverage up to 185 percent of the poverty line without paying a premium.)

quarter after leaving, 89 percent of income-eligible children were covered. This fell to 77 percent during the 8th quarter after leaving.

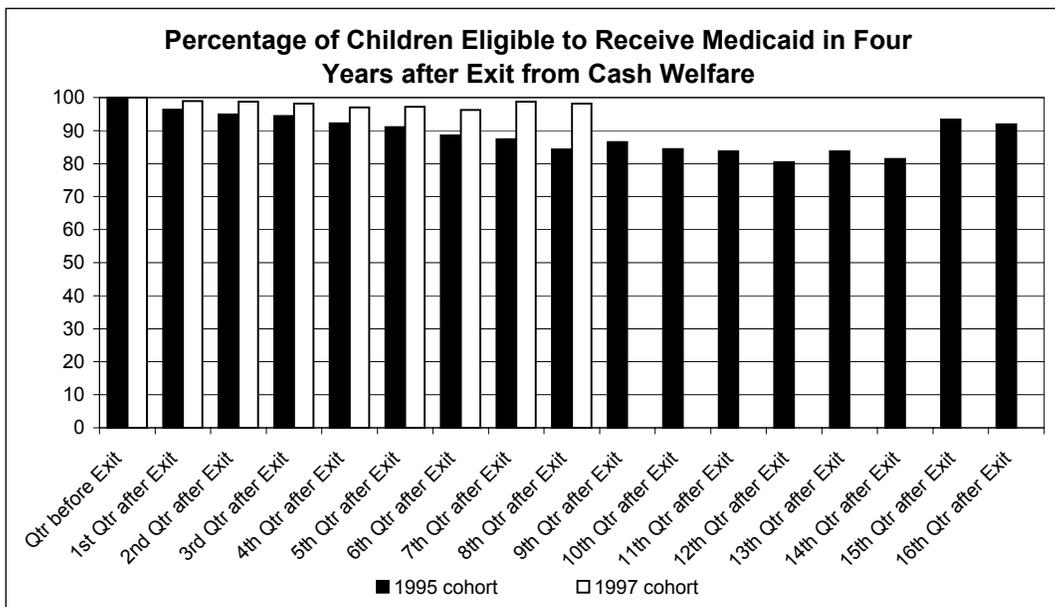
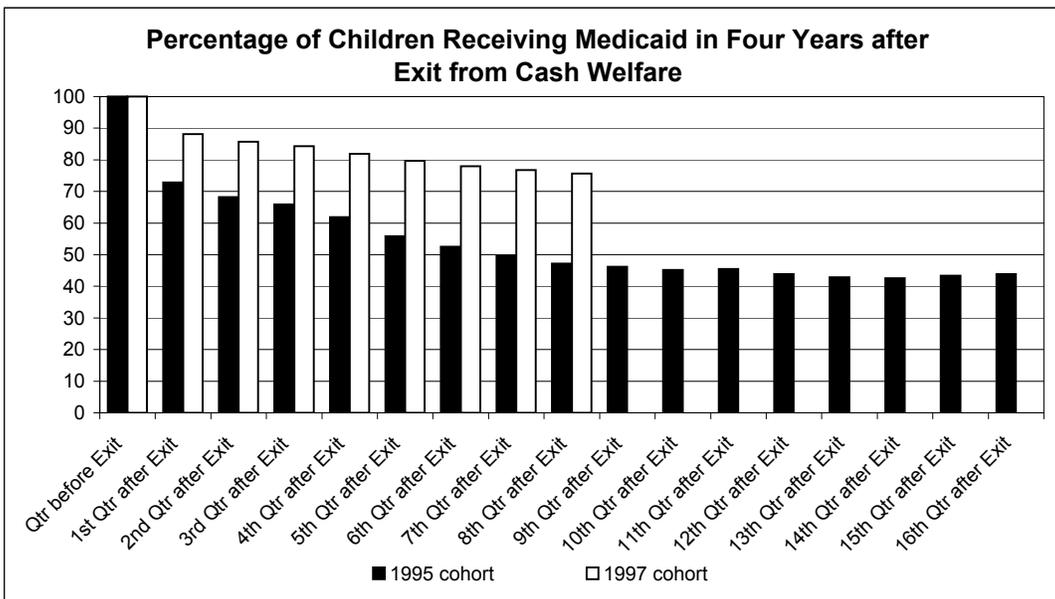
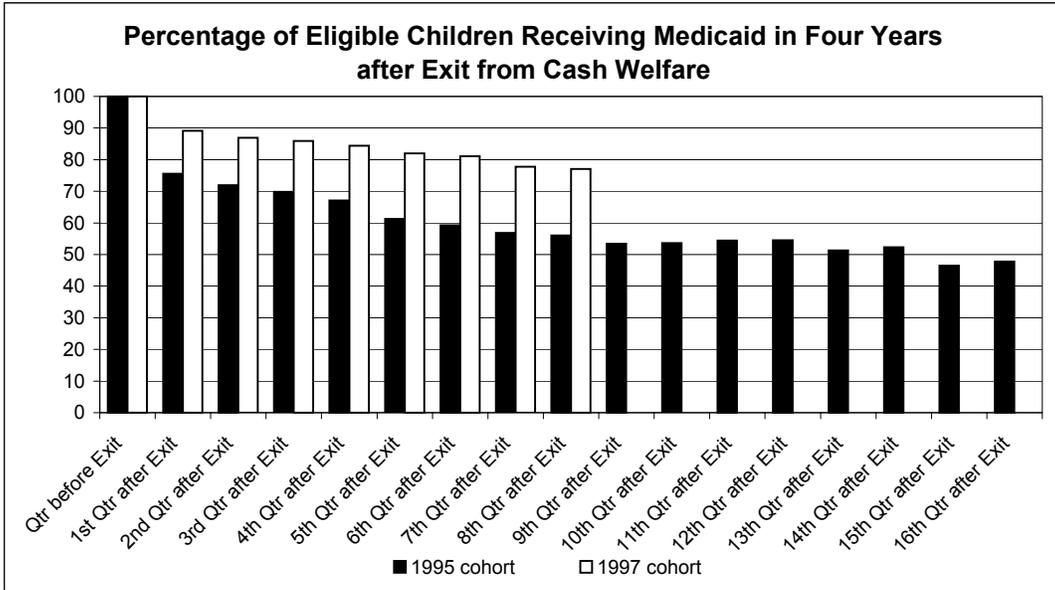
Figure 3 shows the quarterly eligibility patterns for children in the 1995 and 1997 cohorts, as well as the participation rates for all leavers and income-eligible leavers. The changes in the Wisconsin Medicaid program brought about by the introduction of the BadgerCare program in 1999 did not affect the income eligibility of children as much as was the case for mothers, since Medicaid was already quite accessible to children before BadgerCare. Figures 2 and 3 indicate that the first-year participation rate for children was higher than that for the mothers (81 percent versus 73 percent). The gap between these two rates expanded over the following 3 years, such that in the fourth year the participation rate of children exceeded that of mothers by 18 percentage points (55 percent versus 37 percent).

D. Discussion

Some of the take-up rates for eligible people were quite low, but overall these results indicate a substantial growth in postexit take-up of noncash benefits between the 1995 and 1997 groups of leavers. Moreover, the take-up rates that we have reported are larger than those reported in other studies, even for the 1995 cohort.³⁵ Zedlewski and Brauner (1999) report Food Stamp participation rates of 42 percent among eligible leavers, based on survey data. This is comparable to our quarterly Wisconsin figures indicating participation rates of 44–51 percent for those who left in 1995, and substantially below our rates of 66–75 percent for families who left in 1997. In most of the ten leavers studies funded by the U.S. Department of Health and Human Services, between one-third and one-half of leavers received Food Stamps immediately after exit, and between one-fifth and two-fifths were participating in Food Stamps 1 year after exit. These figures are also lower than those reported here. In the other studies summarized in Table 2, slightly over half the leavers participated in Food Stamps in the first year after exit, and slightly

³⁵While our take-up rates are reported for the eligible population, those of other studies are typically for the entire group of leavers. Tables 8 and 9 indicate, however, that annual take-up rates over the entire cohort are only slightly lower than those among the eligibles—2.5 percentage points lower for Food Stamps for the 1995 cohort and less than 1.6 percent for the 1997 cohort, and less than 1 percentage point for children receiving Medicaid.

FIGURE 3
Medicaid Receipt of Leaver Children in the Quarters after Exit - U.S. Citizens Only



less than half were still participating after 1 year, again well below the 1997 participation rates reported here. Some of the differences may reflect more complete reporting of benefits in administrative data. A comparison of survey responses and administrative records of Food Stamp benefits for a somewhat different sample of Wisconsin welfare participants found higher participation, by about 10 percentage points, in administrative data (Cancian and Meyer, 2000).

Garrett and Holohan's (2000) finding that 56 percent of women who left welfare reported participation in Medicaid is somewhat below our finding of a Medicaid take-up rate for 1995 mothers of 68 percent in at least 1 month in the first quarter after leaving (and 67 percent in the second quarter). After the first 6 months, the Wisconsin and national findings diverge even further. Garrett and Holohan report that 35 percent of women leavers continued to participate in Medicaid 1 year after leaving cash welfare, whereas we find participation rates among all mothers in the 1995 leavers cohort of 50 percent in the fifth quarter after exit. Similar trends in the two studies exist for children. Our study and that of Garrett and Holohan find similar participation rates in the first 6 months after welfare exit, but our study shows higher rates of Medicaid participation after that. The DHHS-funded projects generally report Medicaid participation rates among mothers of around 40 percent in the fourth quarter after exit.

For Food Stamps, the declining participation rates over time since welfare exit that we observed among Wisconsin leavers are consistent with patterns of income growth over time reported in previous research on welfare leavers (Cancian et al. 2000a; Meyer and Cancian 1998). Increases in income over time would reduce both eligibility for Food Stamps and the amount of benefits for which individuals are eligible (which would then reduce the incentive to apply for benefits). Decreasing participation over time is also consistent with a lack of convenient access to offices that certify benefit eligibility, high transaction costs, or other administrative barriers.

Since the value of Medicaid is constant over income levels among those eligible, the steady decline in the take-up of Medicaid is perhaps more surprising. Part of the explanation for the observed decline may be that some of these families obtain private, employer-based coverage, either through the woman's own employer or possibly through the employer of a new spouse. We have not been able to

obtain administrative data on private health insurance coverage, but we do know from a sample of low-income Wisconsin women who participated in the Child Support Demonstration Evaluation (CSDE) that 14 percent of their children had private health care coverage at some point in 1988, and 20 percent had such coverage at some point in 1999 (see Section XI, below, for more on this analysis).³⁶ The explanation for the decline in participation rates over time may also lie in some combination of high transaction costs to establish eligibility, lack of knowledge, limited access to care by Medicaid providers in the community in which they live, or other administrative obstacles.³⁷ Finally, it is likely that the portion of family income captured by our administrative data falls somewhat over time—for example, if women marry after they leave AFDC/TANF, we do not observe spousal earnings, and we thus may mismeasure eligibility. More research is needed to understand these patterns.

VII. PATTERNS OF NONCASH BENEFIT USE

In Table 10, we present the possible combinations of cash and noncash benefit receipt for both cohorts of leavers during the first 2 years after exit. These calculations are made for all leavers, without distinguishing those eligible for benefits from those who are not. The calculations are shown for all cases, the mothers, and children.

For all of these groups and for both cohorts, the most common patterns are the receipt of both Food Stamps and Medicaid, or the receipt of only Medicaid. For all 1995 cases, the annual percentage in these two categories is 51 percent in the first year after exit and 43 percent in the second year after exit. Because of the large increase in Food Stamp participation between the 1995 and 1997 cohorts, 56 percent of all leavers in the 1997 cohort received both Food Stamps and Medicaid in the first year after leaving,

³⁶These women were not strictly comparable to the leavers sample, since about 70 percent of the CSDE sample did not leave cash welfare during the period of observation.

³⁷Since 1999, Wisconsin has made a concerted effort to ease the process of applying for Medicaid and BadgerCare. Applicants who seek only health care coverage can now apply by mail on a one-page form, and their income and assets do not need to be verified unless the CARES computer system notes, in an automated match, a discrepancy between an applicant's statement of earnings and Social Security earnings files.

TABLE 10
Program Use of Leavers in Two Years after Exit – U.S. Citizens Only

	Quarter before Exit	1st Quarter after Exit	2nd Quarter after Exit	3rd Quarter after Exit	4th Quarter after Exit	5th Quarter after Exit	6th Quarter after Exit	7th Quarter after Exit	8th Quarter after Exit	Year after Exit	Two Years after Exit
1995											
All Leavers (N=7,879)											
All Cases											
Receiving no services	0.0%	24.0%	29.5%	32.3%	37.1%	44.4%	47.7%	50.7%	53.2%	18.1%	37.8%
Receiving AFDC/TANF only	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Receiving AFDC/TANF and Food Stamps	1.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Receiving AFDC/TANF and Medicaid	9.5	1.1	1.0	1.1	1.0	1.1	0.9	0.7	0.5	1.2	0.9
Receiving AFDC/TANF, Food Stamps, and Medicaid	88.4	16.4	17.5	16.7	15.2	13.1	12.1	10.3	6.6	28.2	17.3
Receiving Food Stamps only	0.0	1.3	1.2	1.2	1.0	1.2	1.2	1.4	1.4	1.2	1.5
Receiving Food Stamps and Medicaid	0.0	28.1	24.6	21.6	21.3	20.0	18.8	18.2	19.5	28.7	24.5
Receiving Medicaid only	0.0	29.0	26.2	27.0	24.4	20.2	19.2	18.7	18.8	22.6	18.1
Mothers											
Receiving no services	0.0%	33.4%	37.5%	40.3%	45.1%	54.3%	58.3%	62.4%	65.9%	25.6%	46.5%
Receiving AFDC/TANF only	0.5	0.1	0.1	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1
Receiving AFDC/TANF and Food Stamps	3.1	0.5	0.4	0.5	0.6	0.5	0.7	0.7	0.6	0.5	0.5
Receiving AFDC/TANF and Medicaid	9.3	1.0	0.9	1.0	0.8	0.8	0.7	0.6	0.3	1.0	0.8
Receiving AFDC/TANF, Food Stamps, and Medicaid	87.2	15.9	17.1	16.3	14.5	12.5	11.5	9.6	6.1	27.5	16.8
Receiving Food Stamps only	0.0	8.1	7.0	6.7	7.0	8.4	8.6	9.9	11.1	6.6	8.9
Receiving Food Stamps and Medicaid	0.0	21.4	18.8	16.1	15.4	12.8	11.5	9.7	9.8	23.2	17.1
Receiving Medicaid only	0.0	19.6	18.2	19.0	16.4	10.4	8.6	7.0	6.1	15.6	9.4
All children											
Receiving no services	0.0%	25.9%	30.8%	33.2%	37.3%	43.3%	46.6%	49.0%	51.4%	19.1%	35.6%
Receiving AFDC/TANF only	0.6	0.1	0.2	0.2	0.2	0.3	0.2	0.1	0.1	0.1	0.1
Receiving AFDC/TANF and Food Stamps	3.4	1.0	1.4	1.5	1.5	1.5	1.5	1.2	1.0	1.5	1.7
Receiving AFDC/TANF and Medicaid	7.6	1.0	0.9	1.1	0.9	1.0	0.9	0.6	0.5	1.0	0.8
Receiving AFDC/TANF, Food Stamps, and Medicaid	88.4	16.8	17.7	17.5	16.5	14.6	13.8	11.9	7.6	29.7	20.0
Receiving Food Stamps only	0.0	3.2	2.8	2.9	2.9	3.2	3.3	3.9	4.2	2.7	3.6
Receiving Food Stamps and Medicaid	0.0	28.8	25.5	22.4	21.5	20.2	18.8	18.2	20.2	28.4	24.1
Receiving Medicaid only	0.0	23.2	20.6	21.2	19.3	15.9	15.1	15.0	15.0	17.5	14.0

(table continues)

TABLE 10, continued

	Quarter before Exit	1st Quarter after Exit	2nd Quarter after Exit	3rd Quarter after Exit	4th Quarter after Exit	5th Quarter after Exit	6th Quarter after Exit	7th Quarter after Exit	8th Quarter after Exit	Year after Exit	Two Years after Exit
1997											
All Leavers (N=7,828)											
All Cases											
Receiving no services	0.0%	10.1%	13.2%	15.2%	18.3%	20.5%	22.5%	23.9%	25.0%	6.8%	14.9%
Receiving AFDC/TANF only	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
Receiving AFDC/TANF and Food Stamps	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Receiving AFDC/TANF and Medicaid	8.2	0.5	0.9	1.5	1.4	1.0	0.6	0.5	0.5	0.5	0.4
Receiving AFDC/TANF, Food Stamps, and Medicaid	91.7	13.1	15.4	15.8	13.8	12.0	11.6	11.3	9.5	24.5	19.5
Receiving Food Stamps only	0.0	1.1	1.0	0.9	0.8	1.3	1.2	1.2	1.4	0.8	1.4
Receiving Food Stamps and Medicaid	0.0	58.0	49.9	45.4	44.6	44.5	42.6	41.5	42.5	55.5	48.0
Receiving Medicaid only	0.0	17.2	19.5	21.2	21.0	21.0	21.5	21.7	21.1	11.9	15.8
Mothers											
Receiving no services	0.0%	15.8%	20.3%	22.5%	26.4%	30.0%	33.4%	33.9%	33.4%	10.6%	21.0%
Receiving AFDC/TANF only	0.9	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.0
Receiving AFDC/TANF and Food Stamps	3.3	0.6	0.4	0.2	0.2	0.2	0.2	0.1	0.1	0.2	0.1
Receiving AFDC/TANF and Medicaid	7.3	0.5	0.9	1.4	1.4	0.7	0.5	0.5	0.5	0.4	0.4
Receiving AFDC/TANF, Food Stamps, and Medicaid	88.5	12.5	15.1	15.6	13.6	11.8	11.5	11.2	9.4	24.4	19.4
Receiving Food Stamps only	0.0	12.2	11.2	10.6	10.8	12.3	12.6	10.1	9.1	8.3	8.7
Receiving Food Stamps and Medicaid	0.0	46.9	39.7	35.6	34.6	33.4	31.2	32.5	34.8	4.8	40.7
Receiving Medicaid only	0.0	11.5	12.4	13.9	12.8	11.5	10.6	11.7	12.7	8.2	9.8
All children											
Receiving no services	0.0%	10.7%	13.6%	15.3%	17.6%	19.7%	21.6%	22.9%	23.8%	6.7%	13.7%
Receiving AFDC/TANF only	0.7	0.1	0.2	0.3	0.3	0.1	0.2	0.1	0.2	0.0	0.1
Receiving AFDC/TANF and Food Stamps	4.8	0.9	1.2	1.3	1.3	1.2	1.3	1.1	0.9	1.6	1.5
Receiving AFDC/TANF and Medicaid	5.4	0.3	0.6	1.1	1.0	0.6	0.5	0.4	0.3	0.3	0.3
Receiving AFDC/TANF, Food Stamps, and Medicaid	89.1	12.9	15.4	16.0	14.3	12.5	11.9	11.5	9.8	25.3	20.7
Receiving Food Stamps only	0.0	4.8	4.6	4.3	4.6	5.1	4.9	5.3	5.7	4.0	4.7
Receiving Food Stamps and Medicaid	0.0	58.5	50.9	46.6	45.7	45.6	44.3	43.3	44.1	54.5	48.1
Receiving Medicaid only	0.0	11.8	13.6	15.2	15.2	15.1	15.4	15.5	15.2	7.6	10.9

and 48 percent did so in the second year after leaving. For this later cohort, 67 percent are in either the both-Food-Stamps-and-Medicaid or the only-Medicaid categories in the first year after leaving, and 64 percent in the second year.³⁸

The percentage of cases receiving no services (including cash assistance) was higher for the 1995 cohort than it was for the 1997 cohort. Among 1995 cases, 24 percent received no services in the first quarter after leaving, and this percentage rose persistently, reaching 53 percent in the 8th quarter after leaving. A higher percentage of mothers than children received no services after leaving cash assistance—33 percent in the first quarter after leaving, increasing to 66 percent in the 8th quarter after leaving. Among the 1997 cohort, only 10 percent of all cases received no benefits in the first quarter after exit, increasing to 25 percent by the 8th quarter. For mothers in the 1997 cohort, 16 percent received no benefits in the first quarter after leaving, increasing to 33 percent in the 8th quarter.

The most striking change in benefit receipt patterns between the 1995 and 1997 cohorts is among children. Over 25 percent of the 1995 children received no services in the first quarter after leaving, and this increased to 51 percent in the 8th quarter after leaving. However, for the 1997 cohort, fewer than 11 percent received no services in the first quarter after leaving, and this increased to 24 percent by the 8th quarter.

VIII. PREDICTORS OF FOOD STAMP AND MEDICAID TAKE-UP

Next we explore which of the eligible leaver families were most likely to take up Food Stamp and Medicaid benefits. Tables 11–13 present summaries of the results of probit analyses of benefit receipt among cases that left cash welfare and were eligible for Food Stamps and Medicaid benefits at any point during the year after exit. The full results for 1995 and 1997 are shown in Appendix Tables D1–D3. Table

³⁸The Wisconsin Department of Workforce Development has reported reciprocity patterns for the entire caseload, as opposed to leavers. They indicate that of the 73,204 families receiving AFDC in April 1995, 83 percent were also receiving Food Stamps and 99.4 percent were receiving Medicaid. In April 1997 there were 40,849 families receiving AFDC, 82 percent of whom were also receiving Food Stamps and 99.6 percent of whom were receiving Medicaid. This packaging of benefits is consistent with that shown in our estimates.

11 summarizes results for Food Stamp benefit reciprocity. Table 12 presents results for receipt of Medicaid benefits by a mother, and Table 13 shows receipt of Medicaid by each child in the case.

Consider first the Food Stamp results in Table 11. The patterns shown there suggest, for both cohorts, that those families with the greatest need—those with infant children, those with larger numbers of children and other adults in the family, those eligible for more benefits and for more quarters of the year, and those who were previously more dependent on welfare income—were more likely to take up Food Stamp assistance. Similarly, the extent of contact with public agencies, employers, or neighbors who are likely to be benefit recipients (reflected in the line for percentage of households that were female-headed in the mother's ZIP Code area) appears to be positively related to the probability that benefits for which leavers are eligible will be taken up. African Americans are also more likely to take up Food Stamp benefits.

Many of the patterns observed for Food Stamp take-up are observed for Medicaid participation as well. We describe the factors related to mother's coverage by Medicaid benefits first (Table 12), followed by those related to children's Medicaid coverage (Table 13).

Mothers in the most needy families appear to have the highest probability of being covered by Medicaid (or Medicaid/BadgerCare, beginning in the third quarter of 1999). The probability of coverage is positively related to having more children or other adults living in the family,³⁹ the length of time eligible for Medicaid, and past dependence on welfare. However, mothers living in Milwaukee and mothers with less than a high school degree appear to have lower take-up rates than mothers without these characteristics. As in the case of Food Stamps, contact with the welfare system or the world of work appears to provide information leading to the take-up of public health care benefits. Interestingly, the probability of take-up is not related to the prevalence of mother-only families in the neighborhood. Because low-income mothers of infants are covered by Medicaid during pregnancy, it follows that the

³⁹Given the nature of medical care provision to low-income families, the positive relationship between coverage and the number of people in the family is expected. If any person in the family requires care, the provider seeks payment from Medicaid, and in the process provides information on other family members, leading to their enrollment if eligible.

TABLE 11
Probability of Food Stamp Take-Up among Families Eligible to Receive Food Stamps – U.S. Citizens Only
 Summary of Sign and Significance from Annual Probits

	1995 Cohort				1997 Cohort	
	1996	1997	1998	1999	1998	1999
Mother's Age						
Age	+++	+++	-	+	++++	+
Age squared	-	-	+	+	-**	-
Mother's Education (compared to less than high school degree)						
High school graduate	-	-	-**	-***	+	-
More than high school graduate	+	-	-	-***	+	-
Mother's Race (compared to white)						
African American	+++	+++	+***	+***	+**	+***
Hispanic	-	-	+	+	+*	-
Other	-	+	-	-	+***	+
County of Residence (compared to other urban counties)						
Milwaukee	-	-	+	+	-	+
Rural counties	-	-	+	-	-	-**
Age of Youngest Child (compared to less than 1)						
1–5 years	+++	-*	-***	-***	-	-***
6–12 years	-	-***	-***	-***	-	-***
13–18 years	-	-***	-***	-***	-	-***
Number Children in Family (compared to 1)						
2	+	-	+*	+	+***	+
3 or more	+*	+	+***	+***	+***	+**
Any Adults Other than Mother Living in Household						
	+***	+***	+***	+***	+***	+***
Any Child Receiving SSI						
	-***	-	+*	+	-***	-**
Number of Quarters Family Is Eligible to Receive Food Stamps (compared to 1)						
2	+***	+***	+***	+***	+	+***
3	+***	+***	+***	+***	+	+***
4	+***	+***	+***	+***	+***	+***

(table continues)

TABLE 11, continued

	1995 Cohort				1997 Cohort	
	1996	1997	1998	1999	1998	1999
Monthly Amount of Food Stamp Eligibility (compared to \$25 or less)						
\$26–50	+	+	+	****	**	****
\$51–100	+	****	****	****	****	**
\$101–250	+	****	****	****	****	****
>\$250	****	****	****	****	****	****
Number of Quarters Mother Worked during Year						
	****	****	****	****	****	****
Family Received Cash Welfare during Year						
	****	****	****	****	****	****
Number of Quarters Mother Worked in Previous Two Years^a (compared to 0)						
1–3	+	-	+	+	-	+
4–7	**	+	+	**	+	**
8	****	+	**	****	+	**
Number of Months Mother Received Welfare in Previous Two Years^a (compared to 6 or less)						
7–12	**	+	+	-	+	+
13–18	****	****	****	+	****	+
19–24	****	****	****	****	****	****
Mother Had More than One Welfare Spell in Previous Two Years^a						
	**	**	+	+	+	+
% Female-Headed Households in ZIP Code of Residence						
	+	+	**	****	****	****
Constant term	***	***	***	***	***	***
Log likelihood	-3553.2	-3602.5	-3582.6	-3571.6	-2792.3	-3358.6
Sample size	7,543	7,262	6,990	6,837	7,683	7,520

+ Coefficient is positive and not significant at the 10% level or below.

+* Coefficient is positive and statistically significant at the 10% level.

** Coefficient is positive and statistically significant at the 5% level.

*** Coefficient is positive and statistically significant at the 1% level.

- Coefficient is negative and not significant at the 10% level or below.

-* Coefficient is negative and statistically significant at the 10% level.

** Coefficient is negative and statistically significant at the 5% level.

*** Coefficient is negative and statistically significant at the 1% level.

Note: Model also controls for missing race and percentage of female-headed-households variables.

^aOctober 1993 through September 1995 for the 1995 cohort, and October 1995 through September 1997 for the 1997 cohort.

TABLE 12
Probability of Medicaid Take-Up among Mothers Eligible to Receive Medicaid – U.S. Citizens Only
 Summary of Sign and Significance from Annual Probits

	1995 Cohort				1997 Cohort	
	1996	1997	1Q1998- 2Q99	3Q99- 4Q99	1Q1998- 2Q99	3Q99- 4Q99
Mother's Age						
Age	-	_*	_-***	_-***	_-**	_-*
Age squared	+	+*	+***	+**	+***	+
Mother's Education (compared to less than high school degree)						
High school graduate	+***	+***	-	-	+	+
More than high school graduate	+***	+***	+	-	+***	-
Mother's Race (compared to white)						
African American	_-***	-	+	-	-	_-!***
Hispanic	-	-	-	_-**	+	_-***
Other	-	+	-	-	+	-
County of Residence (compared to other urban counties)						
Milwaukee	_*	+	-	+	_-**	+
Rural counties	+*	+	+***	+***	+**	+***
Age of Youngest Child (compared to less than 1)						
1–5 years	+	_*	_-***	_-**	-	_-***
6–12 years	-	_-**	_-***	_-***	-	_-***
13–18 years	-	_-***	_-***	_-**	_-**	_-***
Number Children in the Family (compared to 1)						
2	+**	+***	+***	+***	+***	+***
3 or more	+	+***	+***	+***	+**	+***
Any Adults Other than Mother Living in Household						
	+***	+***	+***	+***	+***	+***
Any Child Receiving SSI						
	-	-	+***	+***	+	+

(table continues)

TABEL 12, continued

	1995 Cohort				1997 Cohort	
	1996	1997	1Q1998- 2Q99	3Q99- 4Q99	1Q1998- 2Q99	3Q99- 4Q99
Number of Quarters Mother Is Eligible to Receive Medicaid (compared to 1)						
2	****	****	****	NA	****	NA
3	****	****	****	NA	****	NA
4	****	****	****	NA	****	NA
5	NA	NA	****	NA	****	NA
6	NA	NA	****	NA	****	NA
Eligible for Medicaid (as opposed to BadgerCare)	NA	NA	NA	****	NA	****
BadgerCare Premium	NA	NA	NA	-***	NA	-***
Mother Worked for Firm Offering Health Insurance	+	+	****	****	-*	+
Number of Quarters Mother Worked during Year	****	****	****	****	****	****
Family Received Cash Welfare during Year	****	****	****	****	****	****
HMOs Mandated in County (1996 only)	-	NA	NA	NA	NA	NA
Number of HMOs Covering Medicaid in County (1997–1999)	NA	-	+	+	+	+
Free Health Clinic in ZIP Code of Residence	-*	-	-	-	+	-
Number of Quarters Mother Worked in Previous Two Years^a (compared to zero)						
1–3	+	+	+	+	+	-
4–7	+	+	+	***	+	+
8	****	****	**	+	+	**

(table continues)

TABEL 12, continued

	1995 Cohort				1997 Cohort	
	1996	1997	1Q1998- 2Q99	3Q99- 4Q99	1Q1998- 2Q99	3Q99- 4Q99
Number of Months Mother Received Welfare in Previous Two Years^a (compared to 6 or less)						
7-12	+	+**	+	+	+***	+***
13-18	+***	+***	+	+**	+***	+***
19-24	+***	+***	+***	+***	+***	+***
Mother Had More than One Welfare Spell in Previous Two Years^a	+***	+	+**	+	+	-
% Female-Headed Households in ZIP Code of Residence	-	-*	+	+	-	+
Constant term	-.***	-.***	-.***	-.***	-.***	-.**
Log likelihood	-2654.6	-3095.0	-2963.9	-3729.4	-2202.2	-3811.7
Sample size	7,284	6,473	6,107	6,928	7,544	7,471

+ Coefficient is positive and not significant at the 10% level or below.

+* Coefficient is positive and statistically significant at the 10% level.

+** Coefficient is positive and statistically significant at the 5% level.

+*** Coefficient is positive and statistically significant at the 1% level.

- Coefficient is negative and not significant at the 10% level or below.

-* Coefficient is negative and statistically significant at the 10% level.

-** Coefficient is negative and statistically significant at the 5% level.

-*** Coefficient is negative and statistically significant at the 1% level.

Note: Model also controls for missing race and percentage of female-headed-households variables.

^aOctober 1993 through September 1995 for the 1995 cohort, and October 1995 through September 1997 for the 1997 cohort.

TABLE 13
Probability of Medicaid Take-Up among Children Eligible to Receive Medicaid – U.S. Citizens Only
 Summary of Sign and Significance from Annual Probits

	1995 Cohort				1997 Cohort	
	1996	1997	1Q1998- 2Q99	3Q99- 4Q99	1Q1998- 2Q99	3Q99- 4Q99
Mother's Age						
Age	+	_*	_*	_*	_*	_*
Age squared	-	****	****	****	****	****
Mother's Education (compared to less than high school degree)						
High school graduate	****	+	+	-	+	+
More than high school graduate	****	_*	+	_*	****	-
Mother's Race (compared to white)						
African American	_*	-	**	****	_*	+
Hispanic	_*	_*	-	-	+	_*
Other	-	+	-	-	**	-
County of Residence (compared to other urban counties)						
Milwaukee	_*	+	+	+	_*	+
Rural counties	**	****	****	****	+	****
Child's Age (compared to less than 1)						
1–5 years	_*	_*	_*	_*	_*	_*
6–12 years	_*	_*	_*	_*	_*	_*
13–18 years	_*	_*	_*	_*	_*	_*
Number of Other Children in the Family	-	****	****	****	****	-
Any Adults Other than Mother Living in Household	****	****	****	****	****	****
Any Child Receiving SSI	****	****	****	****	****	**
Number of Quarters Child Is Eligible to Receive Medicaid (compared to 1)						
2	****	****	****	NA	****	NA
3	****	****	****	NA	****	NA
4	****	****	****	NA	****	NA
5	NA	NA	****	NA	****	NA
6	NA	NA	****	NA	****	NA
Eligible for Medicaid (as opposed to BadgerCare)	NA	NA	NA	****	NA	****

(table continues)

TABLE 13, continued

	1995 Cohort				1997 Cohort	
	1996	1997	1Q1998- 2Q99	3Q99- 4Q99	1Q1998- 2Q99	3Q99- 4Q99
BadgerCare Premium	NA	NA	NA	-.***	NA	-.***
Number of Quarters Mother Is Eligible to Receive Medicaid	+.***	+.***	+.**	NA	+.***	NA
Mother Eligible to Receive Medicaid	NA	NA	NA	-.***	NA	+.***
Any Other Noneligible Children in Family	-.***	-.***	-.***	NA	-.***	NA
Another Child in Household Eligible to Receive Medicaid	NA	NA	NA	+.***	NA	+.***
Mother Worked for Firm Offering Health Insurance	+.***	+.***	+.***	+.***	+*	+
Number of Quarters Mother Worked during Year	+.***	+.***	+.***	+.***	+.***	+.***
Family Received Cash Welfare during Year	+.***	+.***	+.***	+.***	+.***	+.***
HMOs Mandated in County (1996 only)	+	NA	NA	NA	NA	NA
Number of HMOs Covering Medicaid in County (1997–1999)	NA	-	-	+	+	+
Free Health Clinic in ZIP Code of Residence	-.***	+	-	+	+	-.***
Number of Quarters Mother Worked in Previous Two Years^a (compared to zero)						
1–3	-.*	+*	+	+*	+	+
4–7	+	+*	+.***	+.***	+	+.***
8	+.***	+.***	+.***	+.***	+.***	+.***
Number of Months Mother Received Welfare in Previous Two Years^a (compared to 6 or less)						
7–12	+.***	+.**	+.***	+	+.***	+.***
13–18	+.***	+.***	+.***	+.***	+.***	+.***
19–24	+.***	+.***	+.***	+.***	+.***	+.***

(table continues)

TABLE 13, continued

	1995 Cohort				1997 Cohort	
	1996	1997	1Q1998- 2Q99	3Q99- 4Q99	1Q1998- 2Q99	3Q99- 4Q99
Mother Had More than One Welfare Spell in Previous Two Years^a	****	****	****	**	+	+
% Female-Headed Households in ZIP Code of Residence	+	-*	-	**	-*	+
Constant term	-**	-***	-***	-	-***	-
Log likelihood	-4955.5	-6520.0	-6931.6	-7797.1	-3399.2	-7092.5
Sample size	14,635	13,827	13,544	13,947	17,485	17,851

+ Coefficient is positive and not significant at the 10% level or below.

+* Coefficient is positive and statistically significant at the 10% level.

+** Coefficient is positive and statistically significant at the 5% level.

+*** Coefficient is positive and statistically significant at the 1% level.

- Coefficient is negative and not significant at the 10% level or below.

-* Coefficient is negative and statistically significant at the 10% level.

-** Coefficient is negative and statistically significant at the 5% level.

-*** Coefficient is negative and statistically significant at the 1% level.

Note: Model also controls for missing race and percentage of female-headed-households variables.

^aOctober 1993 through September 1995 for the 1995 cohort, and October 1995 through September 1997 for the 1997 cohort.

take-up rate of mothers with older children would be smaller than that of mothers of infants. After BadgerCare went into effect, and the state charged a premium for coverage of families with incomes at or above 150 percent of the poverty line, mothers facing the highest premium were less likely to have signed up for coverage.

The pattern of children's coverage by Medicaid (or BadgerCare, beginning in the third quarter of 1999) is shown in Table 13; it is very similar to that of mothers' Medicaid coverage. Again, the probability of coverage is higher for children in more needy families. Children in large families, families with a child on SSI, and families in which the mother or child has been eligible for benefits for a longer period of time all have a greater probability of being covered by Medicaid than children without these characteristics. Children living in rural areas and with mothers who have at least a high school degree are more likely to be covered than children without these characteristics, although after the implementation of BadgerCare, the mother's education no longer had a significant effect on the probability of a child being covered by Medicaid. Whereas African American children and those living in Milwaukee were less likely to be covered than white children or those living in other urban areas in the first years after leaving, they were more likely to be covered after BadgerCare went into effect. Hispanic children appear to be less likely to be covered than whites throughout the entire postexit period. As in the case with mothers' coverage, higher premiums (for BadgerCare) appear to discourage enrollment. The prior pattern of increased coverage associated with the extent of mother's contact with the welfare system or the world of work is also observed in the case of children. While the information provided through these contacts probably increases the demand for coverage, it is interesting that living in a neighborhood with a high prevalence of mother-only families does not seem to play this role. Again, because of procedures followed in the provision of medical care services, it is not surprising that the more persons living in the family, the greater the probability that a child will be covered by Medicaid.

Table 14 summarizes the correlates of take-up for Food Stamps, mothers' Medicaid, and children's Medicaid. The positive relationship between both (1) the number of previous quarters in the labor force and (2) the number of months receiving welfare in the previous 2 years and the probability of

TABLE 14
Summary of Correlates of Benefit Take-Up

	Food Stamps	Mother's Medicaid	Children's Medicaid
Mother's Age	Positive in nearly all years Significant in few cases	Negative Usually significant	Negative Significant
Mothers Education	Negative Sometimes significant	Positive, often significant in first years after leaving and before BadgerCare Negative, marginally significant after BadgerCare	Positive, often significant in first years after leaving and before BadgerCare Negative, marginally significant after BadgerCare
Mother's Race	African American: Positive Significant Other minorities: No consistent pattern	No consistent pattern, either before of after BadgerCare	African American: no consistent pattern before BadgerCare, positive and significant after BadgerCare Hispanic; negative often significant
County of Residence	No consistent pattern	Rural counties: Positive Significant No difference between Milwaukee and other urban counties	Rural counties: Positive Significant Milwaukee: negative and significant in first year after leaving; positive after first year and after BadgerCare
Age of Youngest Child	Negative Often significant	Negative Often significant	Negative Significant
Number of Children	Positive Often significant	Positive Significant	Positive Significant
Other Adults in Family	Positive Significant	Positive Significant	Positive Significant
Any Child on SSI	No consistent pattern-1995 Negative-1997	Positive, significant after first year postexit, and after BadgerCare	Positive Significant
Quarters Eligible for Benefit	Positive Significant	Positive Significant*	Positive Significant
Quarters Mother Eligible for Benefit	NA	NA	Positive Significant

(table continues)

TABLE 14, continued

	Food Stamps	Mother's Medicaid	Children's Medicaid
Amount of (Net) Benefit Eligibility	Positive Significant	Positive Significant after BadgerCare**	Positive Significant after BadgerCare**
Quarters Worked in Year	Positive Significant	Positive Significant	Positive Significant
Quarters Worked in Last Two Years	Positive Often significant	Positive Often significant	Positive Significant
Worked for Employer Offering Health Insurance	NA	Positive Often significant	Positive Significant
Received Welfare during Year	Positive Significant	Positive Significant	Positive Significant
Months on Welfare in Last Two Years	Positive Significant	Positive Significant	Positive Significant
More than One Welfare Spell in Last Two Years	Positive Sometimes significant	Positive Sometimes significant	Positive Significant (only for 1995 cohort)
Percentage Female-Head Families in Neighborhood	Positive Usually significant	No consistent pattern	No consistent pattern
Availability of Health Care Services in Area	NA	No consistent pattern	No consistent pattern

*Also, mothers eligible for Medicaid were more likely to be covered by Medicaid after BadgerCare was in effect than were mothers who were eligible for only BadgerCare likely to be covered by it.

**Inferred from negative and significant coefficient on BadgerCare premium.

receiving Food Stamps or Medicaid are of particular interest. Some women cycle in and out of the labor force while moving in and out of welfare receipt, owing to their state of labor market readiness, the work or living patterns of a partner, spouse, or other adult (who may also enter or leave the unit or the labor force), and other factors. We would expect women who have previously cycled on and off welfare to have a better understanding of what benefits are available and how to gain access to them. Even if they more permanently leave cash public assistance for work, they may continue to receive health-related noncash benefits, just as they received cash benefits while working. A test of this possibility, conducted by creating variables that reflect the number of prior quarters with both earnings and AFDC, supports this conjecture. Some program factors also reduce the likelihood that women who did not work while on welfare will participate in Food Stamps and Medicaid after their welfare exit. For example, women with no preschool children who left W-2 in part because they did not want to comply with its work requirements may also not wish to participate in Food Stamps, owing to the similar work requirements of that program (applicable to households without preschool children).

IX. QUANTITATIVE EFFECTS OF FAMILY CHARACTERISTICS ON FOOD STAMP AND MEDICAID TAKE-UP: SIMULATION RESULTS

The probit estimates summarized in Table 14 reveal the direction and statistical significance of the relationships between the correlates of Food Stamp and Medicaid take-up and the probability of participating, but they provide little indication of the magnitude of these relationships. In Table 15 we present simulation estimates describing the extent to which the probability of benefit take-up during at least one quarter of the first year after leaving welfare changes in response to changes in the correlates of take-up. In Table 16 we present similar simulation results for the take-up of medical insurance benefits during the final two quarters of 1999, when BadgerCare was in effect.

A. Benefit Take-Up during the First Year after Exit

Table 15 shows the effect on the probability of taking up benefits from varying a number of family characteristics from a base case. The base case is that of a white Milwaukee family with two

TABLE 15
Simulations of the Probability of Benefit Take-Up during the First Year after Exit
among Those Eligible to Receive Benefit

Characteristics	Probability of Family Taking Up Food Stamps		Probability of Mother Taking Up Medicaid		Probability of Each Child Taking Up Medicaid	
	1995 Cohort	1997 Cohort	1995 Cohort	1997 Cohort	1995 Cohort	1997 Cohort
Prototypical Case*	0.401	0.752	0.680	0.854	0.560	0.840
Mother has less than 12 years education	0.408	0.739	0.621**	0.842	0.518**	0.820**
Mother has more than 12 years education	0.417	0.761	0.726**	0.903**	0.626**	0.884**
Mother is African American	0.446**	0.792**	0.604**	0.844	0.471**	0.830
Mother is Hispanic	0.392	0.794**	0.659	0.884	0.468**	0.869**
Family lives in rural county	0.422	0.751	0.732**	0.919**	0.686**	0.897**
Youngest child less than 1 year old	0.353**	0.771	0.675	0.860	0.681**	0.893**
Youngest child aged 13 to 18	0.333**	0.766	0.673	0.792**	0.598**	0.830
One child in household	0.381	0.694**	0.639**	0.801**	0.567	0.789**
Three or more children in household	0.426**	0.780**	0.654	0.829**	0.553	0.883**
Adults other than mother in household	0.718**	0.890**	0.837**	0.924**	0.813**	0.934**
Mother worked for firm which offered health insurance	NA	NA	0.688	0.833	0.645**	0.838
Mother did not work during year	0.271**	0.588**	0.333**	0.644**	0.292**	0.616**
Mother worked four quarters during year	0.543**	0.873**	0.914**	0.959**	0.802**	0.955**
Mother worked for firm which offered health insurance and worked four quarters during year	NA	NA	0.917**	0.950**	0.858**	0.954**
Family received cash welfare	0.953**	0.984**	0.994**	0.996**	0.964**	0.987**
Mother did not work during year and family received cash welfare	0.906**	0.955**	0.947**	0.976**	0.865**	0.938**
Eligible to receive benefit 1 quarter during year	0.114**	0.489**	0.140**	0.229**	0.178**	0.291**
Eligible for \$25 or less in Food Stamp benefits	0.347	0.551**	NA	NA	NA	NA
Eligible for \$250 or more in Food Stamp benefits	0.439**	0.820**	NA	NA	NA	NA
Mother did not work in 2 years prior to exit	0.356**	0.731	0.647	0.849	0.541**	0.825
Mother worked 8 qtrs in 2 years prior to exit	0.447**	0.779**	0.731**	0.875	0.611**	0.909**
Family received AFDC for 6 months or less in 2 years prior	0.326**	0.612**	0.566**	0.743**	0.387**	0.694**

(table continues)

TABLE 15, continued

Characteristics	Probability of Family Taking Up Food Stamps		Probability of Mother Taking Up Medicaid		Probability of Each Child Taking Up Medicaid	
	1995 Cohort	1997 Cohort	1995 Cohort	1997 Cohort	1995 Cohort	1997 Cohort
All variables at their means	0.686	0.892	0.856	0.916	0.900	0.959
Actual probability of take-up	0.602	0.824	0.727	0.848	0.806	0.922
All variables at their means, except family does not receive cash welfare	0.459	0.806	0.662	0.830	0.777	0.920

*Mother is 29, white, and has 12 years of education. The family lives in Milwaukee. The age of the child/youngest child is 1–5 years. There are two children, no adults other than the mother, and no children receiving SSI in the household. The person/family is eligible to receive the benefit for all quarters of the year. The mother worked two quarters during the year and the family did not receive cash welfare during the year. The mother worked 4–7 quarters and received AFDC for 24 months during the two years prior to exit. Other variables are at their means.

Food Stamps only: Family is eligible to receive \$100–250 per month in Food Stamp benefits.

Medicaid only: Mother did not work for a firm which offered health insurance.

Child's Medicaid only: Mother eligible to receive Medicaid for two of the four quarters; no other noneligible children in family.

**Statistically significant at the 10% level or less.

TABLE 16
Simulations of the Probability of Taking Up Badger Care or Medicaid during the Last Half of 1999
among Those Eligible to Receive Benefit

Characteristics	Probability of Mother Taking Up Medicaid or Badger Care		Probability of Each Child Taking Up Medicaid or Badger Care	
	1995 Cohort	1997 Cohort	1995 Cohort	1997 Cohort
Prototypical Case*	0.350	0.711	0.485	0.805
Mother has less than 12 years education	0.358	0.710	0.498	0.794
Mother has more than 12 years education	0.341	0.705	0.458**	0.792
Mother is African American	0.336	0.665**	0.531**	0.816
Mother is Hispanic	0.278**	0.618**	0.461	0.755**
Family lives in rural county	0.382**	0.756**	0.524**	0.832**
Youngest child less than 1 year old	0.407**	0.808**	0.853**	0.927**
Youngest child aged 13 to 18	0.311**	0.613**	0.439**	0.812
One child in household	0.253**	0.649**	0.467**	0.818
Three or more children in household	0.416**	0.746**	0.503**	0.790
Adults other than mother in household	0.445**	0.791**	0.585**	0.892**
Mother worked for firm which offered health insurance	0.449**	0.735	0.597**	0.811
Mother did not work during year	0.237**	0.535**	0.346**	0.615**
Mother worked four quarters during year	0.477**	0.846**	0.626**	0.923**
Mother worked for firm which offered health insurance and worked four quarters during year	0.579**	0.863**	0.728**	0.926**
Family received cash welfare	0.991**	0.999**	0.923*	0.987**
Mother did not work during year and family received cash welfare	0.979**	0.994**	0.857**	0.951**
Eligible to receive BadgerCare only	0.212**	0.392**	0.215**	0.472**
Must pay \$30 BadgerCare premium	0.134**	0.259**	0.172**	0.423**
Must pay \$90 BadgerCare premium	0.042**	0.082**	0.104**	0.330**

(table continues)

TABLE 16, continued

Characteristics	Probability of Mother Taking up Medicaid or Badger Care		Probability of Each Child Taking up Medicaid or Badger Care	
	1995 Cohort	1997 Cohort	1995 Cohort	1997 Cohort
All variables at their means	0.316	0.746	0.488	0.853
Actual probability of take-up	0.420	0.620	0.478	0.780
All variables at their means, except family does not receive cash welfare	0.281	0.623	0.463	0.800

*Mother is 29, white, and has 12 years of education. The family lives in Milwaukee. The age of the child/youngest child is 1–5 years. There are two children, no adults other than the mother, and no children receiving SSI in the household. The person is eligible to receive Medicaid. The mother did not work for a firm which offered health insurance. The mother worked two quarters during the year and the family did not receive cash welfare during the year. The mother worked 4–7 quarters and received AFDC for 24 months during the two years prior to exit. Other variables are at their means.

Child's Medicaid only: Mother is eligible to receive Medicaid and there is another child in the household eligible to receive Medicaid

**Statistically significant at the 10% level or less.

children, in which the mother is 29 years old and has a high school degree (the family is described more fully in a footnote to the table). The quantitative effects of changes in the following variables are shown in the table:

- the level of schooling of the mother (less than and more than 12 years, compared with 12 years,
- mother's race,
- county of residence,
- number of children (one and three or more, compared with two),
- age of youngest child (less than 1 and aged 13–18, compared to aged 1–5),
- adults other than the mother in the household (compared with no adult),
- current cash welfare receipt (compared with not currently receiving),
- current work activity (not working and working four quarters in the year, compared with working two quarters in the year),
- mother's work and welfare history, and
- program eligibility (eligible to receive benefit one quarter in the year, compared with being eligible for the entire year).

In addition, for Food Stamps, the effect of being eligible for \$25 per month or less of monthly benefits and being eligible for \$250 or more of monthly benefits, compared with being eligible for \$100–\$250 of monthly Food Stamp benefits, are shown in the table. For Medicaid, the effect of the mother working for a firm that offers health insurance, compared with not working for such a firm, is shown.

Probabilities of take-up are shown for Food Stamp receipt, Medicaid receipt by the mother, and Medicaid receipt by any child in the family. In addition, the bottom panel of statistics compares the predicted take-up probabilities estimated from the model (when mean values of all of the independent variables are used in the simulation) with the actual take-up percentages observed in the raw data. In general, the predicted probabilities are similar to, but somewhat larger than, the actual rates, reflecting the

nonlinear nature of the probit estimate.⁴⁰ The third row of this panel also shows the effect of assuming that the prototypical mother does *not* receive cash welfare support during the year; for Food Stamp take-up in the 1995 cohort, this assumption has a major effect on the overall prediction of the probability of take-up.

The first row of Table 15 shows the likelihood of receipt of Food Stamps for this prototypical family. The probability of receiving Food Stamps during the first year after exit for this base-case family is 40 percent (expressed in the table as a probability of .401) in the 1995 cohort of leavers, but over 75 percent for the later cohort, a difference of 35 percentage points.⁴¹ For both cohorts, being African American increases the probability of receiving Food Stamps by about 4 percentage points (from 40 to 45 percent for the 1995 cohort and from 75 to 79 percent for the 1997 cohort). Being Hispanic also increases the probability of Food Stamp receipt by about 4 percentage points for the 1997 cohort. However, this effect does not hold for the earlier cohort. The number of children in the family has a larger effect on the probability of receipt; moving from having one child to more than three children increases the probability of Food Stamp receipt by 5 percentage points for the first cohort and by 9 percentage points in the later cohort. Having another adult in the family also has a major effect on the probability of receipt, increasing it from 40 percent (the base case) to 72 percent for the 1995 cohort and by another 14 percentage points for the 1997 cohort. Moving from the mother not working to working in all four quarters increases the probability of Food Stamp receipt by 27 percentage points (from 27 percent to 54 percent) for the early

⁴⁰With one exception, the predicted probabilities deviate by less than 9 percentage points. The deviation for the take-up of Medicaid by mothers in the 1995 cohort is 13 percentage points, and it is the exception.

⁴¹The base probabilities of take-up shown in Table 13 differ substantially from the overall proportions of eligible families who take up benefits, as indicated in Table 6. For example, in Table 6, 60.2 percent of eligible families received Food Stamp benefits, while the predicted probability for the prototypical family analyzed in Table 15 is about 40 percent. The difference between these values is accounted for by the difference between the characteristics of the prototypical family (which is the subject of the estimates in Table 15) and those of the overall population of eligible families. While the prototypical family is white, a substantial share (31 percent of the 1995 cohort and 46 percent of the 1997 cohort) of the entire population of eligible families is nonwhite, and these racial minorities have higher take-up rates than whites. More important, the prototypical family is assumed to receive no cash welfare benefits during the year. A sizable share (30 percent of the 1995 cohort and 25 percent of the 1997 cohort) of the entire population of eligible families did receive cash welfare benefits during the year, and this group has a substantially higher rate of take-up than those families who did not receive cash assistance during the year.

cohort and by 28 percentage points (from 59 percent to 87 percent) in the later cohort. The largest effect is that associated with receiving cash welfare benefits; mothers who were recipients have over a 95 percent chance of receiving Food Stamps in both cohorts. The extent of eligibility—both the number of quarters eligible and the amount of monthly benefits—also has a large simulated effect on the probability of receiving Food Stamps, as does the mother’s work and welfare history.

In some cases, the independent effects of these variables on the probability of Medicaid participation differ from those observed for participation in the Food Stamp program. The probability of the mother taking up Medicaid if eligible during the first year after exit is shown in the second set of columns of the table; the probability for each eligible child is shown in the third set of columns.

For both the mother and children, the probability of take-up is substantially higher for the base-case family in the 1997 cohort, compared with the 1995 cohort. For mothers, the base-case probability increases from 68 percent to 85 percent between the two cohorts; for children the increase is from 56 percent to 84 percent. The effect of maternal education on mothers’ and children’s Medicaid participation is greater than it is for Food Stamp participation. Going from less than a high school degree to more than a high school degree increases the probability of take-up for both mothers and children by 6–10 percentage points. For both the mothers and children, and for both 1995 and 1997, the age of the youngest child and the number of children have small effects on the probability of take-up.

Having another adult in the family has a very large effect on the probability of Medicaid receipt—for the early cohort, the probability of children’s take-up increases by 25 percentage points, and the probability of mother’s take-up increases by 15 percentage points. (The corresponding increases for the later cohort are less than 10 percentage points for both children’s and mother’s take-up.) Very large increases in the probability of take-up are also associated with the extent of mother’s work during the year. (Moving from no work to work in all quarters increases the probability of mother’s take-up by more than 60 percentage points in the 1995 cohort, and by 50 percentage points for children’s take-up; for the 1997 cohort, the effects of mother’s working are also large.) If the mother receives cash welfare, the probability that both she and her children will receive Medicaid increases to 95 percent or more. Finally,

if the mother or child are Medicaid-eligible for only one quarter during the year, the probability of taking up benefits during the first year after exit decreases to less than 20 percent in the first cohort (for both mother and any child), and to about 25 percent in the later cohort.⁴²

B. Public Health Insurance Coverage after BadgerCare

Table 16 presents similar simulation results for the take-up by mothers and by children of either BadgerCare or Medicaid during the period when BadgerCare was in effect—the final two quarters of 1999. The base case probabilities of take-up for this 6-month period reflect the situation 4 years after exiting welfare for the 1995 cohort and 2 years after leaving for the 1997 cohort. Reflecting the erosion of participation rates with the length of time since leaving cash assistance, these base probabilities are substantially below the take-up probabilities during the first year of leaving (Table 15). For mothers in the 1995 cohort, the base probability of take-up in the last two quarters of 1999 is 35 percent, down from 68 percent in 1996, the first year after leaving. For the 1997 cohort, the base take-up probability is 71 percent, down from 85 percent in the first year after leaving. For children, the comparable percentages for the two cohorts are 49 percent and 81 percent, down from 56 percent and 84 percent during the first year after leaving.

These reductions in take-up probabilities from the period before the introduction of BadgerCare to the period after are due to two factors. First, the estimate of participation during the period in which BadgerCare was in effect is made over a 6-month window, rather than over a full year. The truncation of the observation period reduces the probability of take-up, even if nothing else changes. Second, because of the expanded coverage offered by BadgerCare, the population of leaver families that are eligible for either Medicaid or BadgerCare during the last two quarters of 1999 is substantially larger than the pool of

⁴²The difference in effects between the two cohorts could reflect behavioral responses to changes in labor markets or income support policy or differences in underlying characteristics between the cohorts not captured in the models. We ran the model over the combined 1995 and 1997 samples, and then applied a likelihood ratio test of the difference in coefficients between the two cohorts. The test indicates that the relationship between background characteristics and take-up is different in the two time periods for both Food Stamps and Medicaid.

families eligible for Medicaid alone in the period prior to the introduction of BadgerCare. This sudden expansion of the pool of eligible families also tends to reduce the base probability of participation. There may also have been some delays in informing the eligible population of the new BadgerCare program.

The variables that appeared to have the largest effect on the probability of take-up in the later period are similar to those reported in Table 15. Again, mother's schooling has a negligible effect when other variables are controlled for. Both mothers and children of Hispanic origin are much less likely to take up public health benefits during this period (the probability of Hispanic children in the 1997 cohort taking up benefits is 5 percentage points lower than that of white children, while Hispanic mothers in this cohort are 10 percentage points less likely to receive benefits than their white counterparts). Whereas the age of the youngest child had a relatively small effect on the probability of take-up during the first year after leaving, the effect is substantial during this period when BadgerCare is in effect.

For mothers in the 1995 cohort, having a youngest child less than 1 year old suggests a probability of health care take-up of 41 percent, while having a youngest child aged 13–18 is associated with a take-up probability of 31 percent, a reduction of 10 percentage points. For the later cohort, this difference is even more pronounced. Mothers whose youngest child is less than 1 year old have a probability of take-up of 81 percent versus a probability of 61 percent for each older child. In much the same way, for both cohorts, the number of children in the family has a much stronger effect on the probability of take-up for both mothers and children in the BadgerCare period than during the first year after leaving welfare. Moving from one child to three or more children increases the probability of the mother's Medicaid/BadgerCare take-up by 10–17 percentage points during the BadgerCare period, and increases the probability of each child's coverage by about 3 percentage points. It appears that the emphasis on the enrolling of children in the program during the later period also encouraged the enrollment of siblings and their mothers.

Finally, as seen in the last three rows of Table 16, being eligible for only BadgerCare (as opposed to being eligible for both BadgerCare and Medicaid) and, to an even greater extent, having to pay a

premium to receive these benefits significantly lower the probability of both mothers and children in both cohorts taking up benefits.

C. Summary of Simulation Results

In Table 17 we summarize these patterns of impact. For Food Stamp take-up, large positive effects on the probability of participation are recorded for the number of adults in the family, the extent of mother's work, and the duration of eligibility. The probability of take-up is also positively related to the net value of the benefits available from participating in the program, and leavers who return to cash welfare status have a very high probability of also receiving Food Stamps.

Before the introduction of BadgerCare, the participation of both mothers and children in the Medicaid program was positively and strongly related to the number of adults in the family, the extent of mother's work, and the length of time the family has been eligible for Medicaid benefits. These factors were also positively related to participation in the Food Stamp program. Again, the probability of participating in Medicaid is greatly increased if the family, having left cash welfare, returns to cash-benefit status.

During the two quarters when the BadgerCare program was in effect, many of these same patterns continued. However, the positive effect of having another adult in the family was muted, while the probability of participating in either Medicaid or BadgerCare was increased if the mother worked for a firm that offered health insurance. It seems likely that facing the choice of whether or not to participate in the firm's health insurance program may alert eligible women to the benefits of enrolling in either Medicaid or BadgerCare.

X. DURATION OF CHILDREN'S MEDICAID RECEIPT

One of the consistent patterns of program participation is the erosion of benefit take-up over time after leaving cash benefit receipt status. For the 1995 cohort, about 81 percent of children who were income-eligible for at least one quarter were covered by Medicaid during the first year after leaving. This

TABLE 17
Summary of Simulated Effects on Take-Up of Health-Related Public Benefits

	First Year after Exit			During Last Two Quarters, 1999	
	Food Stamps	Mother's Medicaid	Any Child's Medicaid	Mother's Medicaid	Any Child's Medicaid
Mother's education	+; small effect	+; moderate effect	+; moderate effect	-; small effect	-; small effect
Age of youngest child	-; small effect	-; small effect	-; moderate effect	-; large effect	-; large effect
Number of children	+; moderate effect	+; small effect	Small effect, mixed	+; moderate effect	+; moderate effect
Other adults in family	+; large effect	+; large effect	+; large effect	+; moderate effect	+; moderate effect
Extent of mother's work	+; large effect	+; very large effect	+; very large effect	+; very large effect	+; very large effect
Worked for firm offering health insurance	NA	Very small effect, mixed	Small effect, mixed	+; moderate effect	+; moderate effect
Receipt of cash welfare	+; very large effect	+; very large effect	+; very large effect	+; very large effect	+; very large effect
Duration of eligibility	+; large effect	+; very large effect	+; very large effect	NA	NA
Eligible to receive BadgerCare only	NA	NA	NA	-; small effect	-; small effect
Net benefits (price) of program	+; moderate effect	NA	NA	+; large effect	+; large effect

percentage dropped to 66 percent in the second year after leaving cash assistance, to 59 percent in the third year, and to 55 percent in the fourth year. When the participation rate is calculated on a quarterly basis, the intertemporal erosion is even greater.

In this section, we explore this pattern of erosion in Medicaid program participation among the children of leaver families.⁴³ Our exploration is based on the calculation of duration (of receipt) probabilities using the Kaplan-Meier “survivor function” estimation method.⁴⁴

Figure 4a shows the duration of receipt patterns for the 61 percent of children in the 1995 cohort of leavers who were continuously eligible for Medicaid for the first 16 quarters after their mothers left welfare; Figure 5a shows the patterns for the 69 percent of continuously eligible children in the 1997 cohort for the first eight quarters after leaving. Children are distinguished by location (Milwaukee, other urban, rural), age (less than 1 year, 1–5 years, 6–12 years, 13–18 years), race (white, African American, Hispanic), and mother’s education (less than 12 years, 12 years, more than 12 years). In each figure, the duration for the entire sample of eligible children is also shown. Note that all of the children were covered by Medicaid in the quarter prior to leaving, by virtue of being recipients of cash welfare benefits.

We first discuss the patterns in Figure 4a for the 1995 cohort; similar interpretations apply to the 1997 cohort. We then compare the most salient differences between the two cohorts.

In the first quarter after exit, only 70 percent of the continuously eligible children in the 1995 cohort were still receiving Medicaid; hence, 30 percent did not participate in the Medicaid program in this quarter. This proportion is the highest for children living in Milwaukee (32 percent) and lowest for rural children (24 percent).

The data show that the sharpest drop in Medicaid benefit take-up occurs in the first quarter after exit. For quarters beyond the first, the decline in participation slows substantially. For children in all

⁴³Results for family and for mothers’ Food Stamp participation can be found in Tables 18b and 18c and Figures 4b, 4c, 5b, and 5c.

⁴⁴A description of the Kaplan-Meier method and the interpretation of results estimated using this method are found in Appendix E.

FIGURE 4a
Duration of Medicaid Receipt for Leaver Children in the Quarters after Exit, by Various Characteristics: 1995 Cohort
 All Leaver Children Who Were Continuously Eligible for Medicaid in the 16 Quarters after Exit (60.8%)

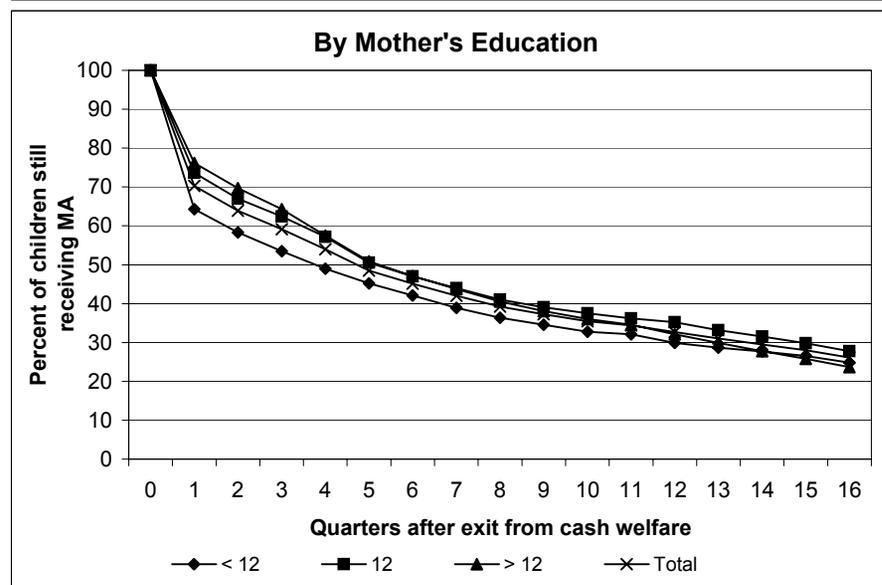
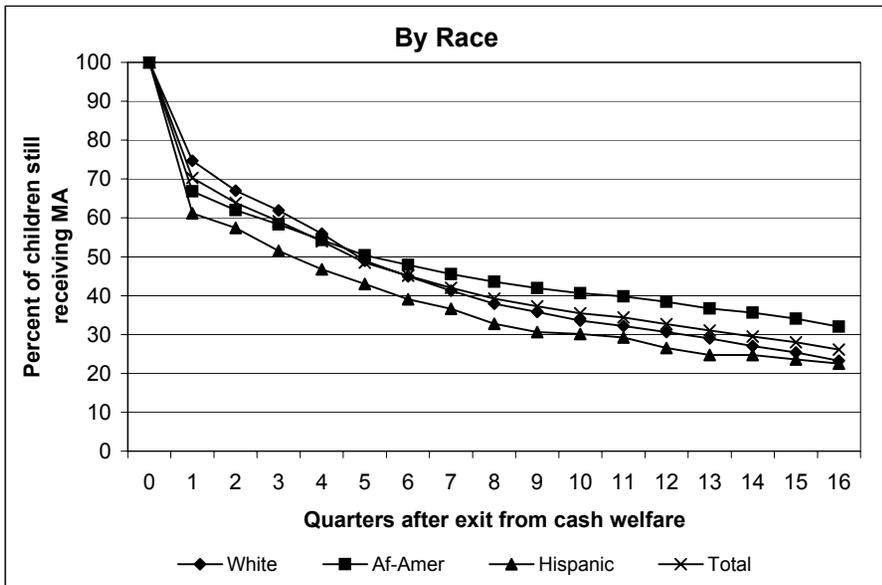
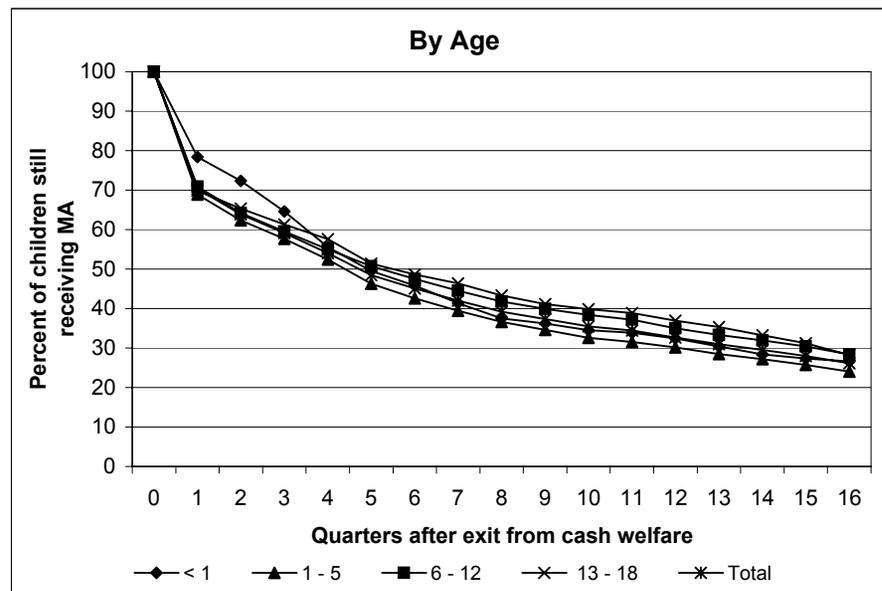
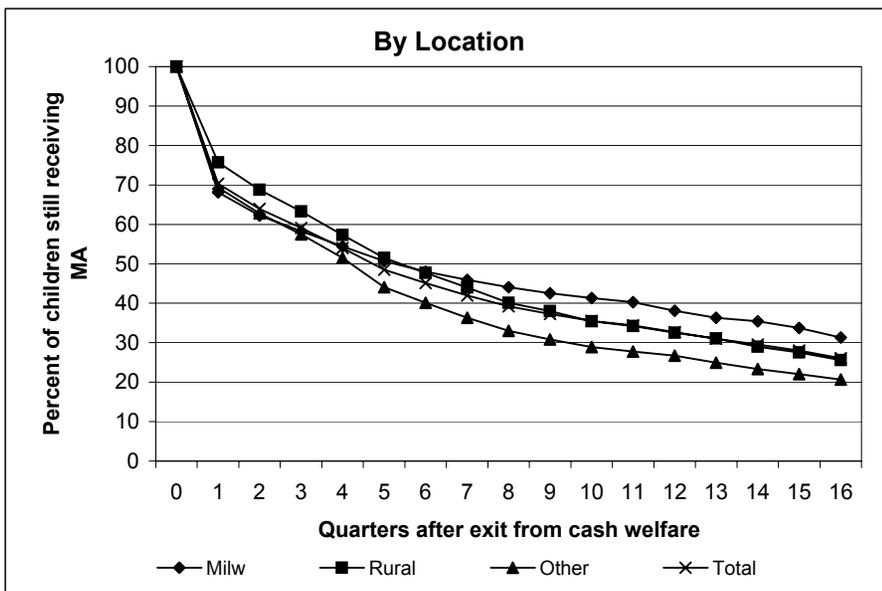


FIGURE 4b
Duration of Food Stamp Receipt for Leaver Families in the Quarters after Exit, by Various Characteristics: 1995 Cohort
 All Leaver Families Who Were Continuously Eligible for Food Stamps in the 16 Quarters after Exit (45.2%)

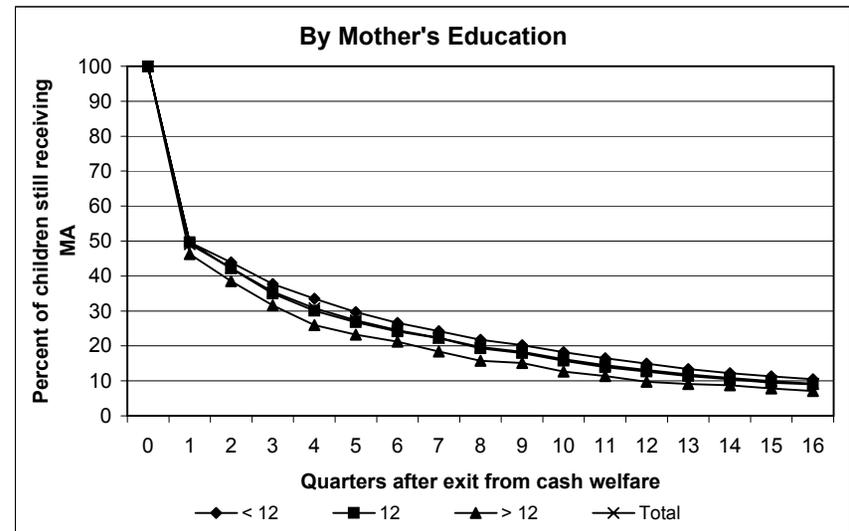
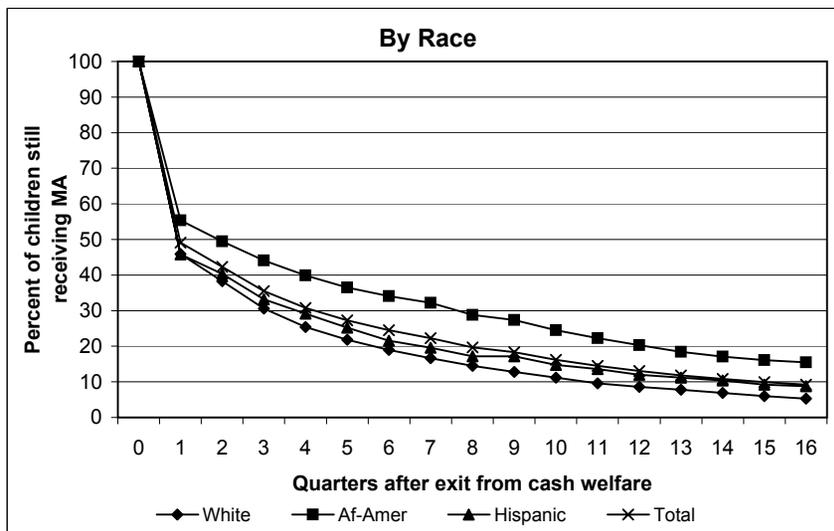
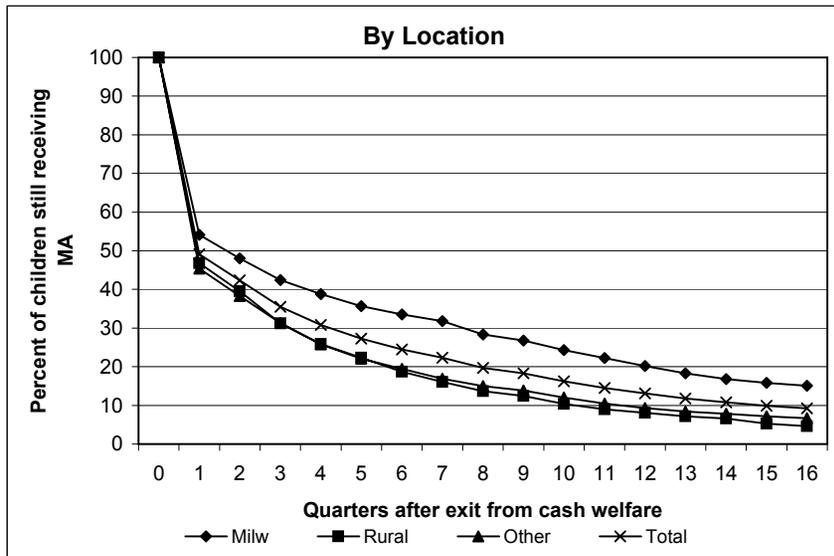


FIGURE 4b, continued

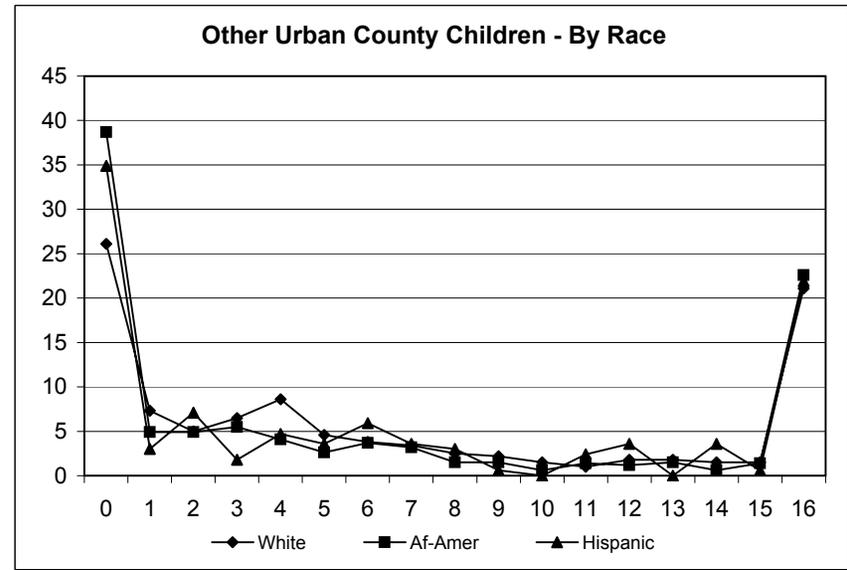
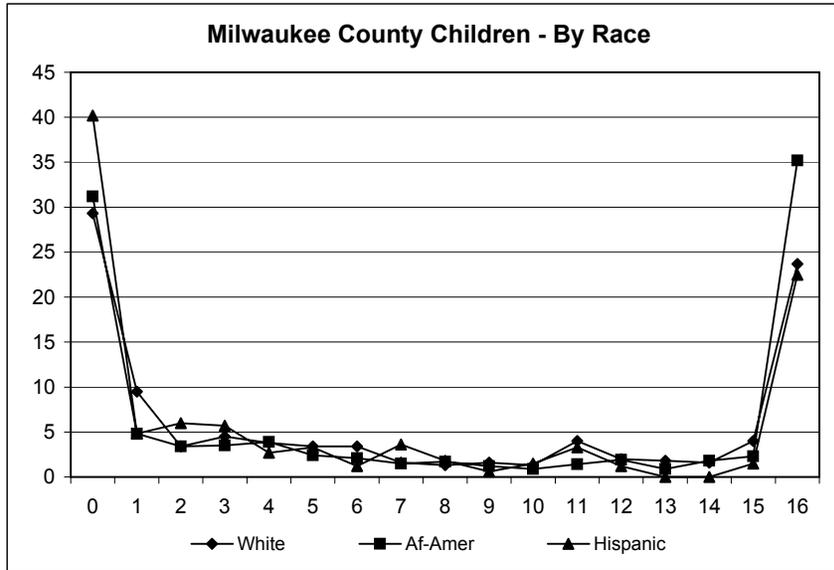


FIGURE 4c
Duration of Medicaid Receipt for Leaver Mothers in the Quarters after Exit, by Various Characteristics: 1995 Cohort
 All Leaver Mothers Who Were Continuously Eligible for Medicaid in the 16 Quarters after Exit (32.9%)

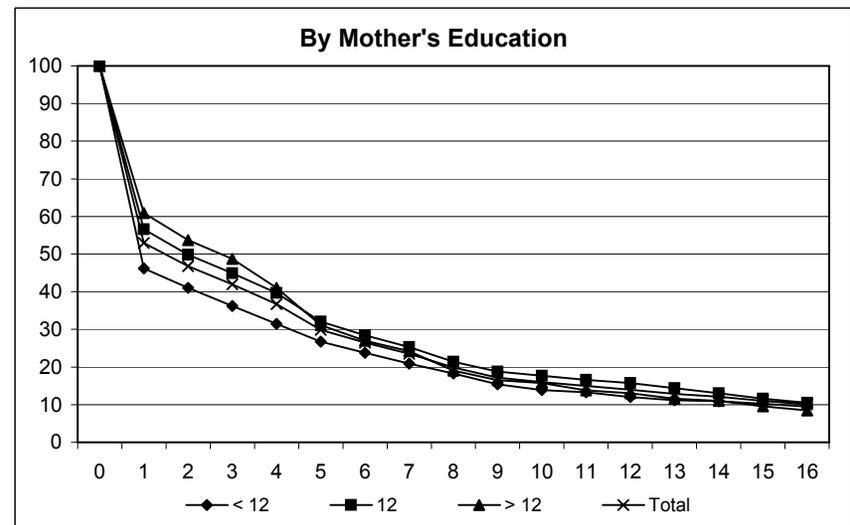
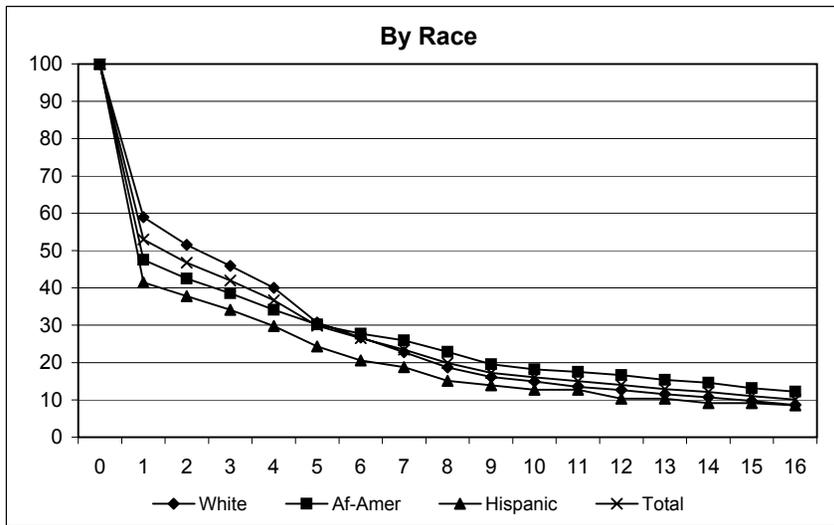
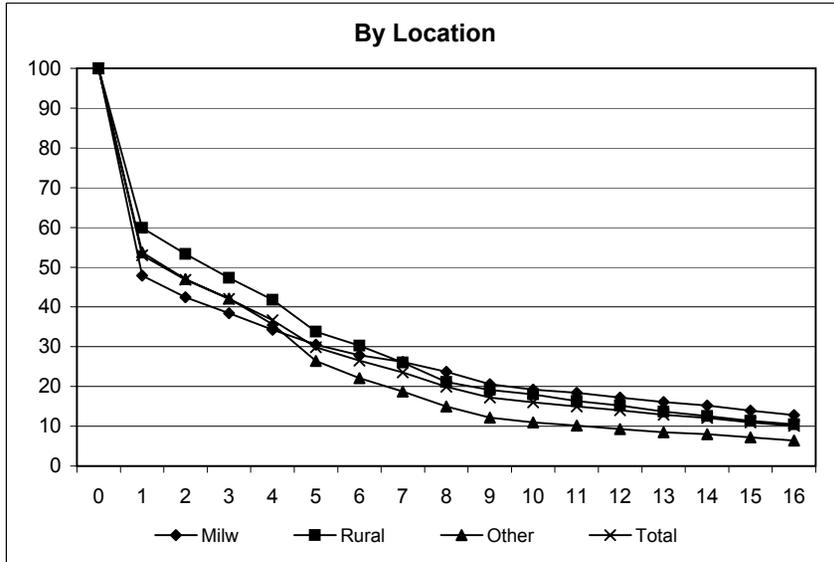


FIGURE 4c, continued

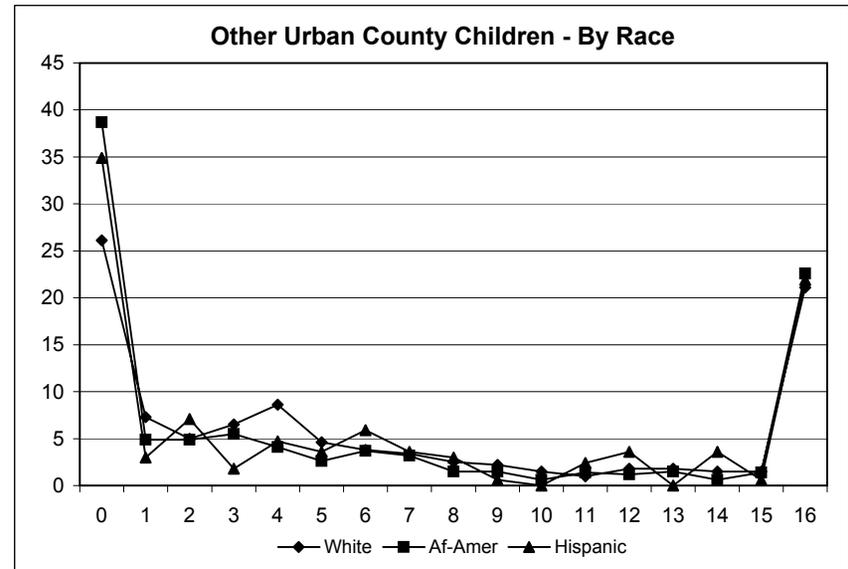
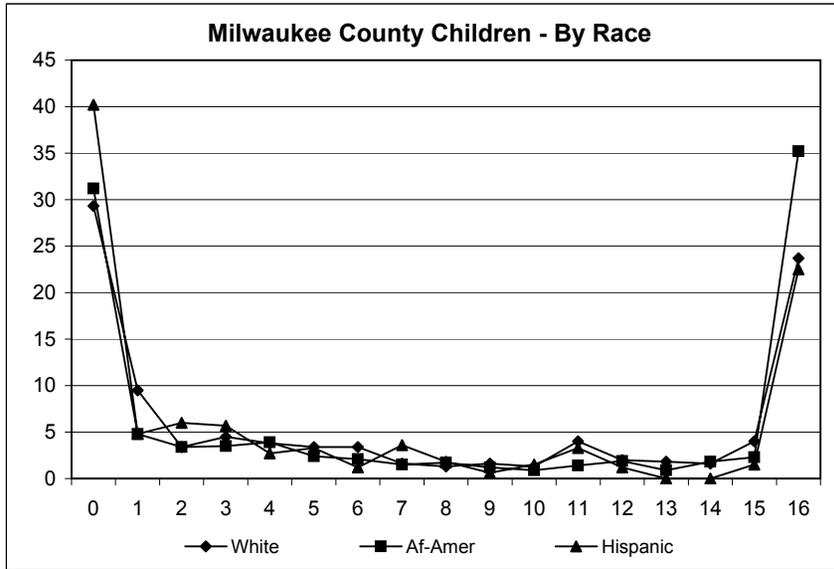


FIGURE 5a
Duration of Medicaid Receipt for Leaver Children in the Quarters after Exit, by Various Characteristics: 1997 Cohort
 All Leaver Children Who Were Continuously Eligible for Medicaid in the 8 Quarters after Exit (68.6%)

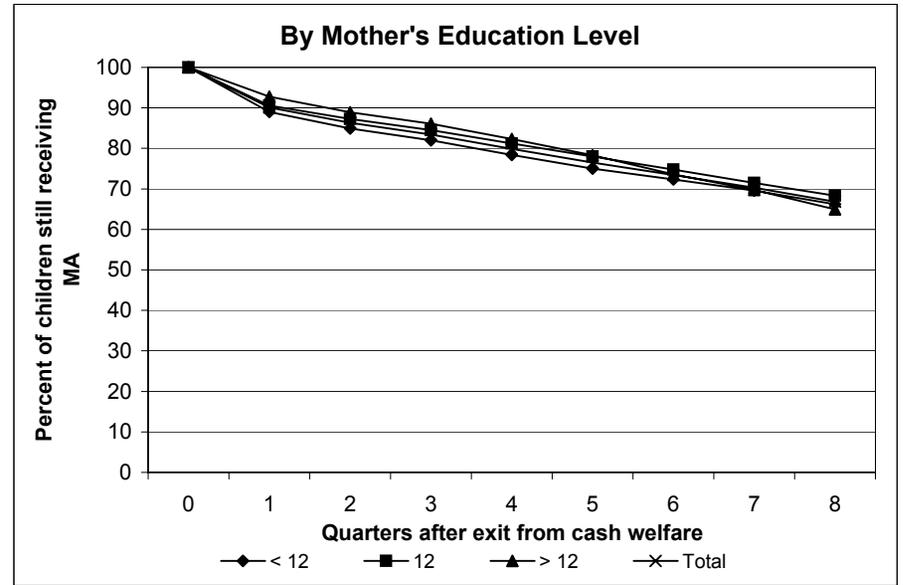
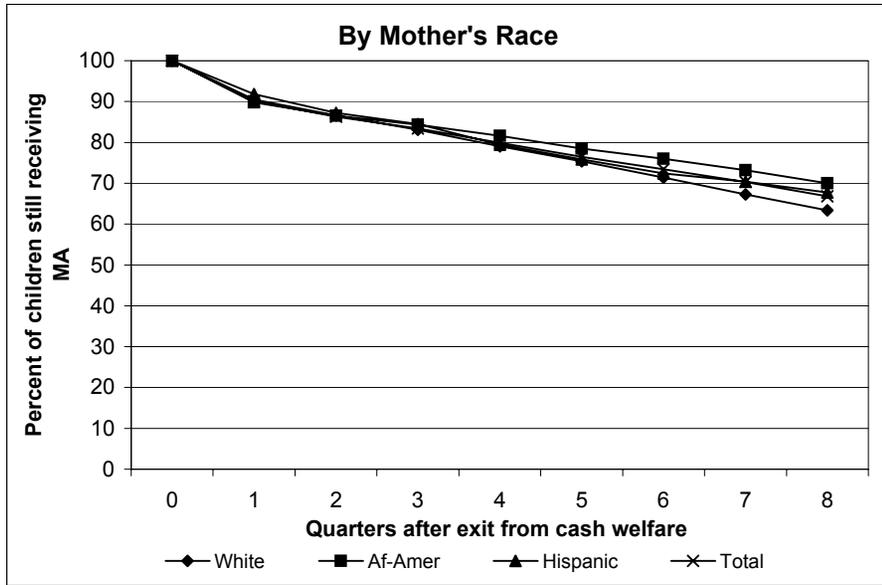
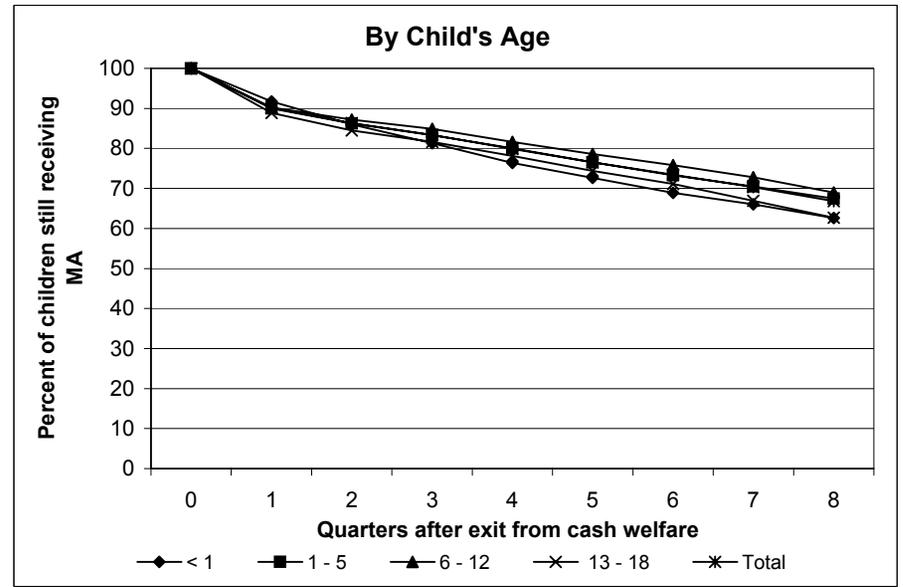
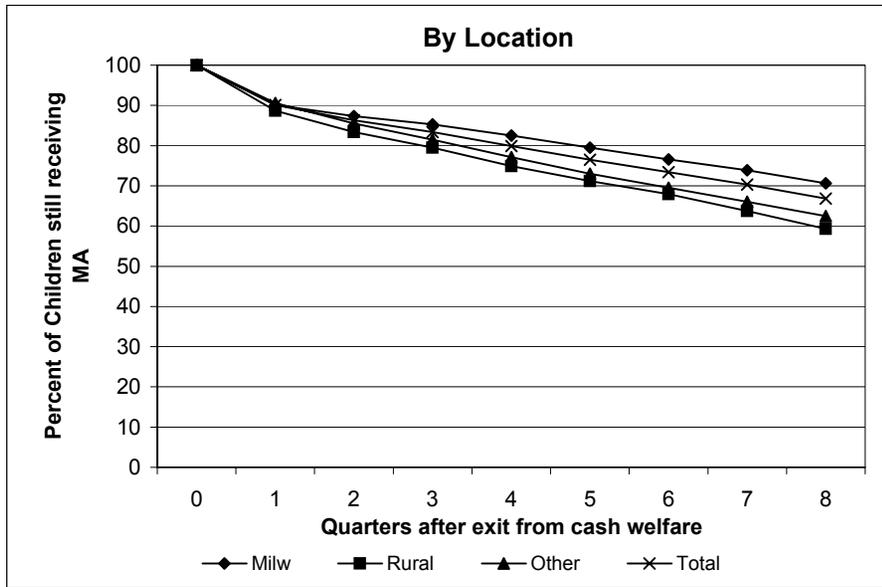


FIGURE 5b
Duration of Food Stamp Receipt for Leaver Families in the Quarters after Exit, by Various Characteristics: 1997 Cohort
 All Leaver Families Who Were Continuously Eligible for Food Stamps in the 8 Quarters after Exit (77.5%)

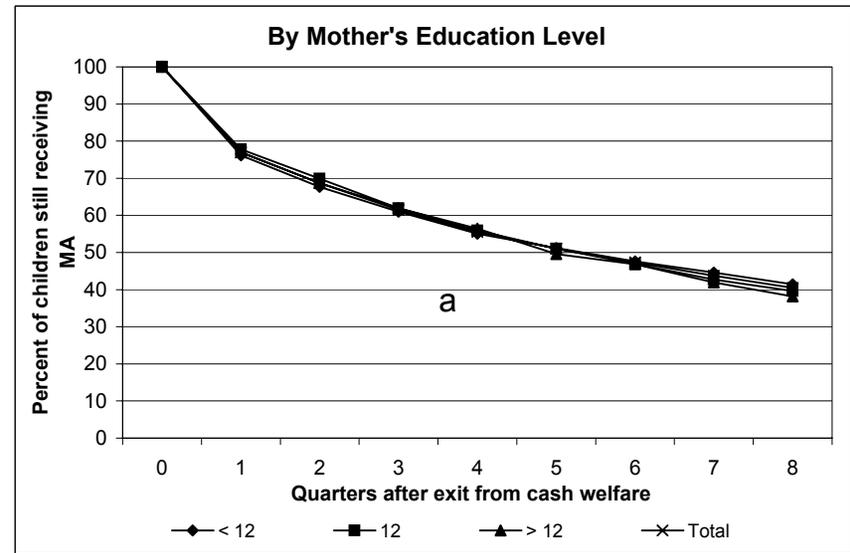
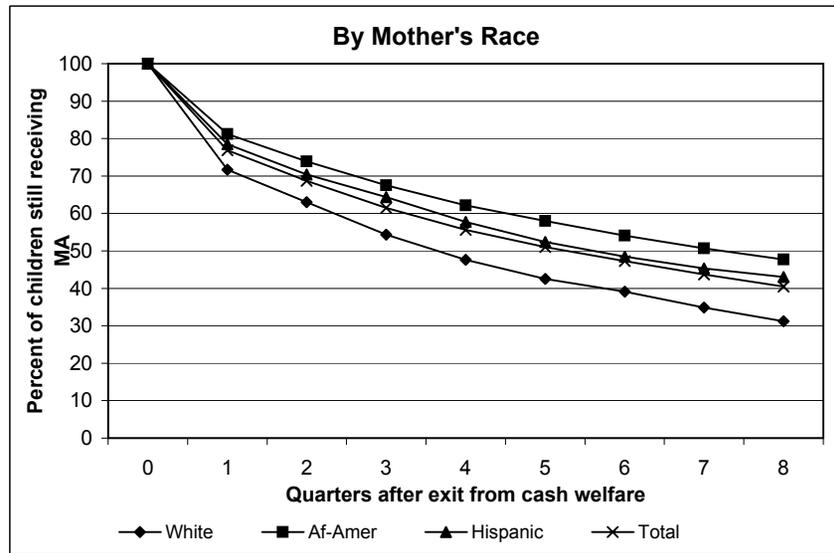
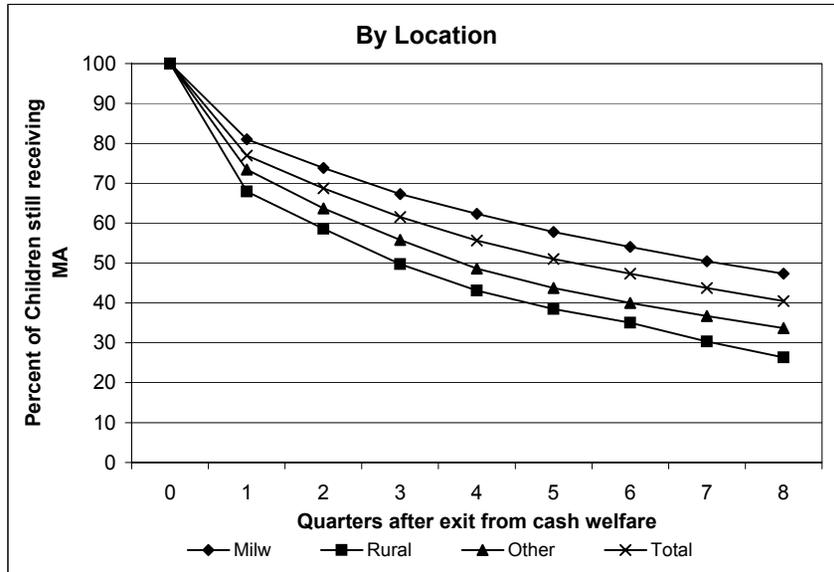
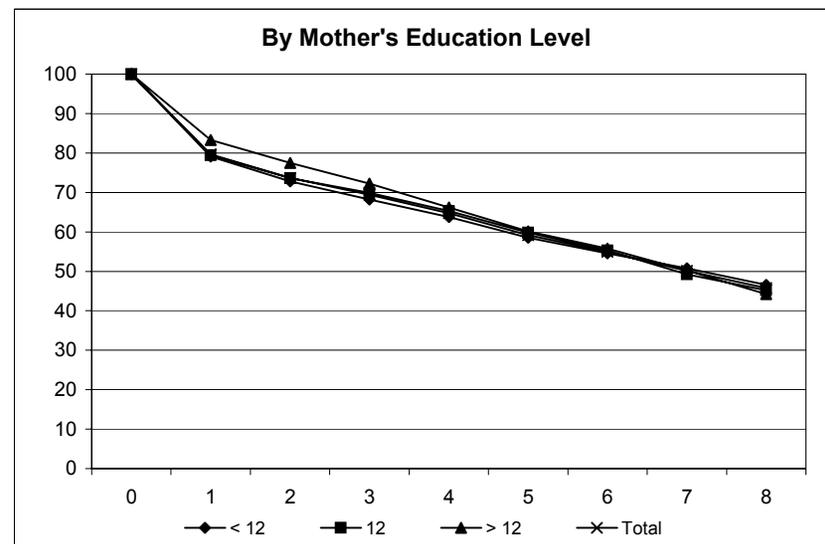
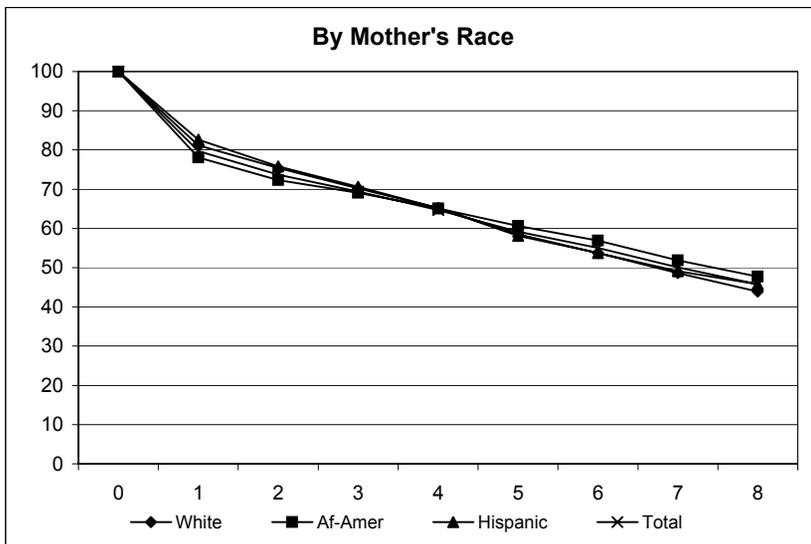
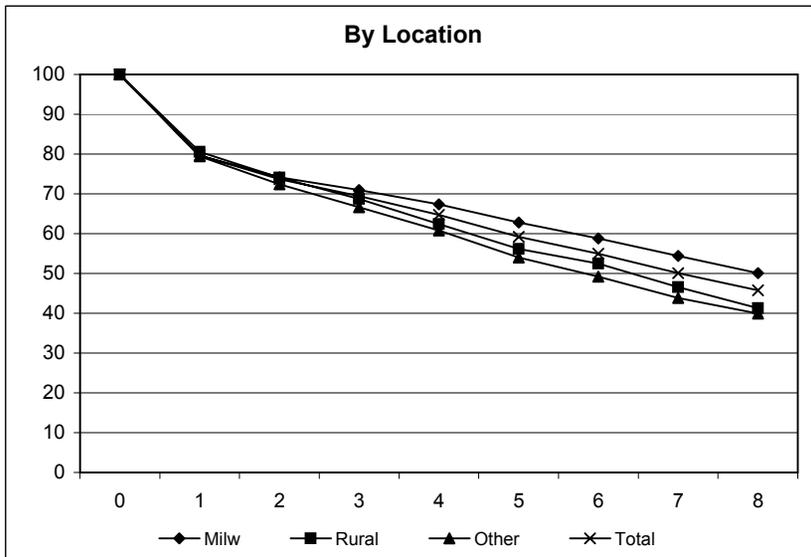


FIGURE 5c
Duration of Medicaid Receipt for Leaver Mothers in the Quarters after Exit, by Various Characteristics: 1997 Cohort
 All Leaver Mothers Who Were Continuously Eligible for Medicaid in the 8 Quarters after Exit (68.3%)



locations, the probability of leaving Medicaid after the first quarter (having been covered by Medicaid in that first quarter) is about 6 percent in the first subsequent quarter; this falls to 1–2 percent in any quarter during the final 2 years.

The proportion of children who remained Medicaid participants for the entire 16 quarters ranges from 31 percent for children in Milwaukee to 21 percent for children living in other urban areas. Although there is relatively little difference in the duration patterns by location, Milwaukee children are both less likely to ever participate in the Medicaid program and more likely to remain on the program for a long duration if they are ever enrolled in the program. Duration patterns also do not differ greatly by the race, age, and mother's education categories.⁴⁵

The most revealing patterns in Figures 4a and 5a are (1) the size of the fall in participation at exit from cash welfare and (2) the proportion still receiving Medicaid at the end of the period of analysis (quarter 16 for the 1995 cohort and quarter 8 for the 1997 cohort). The first point indicates the proportion of eligible children who terminate their participation in Medicaid when they leave cash welfare; the latter observation indicates the proportion who are covered for the entire period.

Table 18a summarizes these patterns. The table reveals substantial difference between the 1995 and the 1997 cohorts in patterns of take-up and duration of coverage. The following discussion compares the eighth-quarter patterns for both the 1995 and the 1997 cohorts. While 30 percent of the 1995 cohort failed to have coverage in the first quarter after leaving welfare, only 10 percent of children in the later cohort ceased coverage immediately upon leaving. Similarly, while only 26 percent of the continuously eligible children in the 1995 cohort were covered by Medicaid for the subsequent 2-year period, over two-thirds of children in the 1997 cohort received benefits for the entire period. This difference in coverage and the duration of coverage between the two cohorts is striking.

⁴⁵The only exception to this is very young children (less than 1 year old) at the time of leaving welfare (see Figure 4a). For these children, nearly 80 percent are covered by Medicaid in the first quarter after leaving welfare, but 6–9 percent of them leave Medicaid each of the next four quarters. This pattern probably reflects the fact that children who are Medicaid eligible at birth are automatically enrolled in Medicaid for the first year of their life. However, to continue to receive Medicaid beyond this period, parents must renew their children's enrollment. This pattern also exists for the 1997 cohort, but is not as strong.

TABLE 18a
Duration Patterns of Children's Medicaid Coverage, 1995 and 1997 Cohorts

	1995 Cohort		1997 Cohort	
	Not Covered after Leaving Welfare	Covered for Entire Period 8 Qtrs/(16 Qtrs)	Not Covered after Leaving Welfare	Covered for Entire Period 8 Qtrs
Total	29.7	40.9 (26.3)	9.9	66.8
Milwaukee County	31.9	46.4 (31.4)	9.9	70.6
Rural counties	24.3	40.9 (25.6)	11.3	59.3
Other urban counties	30.7	34.6 (20.8)	9.4	62.5
Age <1 year	21.6	36.3 (26.7)	8.3	62.6
Age 1–5	31.1	37.4 (24.0)	10.0	67.5
Age 6–12	29.1	43.8 (28.8)	9.8	69.0
Age 13–18	30.2	47.1 (26.3)	11.1	62.7
White	25.3	39.1 (23.5)	9.5	63.4
African American	33.2	45.7 (32.1)	10.2	70.0
Hispanic	38.8	35.0 (22.7)	8.2	67.7
Other	29.6	42.2 (21.9)	11.0	53.7
Mother's education <12	35.7	38.2 (25.0)	11.0	66.2
Mother's education = 12	26.4	42.6 (27.9)	9.4	68.3
Mother's education >12	23.8	42.6 (23.9)	7.2	64.9

Note: Figures in parentheses for the 1995 cohort are for the first 16 quarters, and hence are not directly comparable to the estimates for the 1997 cohort.

TABLE 18b
Duration Patterns of Family Food Stamp Coverage, 1995 and 1997 Cohorts

	1995 Cohort		1997 Cohort	
	Not Covered after Leaving Welfare	Covered for Entire Period 8 Qtrs/(16 Qtrs)	Not Covered after Leaving Welfare	Covered for Entire Period 8 Qtrs
Total	49.4	19.7 (9.4)	23.1	40.5
Milwaukee County	43.9	28.5 (15.1)	19.0	47.5
Rural counties	51.7	14.3 (4.7)	32.1	26.4
Other urban counties	53.4	14.4 (6.6)	26.6	33.8
White	52.7	14.4 (5.5)	28.3	31.3
African American	42.4	29.2 (15.5)	18.8	47.8
Hispanic	51.1	19.0 (9.1)	21.5	43.0
Other	54.5	19.1 (9.5)	21.4	34.6
Mother's education <12	49.1	21.5 (10.6)	23.8	41.5
Mother's education = 12	49.1	19.1 (9.1)	22.2	39.8
Mother's education >12	50.6	17.2 (7.2)	23.0	38.3

Note: Figures in parentheses for the 1995 cohort are for the first 16 quarters, and hence are not directly comparable to the estimates for the 1997 cohort.

TABLE 18c
Duration Patterns of Mothers' Medicaid Coverage, 1995 and 1997 Cohorts

	1995 Cohort		1997 Cohort	
	Not Covered after Leaving Welfare	Covered for Entire Period 8 Qtrs/(16 Qtrs)	Not Covered after Leaving Welfare	Covered for Entire Period 8 Qtrs
Total	42.2	23.1 (10.0)	20.3	45.8
Milwaukee County	46.4	28.2 (12.9)	20.4	50.1
Rural counties	36.7	23.5 (10.5)	19.4	41.4
Other urban counties	41.7	17.4 (6.7)	20.6	39.8
White	37.2	21.4 (8.9)	18.8	44.0
African American	46.8	27.6 (12.2)	21.9	47.7
Hispanic	53.2	16.6 (8.5)	17.4	45.9
Other	47.6	23.4 (7.2)	22.5	37.2
Mother's education <12	49.5	21.0 (9.8)	20.9	46.6
Mother's education = 12	37.9	23.1 (10.7)	20.6	45.2
Mother's education >12	36.4	21.7 (8.5)	16.7	44.2

Note: Figures in parentheses for the 1995 cohort are for the first 16 quarters, and hence are not directly comparable to the estimates for the 1997 cohort.

One possible interpretation is that this difference in patterns reflects the “delinking” of Medicaid from the cash welfare system for the 1995 cohort, and an administrative “relinking” of the two systems 2 years later. A complementary explanation is that the families in the later cohort tend to be more vulnerable—with less schooling, less earnings, larger families—than the families in the early cohort, and hence are less likely to have alternative health care options to Medicaid. The allocation of responsibility for these differences between the two explanations has not yet been determined, and is worthy of further research.

In general, differences in duration patterns by characteristic (location, age, race, mother’s education) are smaller than differences across cohorts, but some differences by characteristic are still noticeable. In both cohorts of these continuously eligible children, children living in Milwaukee were more likely to be continuously covered by Medicaid than children living in either rural counties or in other urban counties. Although younger children in both cohorts were more likely to retain coverage during the first quarter after leaving than were older children, older children who were covered in the first quarter after leaving were more likely to be continuously covered than younger children. In both cohorts, white children were more likely to be covered immediately after leaving welfare than were African American children; however, among those covered in the first quarter after leaving, racial minorities were more likely to be continuously covered than were white children. Finally, in both cohorts, children of more-educated mothers were more likely to be covered in the first quarter after leaving than were the children of less-educated mothers. However, consistent with the greater earnings potential of more-educated mothers, children living in such families with coverage immediately after leaving were less likely to be continuously covered by Medicaid over the subsequent 2 years than were children living with less-educated mothers, even among children who were continuously eligible.

XI. EVIDENCE REGARDING PUBLIC MEDICAL INSURANCE COVERAGE AMONG LOW-INCOME, SINGLE-MOTHER FAMILIES

The administrative data we have used in analyzing the patterns of public medical insurance coverage have a potentially serious defect—we do not know if an individual has *private* insurance coverage. Some people who do not take up Medicaid (and BadgerCare after mid-1999) are doubtless covered by private insurance. Data reported by Davidoff et al. (2000) suggest that, nationally, about 60 percent of Medicaid-eligible children who are not enrolled in Medicaid have private health insurance coverage. Ultimately, the dominant policy concern involves leavers and their children (or low-income, mother-only families more generally) who have neither Medicaid nor private insurance coverage.

Although we do not know from currently available administrative data which leavers have private health insurance, we do have information on both public and private insurance coverage for a set of children from another Wisconsin population of low-income mothers and children. The data are from the Survey of Wisconsin Works Families, which was part of the Child Support Demonstration Evaluation (CSDE). The survey collected data from a panel study of mothers who participated in W-2. Data were gathered in two waves; the first, fielded from February to July 1999 (Time 1), focused on events and experiences during 1998; the second wave, fielded from February to July 2000 (Time 2), asked about events during 1999. Survey members were selected to be a representative subset of the research population of resident mothers in the evaluation.⁴⁶ A focal child was randomly selected from among the children who were listed on the W-2 case at entry and who would be under age 18 on December 31, 1999. The designated focal child remained the same in both waves.

Interviews were completed with 82 percent of the 3,000 mothers who were in the survey sample in 1998 and 1999. We use only data on children in this analysis; the mothers were not asked whether they themselves were covered by private insurance. The data on children include, for each of the two years,

⁴⁶The sample was stratified according to the mother's W-2 status ("transitioned from AFDC to W-2" and "new W-2") and by initial W-2 tier location (upper and lower). See Meyer and Cancian (2001) for detail on the survey.

whether or not they were covered by private insurance at any point in the year, whether they were covered by Medicaid for the full year, whether they were covered by Medicaid for part of the year, and whether they were uninsured for some or all of the year. For the second year, 1999, the data also indicate whether the children were covered by BadgerCare for some of the year.

It should be emphasized that the CSDE sample differs somewhat from that of the leavers. Many of the CSDE women entered the sample because they were on cash assistance on August 31, 1997, when they were randomly assigned to an experimental group (which received a full pass-through of child support) or to a control group (which received only part of the child support paid on their behalf, with the remainder retained by the government). Other families entered the sample when they applied for W-2 at some time between September 1997 and June 30, 1999. At the time of first interview about 30 percent were in private sector jobs and no longer received cash assistance and can thus be described as similar to the 1997 cohort of leavers.⁴⁷ The remaining 70 percent should be thought of as stayers. Compared with the sample of leavers, the CSDE sample will show a higher rate of take-up of Medicaid, since Medicaid coverage remains linked with cash assistance.

Because the information available for this sample differs from that for the administrative sample reported above, we first report health care coverage for the children in the administrative (leavers) sample in a way comparable to our report of the CSDE sample. Table 19 indicates whether or not children in the leavers sample had public (Medicaid) coverage all year for 1996, 1997, and 1998 for the 1995 cohort of leavers' children, and for 1998 for the 1997 cohort of leavers' children. The 1998 data are most comparable to the first-year CSDE data. Table 20 reports coverage for both of these groups of children for the second half of 1999, when BadgerCare was available.

Table 19 shows a steadily decreasing proportion of children of the 1995 cohort who had public coverage all year, from 35 percent in 1996 to 23 percent in 1998. The table also shows the far higher proportion of children in the 1997 cohort with all-year public coverage—57 percent in the first year after

⁴⁷However, most of these late entrants to the CSDE sample had left Medicaid sufficiently recently as to be eligible for (and participating in) Medicaid under its 1-year continuation policy.

TABLE 19
Characteristics of Child Leavers with All Public, Some Public, and No Public Health Insurance, 1996–1998

	1995 Cohort						1997 Cohort					
	1996			1997			1998			1998		
	All Public	Some Public	No Public	All Public	Some Public	No Public	All Public	Some Public	No Public	All Public	Some Public	No Public
Total	35.1%	40.8%	24.2%	24.1%	33.4%	42.5%	22.5%	26.2%	51.4%	56.8%	30.5%	12.7%
Child's Age												
<1 year	35.7	48.5	15.8	40.5	52.2	7.3	45.0	46.5	8.5	49.2	44.0	6.8
1–5 years	36.3	39.9	23.7	26.9	32.5	40.6	26.5	26.9	46.6	60.2	29.7	10.1
6–12 years	36.7	38.3	25.0	24.3	31.3	44.4	21.6	23.9	54.5	59.2	26.6	14.2
13–18 years	30.1	44.2	25.8	16.0	36.4	47.6	13.7	27.2	59.2	41.7	37.4	20.9
Mother's Education												
Less than HS diploma	31.9	40.6	27.5	24.3	34.3	41.5	23.9	27.6	48.5	55.5	30.6	13.8
HS diploma	36.8	40.3	22.9	24.9	33.4	41.7	22.9	25.8	51.3	58.3	29.6	12.0
Greater than HS diploma	36.8	42.4	20.8	21.6	31.8	46.6	18.2	24.2	57.6	56.8	32.5	10.7
Quarters Mother Worked during Year												
0	21.1	28.7	50.2	17.8	20.0	62.2	15.2	15.0	69.8	39.7	31.5	28.8
1	29.7	47.6	22.6	28.5	37.9	33.7	26.0	32.4	41.6	50.5	35.4	14.1
2	31.3	51.0	17.7	27.6	39.6	32.9	24.5	37.7	37.9	52.9	37.7	9.4
3	38.5	45.0	16.6	29.3	42.6	28.1	27.4	31.2	41.4	58.5	31.6	9.9
4	41.3	41.9	16.8	24.8	35.9	39.3	24.1	27.8	48.1	64.5	27.0	8.5
Gross Family Earnings												
<50% federal poverty level	28.7	38.3	33.0	24.5	29.7	45.8	22.2	23.7	54.1	53.1	31.9	15.0
50–100% federal poverty level	46.4	39.3	14.3	30.6	38.6	30.8	31.7	32.3	36.1	66.7	25.7	7.6
>100% federal poverty level	33.0	48.6	18.4	17.0	35.2	47.8	15.2	24.9	60.0	52.2	34.2	13.5
Eligible for Medicaid at some point in year	36.9	42.9	20.2	27.3	37.8	35.0	26.8	31.2	42.1	59.8	32.1	8.2

TABLE 20
Characteristics of Child Leavers with All Public, Some Public, and No Public Health Insurance, July-December 1999

	1995 Cohort Last Half 1999				1997 Cohort Last Half 1999			
	Any BadgerCare	All Medicaid	Some Medicaid, No BadgerCare	No Public	Any BadgerCare	All Medicaid	Some Medicaid, No BadgerCare	No Public
Total	3.6	25.3	13.8	57.3	2.3	53.5	18.0	26.3
Child's Age								
<1 year	0.0	64.1	27.2	8.7	0.0	62.6	30.9	6.5
1–5 years	0.0	34.8	15.7	49.5	0.0	58.4	18.6	23.0
6–12 years	4.9	22.3	12.2	60.6	3.8	52.6	15.8	27.8
13–18 years	4.5	16.1	14.5	64.8	3.5	40.6	19.8	36.1
Mother's Education								
Less than HS diploma	3.4	27.3	15.0	54.2	1.7	53.9	18.7	25.7
HS diploma	3.5	25.8	13.6	57.1	2.5	54.5	17.4	25.7
Greater than HS diploma	4.4	19.5	11.6	64.4	3.9	48.2	17.1	30.8
Quarters Mother Worked during Year								
0	1.4	16.4	8.3	74.0	0.9	38.7	14.4	46.0
1	1.8	35.8	16.8	45.7	0.6	57.5	19.3	22.6
2	4.6	34.0	20.0	41.5	1.3	55.3	23.2	20.3
3	3.1	30.8	18.8	47.4	2.2	60.1	19.8	17.8
4	4.9	26.0	14.2	54.9	3.4	56.8	17.7	22.1
Gross Family Earnings								
<50% federal poverty level	1.6	26.0	13.5	59.0	0.8	52.7	18.1	28.5
50–100% federal poverty level	5.4	36.4	18.0	40.2	2.6	62.3	17.9	17.1
>100% federal poverty level	5.6	18.1	11.9	64.4	5.9	45.3	17.8	31.1
Eligible for BadgerCare	19.6	0.8	7.3	72.3	34.2	2.2	12.4	51.2
Eligible for Medicaid	0.0	37.1	18.3	44.5	0.0	62.4	20.1	17.5

leaving versus 35 percent in the 1995 cohort. In 1999, the differential proportion of these two cohorts of children with full-year coverage remained large, but not as large as in 1998 (25 percent in the 1995 cohort versus 54 percent in the 1997 cohort).

Table 21 provides simple descriptive statistics for the CSDE children. In 1998, 14 percent of the CSDE children had private insurance at some point in the year. The children most likely to have such coverage were those whose mother worked full time, had more education, and had income above the poverty line. One year later, in 1999, a slightly higher proportion of the CSDE children had private coverage at some point in the year, but the same pattern of coverage by characteristic is in evidence for this later year.

Tables 19 and 21 permit comparison of the proportion of the 1997 cohort of leavers and the CSDE sample that had public health insurance coverage all year in 1998. (For both samples, the information on public coverage is from administrative data.) Among the leavers, 57 percent of the 1997 cohort had public coverage all year. Two-thirds of those in families with incomes between 50 and 100 percent of the poverty line had full-year public coverage. In contrast, 77 percent of the children in the CSDE sample had public coverage all year. Again, those in families with incomes 50–100 percent of the poverty line were those most likely to have coverage all year (nearly 80 percent), but the difference between these children and those in families with incomes below 50 percent of the poverty line is very small.

Tables 20 and 21 compare public coverage of the two samples in 1999, when BadgerCare became available. Among children in the 1997 leavers cohort, nearly 54 percent had full-year public coverage (Medicaid or BadgerCare). In contrast, nearly 72 percent of the CSDE sample had public coverage for the entire year (this could be all Medicaid or a combination of Medicaid and BadgerCare). As expected, the CSDE sample was more likely to have public coverage all year than children of the 1997 cohort of leavers.

For children in the CSDE survey sample, we know whether they were uninsured at some point in the year. In both 1998 and 1999, 16–17 percent of the children were uninsured at some point. Using the

TABLE 21
Health Insurance Use by Descriptive Characteristics, CSDE Survey Sample

Measure	Row Percent Column Percent	1998			Measure Category as % of Total	1999				
		Ever Uninsured during Year	Ever Had Private Insurance during Year	Had Public Insurance for Entire Year ^a		Ever Uninsured during Year	Ever Had Private Insurance during Year	Had Public Insurance for Entire Year ¹	Ever Received BadgerCare during Year	Measure Category as % of Total
Child Age										
	0 to 5	15.2%	13.6%	78.1%	52.0%	17.6%	20.3%	72.4%	—	43.5%
		50.5%	50.5%	52.5%		46.0%	43.8%	43.8%	—	
	6 to 12	14.6%	14.8%	77.6%	35.8%	15.8%	19.7%	71.3%	11.4%	41.1%
		33.4%	37.9%	35.9%		39.2%	40.2%	40.8%	74.2%	
	13 and older	20.4%	13.3%	73.4%	12.3%	15.9%	20.9%	71.4%	10.5%	15.5%
		16.1%	11.7%	11.6%		14.8%	16.0%	15.4%	25.9%	
Mother's Education										
	Less than HS diploma	15.3%	6.6%	77.7%	39.0%	14.7%	10.4%	77.7%	4.5%	36.3%
		38.2%	18.5%	39.2%		32.1%	18.7%	39.3%	25.8%	
	HS diploma	15.0%	14.9%	77.6%	42.3%	18.1%	20.8%	69.3%	6.5%	43.5%
		40.9%	45.2%	42.5%		47.5%	45.0%	42.0%	45.1%	
	Greater than HS diploma	17.5%	27.2%	75.7%	18.7%	16.8%	36.3%	66.7%	9.1%	20.2%
		21.0%	36.4%	18.3%		20.4%	36.2%	18.7%	29.1%	
Work History										
	No full-time work	13.8%	9.4%	80.0%	67.2%	12.7%	11.4%	77.4%	3.7%	57.9%
		59.4%	45.2%	69.5%		44.4%	32.9%	62.4%	33.7%	
	Full-time work	19.3%	23.4%	71.9%	32.8%	21.9%	32.1%	64.2%	9.9%	42.1%
		40.6%	54.8%	30.5%		55.7%	67.1%	37.6%	66.3%	
Income										
	<50% federal poverty level	13.6%	7.4%	79.0%	38.5%	13.9%	9.1%	79.3%	3.3%	37.2%
		33.6%	20.4%	39.4%		31.1%	16.8%	41.0%	19.4%	
	50–100% federal poverty level	16.4%	10.3%	79.8%	37.7%	14.1%	14.6%	76.3%	6.1%	33.3%
		39.7%	27.8%	38.9%		28.4%	24.2%	35.3%	32.3%	
	>100% federal poverty level	17.5%	30.5%	70.6%	23.8%	22.7%	40.3%	57.5%	10.3%	48.4%
		26.7%	51.8%	21.7%		40.5%	59.0%	23.6%	48.5%	
Care type as % of total		15.6%	14.0%	77.3%		16.6%	20.2%	71.8%	6.3%	
		n=1,866				n=1,832				

CSDE data, we next explore the characteristics of children and families that were without insurance coverage at some point in the year. These results are reported in Table 22, which shows probit maximum likelihood estimates run separately for 1998 and 1999 over all of the children in the CSDE survey sample. The table suggests that among this group of children, those who are older, are nonwhite, moved more often, and who lived outside the state at some point in the year were more likely to be uninsured for at least a part of 1998. Children whose mothers worked for firms that offered health insurance to some employees were also significantly more likely to be uninsured at some point in 1998. Children with more siblings were less likely to be uninsured at some point. In 1999 the pattern was somewhat different. Children who moved continued to be more likely to be without coverage at some point, and children with more siblings were less likely to be without coverage. Children whose families received Food Stamps the prior year and children whose mothers were in school were less likely to have been without insurance. Race was no longer a significant factor (and the coefficient changed sign). Many of these results are not surprising. One, however, stands out—children whose mothers worked for firms that offered coverage were themselves more likely to have spent some time without coverage. Perhaps this is only a transitory phenomenon, but it merits further exploration.

XII. CONCLUSION

Although the take-up rates among those eligible for Medicaid and Food Stamps as reported in this paper may be lower than policymakers would like, our results indicate a substantial growth in postexit take-up of noncash benefits between the 1995 and 1997 groups of leavers. Moreover, the take-up rates we have reported are larger than those reported in other studies, even for the 1995 cohort.⁴⁸ As we indicated above, Dion and Loprest (2000) report Food Stamp participation rates of 30–60 percent based on survey

⁴⁸Whereas our take-up rates are reported for the eligible population, those of other studies are typically for the entire group of leavers. Tables 8 and 9 indicate, however, that annual take-up rates over the entire cohort are only slightly lower than those among the eligibles—2.5 percentage points lower for Food Stamps for the 1995 cohort and less than 1.6 percent for the 1997 cohort, and less than 1 percentage point for Medicaid cases.

TABLE 22
Probability of Child Having No Insurance at Some Point in Year, 1998 and 1999
Availability of Health Insurance: Ever Uninsured

Measure	Child Was Uninsured at Some Point in 1998	Child Was Uninsured at Some Point in 1999
Intercept	-1.608 (0.0001)	-0.581 (0.004)
CSDE experimental group	0.046 (0.530)	0.035 (0.628)
Mother is married	0.339 (0.054)	0.171 (0.243)
Mother has high school diploma	-0.024 (0.775)	0.047 (0.579)
Mother has education beyond high school	0.033 (0.755)	-0.051 (0.633)
Mother is currently in school	-0.030 (0.764)	-0.243 (0.033)
Mother worked full time	-0.197 (0.400)	0.282 (0.0650)
Mother's employer offered health insurance to some employees	0.541 (0.023)	0.071 (0.653)
Mother's employer's health insurance offer unknown	0.490 (0.051)	0.008 (0.965)
Child had some face-to-face contact with father	0.093 (0.218)	-0.069 (0.350)
Child age	0.022 (0.014)	0.003 (0.733)
Child is male	0.066 (0.368)	0.031 (0.670)
Child is nonwhite	0.241 (0.019)	-0.022 (0.822)
Children have same father or only child	0.054 (0.522)	0.042 (0.618)

(table continues)

TABLE 22, continued

Measure	Child Was Uninsured at Some Point in 1998	Child Was Uninsured at Some Point in 1999
Number of siblings	-0.104 (0.008)	-0.087 (0.022)
Any siblings under age 2	0.197 (0.040)	0.009 (0.948)
Any siblings between age 2 and 5	-0.009 (0.928)	-0.050 (0.590)
Mother reported child's health as fair or poor	-0.026 (0.830)	0.021 (0.862)
Family income <100% poverty	0.026 (0.784)	-0.088 (0.305)
Received Food Stamps at some point in 1998	— —	-0.356 (0.007)
Family lives in Milwaukee	-0.027 (0.815)	-0.162 (0.145)
Family lives in rural area	0.205 (0.192)	-0.259 (0.092)
Number of moves in year	0.156 (0.0004)	0.136 (0.003)
Lived outside Wisconsin at some point in year	0.501 (0.018)	0.345 (0.147)
	<i>n</i> = 1,821	1,809

Source: Survey of Wisconsin Works Families.

Note: All cells reported as coefficient (p-value).

data and 30–45 percent based on administrative data; Isaacs and Lyon (2000) report even lower rates, ranging from 20 to 40 percent. The studies based on administrative data summarized in Appendix B indicate take-up rates at least 1 year after exit of about 35 percent for Food Stamps. Our Wisconsin take-up rates of 38 percent among 1995 leavers (and 44 percent among eligible leavers; see Table 8) are slightly above these rates. However, our rates of 59 percent for 1997 leavers 1 year after exit and 66 percent among eligible leavers are substantially greater than the prior estimates. Some of the difference may reflect more complete reporting of benefits in administrative data.⁴⁹ However, our comparison of the studies using administrative and survey data (see above) does not indicate persistently higher estimates in administrative data.

The finding by Garrett and Holohan (2000) that 22 percent of women leavers continued to participate in Medicaid 1 year after leaving cash welfare and the estimates from other studies reported above indicating mother's Medicaid coverage rates of about 40 percent in studies based on administrative data are below our estimated Medicaid coverage rates in the fourth quarter after leaving of 48 percent for the 1995 cohort of leavers (60 percent of eligible leavers) and 63 percent for the 1997 leavers cohort (75 percent of eligible leavers; see Table 8).

Similar patterns exist for children's Medicaid coverage. Garrett and Holahan (2000) find a children's coverage rate of 47 percent at the end of the first year after leaving, and the studies summarized in Appendix B find rates ranging from 25 to 85 percent, with most in the 50–60 percent range. Our estimated Wisconsin children's Medicaid coverage rates 1 year after leaving welfare of 62 percent for the 1995 cohort (67 percent of eligible children) and 82 percent for the 1997 cohort (84 percent of eligible children; see Table 8) are substantially above these estimates.

Not only are the Wisconsin take-up figures reported here higher than most of those reported elsewhere, but they also rose substantially over the two cohorts. While a greater proportion of welfare

⁴⁹A comparison of survey responses and administrative records of Food Stamp benefits for a somewhat different sample of Wisconsin welfare participants found higher participation, by about 10 percentage points, in administrative data (Cancian and Meyer, 2000).

recipients left cash assistance in 1997 than in 1995, Food Stamp and Medicaid take-up in Wisconsin was higher among those who left in 1997 than among those who left in 1995. Those who left in 1997 had lower incomes than did the earlier cohort; this would increase the number eligible for Food Stamps, would make them eligible for higher amounts, and thereby increase take-up. However, the differences between the cohorts were quite striking for Medicaid as well. As shown in Table 18a, just 41 percent of continuously eligible children in the 1995 cohort were covered by Medicaid for the subsequent 2-year period. However, over two-thirds of children in the 1997 cohort had Medicaid coverage over the following 2 years.

There is some evidence that working while still receiving cash benefits is positively associated with take-up of health-related noncash benefits after the cash grant ends. It may be that people become accustomed to combining work and these noncash benefits, and that the familiarity of doing so carries over after cash benefits terminate. If this is so, a policy of allowing people to work and simultaneously receive cash benefits might stimulate Medicaid and Food Stamp participation after all cash benefits end. This is consistent with the desire to stimulate work (and human capital via work experience) and maintain or increase the economic well-being of participating families.

The take-up of benefits appears to decline substantially over time after exit from cash welfare among those who remain eligible for the benefits, although this trend has become less pronounced for Medicaid since the start of BadgerCare. In the case of Food Stamps, it may be that those who are eligible for small amounts of Food Stamps do not collect them, but it may also be that substantial barriers exist to obtaining the benefits for which they are eligible. It is also possible that our measures of income are less complete in later years, leading us to misclassify a growing portion of leavers as eligible. The decline over 4 years in the Medicaid take-up rate to about 50 percent for eligible children (Figure 3) suggests potential problems in the access to health care for the families of these children, although it is possible that more recent changes in Wisconsin's Medicaid eligibility process (such as one-page, mail-in applications and simplified verification of income and assets) will reduce this drop-off rate in the future.

Children of more-educated mothers are more likely to be covered by the Medicaid program in the first quarter after leaving than are the children of less-educated mothers. For both Food Stamps and Medicaid, program participation is positively and strongly related to the number of adults in the family, the extent of the mother's work, and the length of time the family has been eligible for benefits.

This research suggests that the take-up of health-related benefits is far from automatic among those eligible. The simple enactment of higher eligibility thresholds does not automatically increase use of the benefits. The barriers may be administrative, informational, a result of stigma associated with income-conditioned programs, or a result of disinterest among potential participants. The higher take-up rate among the later cohort of welfare leavers in Wisconsin provides some evidence that aggressive efforts by program managers to increase client awareness can influence the take-up of health-related benefits among the low-income population.

APPENDIX TABLE A1
Use of Routine Medical Care: Regular Routine Physician Visits (children aged < 13)

Measure	Child Made at Least One Routine Doctor Visit in Last Year, 1998	Child Made at Least One Routine Doctor Visit in Last Year, 1999
Intercept	1.407 (0.0001)	1.721 (0.0001)
CSDE experimental group	-0.160 (0.080)	0.176 (0.243)
Mother is married	0.093 (0.726)	-0.022 (0.945)
Mother has high school diploma	0.098 (0.341)	0.472 (0.004)
Mother has education beyond high school	0.287 (0.051)	0.824 (0.002)
Mother is currently in school	0.117 (0.352)	0.515 (0.090)
Mother worked full time	0.081 (0.448)	-0.020 (0.902)
Child had some face-to-face contact with father	0.092 (0.322)	-0.162 (0.283)
Child age	-0.055 (0.0002)	-0.074 (0.004)
Child is male	0.003 (0.976)	0.120 (0.417)
Child is nonwhite	0.039 (0.750)	0.014 (0.943)
Children have same father or only child	0.120 (0.251)	-0.061 (0.715)
Number of siblings	-0.031 (0.473)	0.023 (0.755)
Any siblings under age 2	0.039 (0.733)	-0.124 (0.605)

(table continues)

APPENDIX TABLE A1, continued

Measure	Child Made at Least One Routine Doctor Visit in Last Year, 1998	Child Made at Least One Routine Doctor Visit in Last Year, 1999
Any siblings between age 2 and 5	0.066 (0.560)	0.249 (0.178)
Mother reported child's health as fair or poor	0.088 (0.596)	0.210 (0.454)
Family income < 100% poverty	-0.287 (0.028)	0.075 (0.687)
Child was uninsured at some point in year	0.079 (0.157)	-0.422 (0.018)
Child was privately insured at some point in year	0.137 (0.008)	-0.277 (0.161)
Family lives in Milwaukee	0.223 (0.094)	0.254 (0.203)
Family lives in rural area	0.1423 (0.480)	1.19725 (0.066)
Number of moves in year	0.052 (0.400)	0.016 (0.882)
Lived outside Wisconsin at some point in year	0.512 (0.184)	-0.088 (0.865)
Child has a functional limitation	0.371 (0.025)	0.009 (0.971)
Mother has work limitation	-0.022 (0.849)	0.161 (0.442)
	<i>n</i> = 1,611	1,523

Source: Survey of Wisconsin Works Families.

Note: All cells reported as coefficient (p-value).

APPENDIX TABLE A2
Use of Routine Medical Care: Dental Care (children aged > 2)

Measure	Child Made at Least One Dentist Visit in Last Year, 1998	Child Made at Least One Dentist Visit in Last Year, 1999
Intercept	-0.021 (0.915)	-0.000 (0.998)
CSDE experimental group	0.059 (0.420)	0.027 (0.689)
Mother is married	-0.066 (0.729)	-0.028 (0.858)
Mother has high school diploma	0.411 <.0001	0.396 (0.0001)
Mother has education beyond high school	0.322 (0.002)	0.423 (0.0001)
Mother is currently in school	0.115 (0.244)	0.231 (0.023)
Mother worked full time	0.007 (0.936)	-0.092 (0.231)
Child had some face-to-face contact with father	0.128 (0.083)	0.075 (0.280)
Child age	0.049 (0.0001)	0.039 (0.0001)
Child is male	-0.059 (0.418)	-0.079 (0.247)
Child is nonwhite	-0.028 (0.781)	-0.074 (0.430)
Children have same father or only child	-0.179 (0.033)	-0.108 (0.166)
Number of siblings	-0.034 (0.309)	0.023 (0.448)
Any siblings under age 2	0.021 (0.821)	-0.134 (0.251)
Any siblings between age 2 and 5	-0.019 (0.832)	0.018 (0.826)

(table continues)

APPENDIX TABLE A2, continued

Measure	Child Made at Least One Dentist Visit in Last Year, 1998	Child Made at Least One Dentist Visit in Last Year, 1999
Mother reported child's health as fair or poor	-0.079 (0.512)	-0.288 (0.007)
Family income < 100% poverty	0.078 (0.427)	-0.209 (0.016)
Child was uninsured at some point in year	-0.126 (0.042)	-0.055 (0.089)
Child was privately insured at some point in year	0.082 (0.106)	0.097 (0.115)
Family lives in Milwaukee	-0.193 (0.115)	0.129 (0.241)
Family lives in rural area	-0.07697 (0.673)	0.19255 (0.235)
Number of moves in year	-0.014 (0.778)	-0.081 (0.082)
Lived outside Wisconsin at some point in year	-0.095 (0.708)	0.100 (0.670)
	<i>n=</i> 1,311	1,509

Source: Survey of Wisconsin Works Families.

Note: All cells reported as coefficient (p-value).

APPENDIX TABLE A3
Child Health Status: Relationship between Routine Physician and Dentist Visits and Mother Reports of Child Health Improvement among Children under Age 13

Measure	Mother Reported Child Health Improved during Last Year, 1999
Intercept	-0.549 (0.144)
CSDE experimental group	-0.035 (0.637)
Mother is married	-0.019 (0.907)
Mother has high school diploma	-0.068 (0.431)
Mother has education beyond high school	0.164 (0.129)
Mother is currently in school	-0.005 (0.964)
Mother worked full time	0.066 (0.422)
Child had some face-to-face contact with father	-0.009 (0.904)
Child age	-0.031 (0.032)
Child is male	0.002 (0.979)
Child is nonwhite	0.008 (0.936)
Children have same father or only child	0.103 (0.218)
Number of siblings	0.019 (0.601)
Any siblings under age 2	0.183 (0.117)

(table continues)

APPENDIX TABLE A3, continued

Measure	Mother Reported Child Health Improved during Last Year, 1999
Any siblings between age 2 and 5	-0.014 (0.877)
Family income < 100% poverty	0.119 (0.196)
Child was uninsured at some point in last year	-0.013 (0.898)
Child was covered by private insurance at some point in last year	0.017 (0.869)
Child was covered by public insurance at some point in last year	-0.219 (0.286)
Family lives in Milwaukee	-0.034 (0.768)
Family lives in rural area	0.013 (0.933)
Number of moves in year	0.014 (0.782)
Lived outside Wisconsin at some point in year	0.479 (0.051)
Child health reported as very good or excellent in T1	-0.401 (0.001)
Child health reported as good in T1 (omitted fair/poor)	-0.145 (0.295)
Mother has a work limitation	-0.054 (0.598)
Child made at least one routine doctor visit in last year	0.358 (0.185)
Child made at least one dentist visit in last year	-0.061 (0.460)
	<i>n</i> = 1,510

Source: Survey of Wisconsin Works Families.

Note: All cells reported as coefficient (p-value).

APPENDIX B**A SUMMARY OF RESEARCH ON NONCASH BENEFIT TAKE-UP**

CULLEN GORETZKE

This appendix summarizes the extensive research on the take-up of noncash benefits by welfare leavers. All of these studies have been published since 1998.

There are two major approaches to understand the patterns of noncash benefit take-up. The first relies on large national surveys, primarily the National Survey of America's Families (NSAF), undertaken by the Urban Institute. There are two waves in this survey, 1995 and 1997, and a typical approach is to identify the welfare cases which left the rolls between 1995 and 1997, and to measure the extent of benefit take-up at the time of interview in 1997. The second approach is to study, at the state level, the take-up of benefits for a group of leavers at some point in time after they have left welfare. Many of these studies have been sponsored by the Office of the Assistant Secretary for Planning and Evaluation (ASPE), U.S. Department of Health and Human Services. Efforts have been made to use the same definition of welfare leavers across these studies; however, take-up is measured in various ways, including receiving benefits at any point during the first year after leaving and receiving benefits in the fourth quarter (or twelfth month) after leaving. Most of these studies use administrative data, but some rely on survey information. The date of the cohort of leavers varies substantially across the studies.

For the NSAF-based studies, several papers report results on take-up and program coverage. The most prominent of these are Zedlewski and Brauner (1999) for Food Stamps and Garrett and Holahan (2000) for Medicaid. A later study also based on NSAF is Zedlewski (2001).

Several studies have attempted to summarize the results from the state-level studies. One of the earliest of these is Brauner and Loprest (1999). This study describes findings on outcomes from 11 state-level studies, some of which are funded by ASPE and some of which are not.

Following Brauner and Loprest, several other cross-state studies summarize the results from leaver studies, primarily those funded by ASPE. They include:

- Office of the Assistant Secretary for Planning and Evaluation, U.S. Department of Health and Human Services (2000).
- Isaacs and Lyon (2000). This paper expands on the information in Brauner and Loprest (1999), and updates the Office of the Assistant Secretary for Planning and Evaluation, U.S. Department of Health and Human Services (2000). It is based on reports of the ASPE-funded studies as of July 2000.
- Dion and Pavetti (2000). This paper summarizes the literature relevant to the recent decline in Food Stamp and Medicaid caseloads. It includes government and privately sponsored research projects, studies of participation in the Food Stamp Program and Medicaid at the national and state levels, studies of families who have left welfare, reviews of research, and ongoing analysis and data collection efforts.
- Acs and Loprest (2001). This report covers the same reports as those reviewed by Isaacs and Lyon (2000). It includes the 11 ASPE-funded studies as of October 2000.

- Office of the Assistant Secretary for Planning and Evaluation, U.S. Department of Health and Human Services (2001). This report is based on Acs and Loprest (2001), Isaacs and Lyon (2000), and ASPE staff analyses of reports submitted between November 2000 and March 2001.

The tables included in Appendix B present summaries of take-up and coverage rates for welfare leavers drawn from Brauner and Loprest (1999), Office of the Assistant Secretary for Planning and Evaluation, U.S. Department of Health and Human Services (2000), Acs and Loprest (2000), Dion and Pavetti (2000), and Office of the Assistant Secretary for Planning and Evaluation, U.S. Department of Health and Human Services (2001). These papers provide the most recent data available from the ASPE-sponsored state leavers studies.

The Appendix B tables summarize the content of these studies, but present the information in a format that enables more direct comparisons among the component studies. These tables draw selectively from the information presented on the studies found in the source reports—for example, presenting a single take-up rate rather than reported quarterly and annual figures. The tables also include more information on the population being studied and, in some cases, the date take-up was studied, and organize the findings by Food Stamp participation, mother's Medicaid coverage, and children's Medicaid coverage. As such, they represent a sort of meta-summary—a summary of the summaries—and hence enable more direct comparisons of findings across states and across different leaver cohorts within the same state. Moreover, they reveal more explicitly than the other reports the substantial variation among the studies in terms of the population studied, the type of data used, the date take-up was studied, and the measure of take-up that was reported.

Appendix Table B1 presents take-up rates for the Food Stamp program; Appendix Table B2 describes Medicaid coverage rates for mothers; Appendix Table B3 shows Medicaid coverage rates for children. Appendix Table B4 presents a bibliography of all of the studies referred to in the tables.

APPENDIX TABLE B1
Summary of Existing Studies: Food Stamp Take-Up

Study	Exit Cohort	Date Take-up Was Studied	Data	Population Studied	Definition of Take-Up	Estimated Take-Up
Arizona (Acs & Loprest, 2001; ASPE staff, 2001) (Acs & Loprest, 2001; ASPE staff, 2001) (ASPE staff, 2000)	1Q98	Any time within a year after exit	Administrative	Single-parent leavers	Total # of leavers who take up FS / total # of leavers	67%
	1Q98	12th month after exit	Administrative	Single-parent leavers	Total # of leavers who take up FS / total # of leavers	35%
	4Q96	Any time within a year after exit	Administrative	Single-parent leavers	Total # of leavers who take up FS / total # of leavers	67.2%
	4Q96	12th month after exit	Administrative	Single-parent leavers	Total # of leavers who take up FS / total # of leavers	34.2%
District of Columbia (Acs & Loprest, 2001) (ASPE staff, 2001)	4Q98	12th month after exit	Administrative	Single-parent leavers	Total # of leavers who take up FS / total # of leavers	38%
	4Q98	Any time within a year after exit	Administrative	Single-parent leavers	Total # of leavers who take up FS / total # of leavers	41%
(ASPE staff, 2000)	4Q97	12th month after exit	Administrative	Continuous leavers	Total # of leavers who take up FS / total # of leavers	20.4%
(ASPE staff, 2000)	4Q97	12th month after exit	Administrative	Single-parent leavers	Total # of leavers who take up FS / total # of leavers	34.3%
Florida (Acs & Loprest, 2001) (Acs & Loprest, 2001)	2Q97	Any time within a year after exit	Administrative	Single-parent leavers	Total # of leavers who take up FS / total # of leavers	67%
	2Q97	4th quarter after exit	Administrative	Single-parent leavers	Total # of leavers who take up FS / total # of leavers	35%
Illinois (Acs & Loprest, 2001) (Acs & Loprest, 2001)	3Q97-4Q98	Any time within a year after exit	Administrative	Single-parent leavers	Total # of leavers who take up FS / total # of leavers	56%
	3Q97-4Q98	12th month after exit	Administrative	Single-parent leavers	Total # of leavers who take up FS / total # of leavers	33%
	3Q97	4th quarter after exit	Administrative	Continuous Leavers	Total # of leavers who take up FS / total # of leavers	19.6%
(ASPE staff, 2000)	3Q97	12th month after exit	Administrative	Single adult leavers	Total # of leavers who take up FS / total # of leavers	34.5%
(ASPE staff, 2001)	7/97-12/98	12th month after exit	Administrative	Single adult leavers	Total # of leavers who take up FS / total # of leavers	33%
(ASPE staff, 2001)	7/97-12/98	Any time within a year after exit	Administrative	Single adult leavers	Total # of leavers who take up FS / total # of leavers	56%

(table continues)

APPENDIX TABLE B1, continued

Study	Exit Cohort	Date Take-up Was Studied	Data	Population Studied	Definition of Take-Up	Estimated Take-Up
Indiana (Brauner & Loprest, 1999)	9/97 ^a	12th month after exit	Survey data	Continuous leavers	Total # of leavers who take up FS / total # of leavers	38%
Iowa (Brauner & Loprest, 1999) (ASPE staff, 2001)	11/95-01/96	12th month after exit	Administrative / survey	Continuous Leavers	Total # of <i>sanctioned</i> leavers who take up FS / total # of <i>sanctioned</i> leavers	64%
	2Q99	12th month after exit	Administrative	Single parent leavers	Total # of leavers who take up FS / total # of leavers	37%
(ASPE staff, 2001)	2Q99	Any time within a year after exit	Administrative	Single parent leavers	Total # of leavers who take up FS / total # of leavers	65%
	1Q99	Any time within a year after exit	Administrative	Single parent leavers	Total # of leavers who take up FS / total # of leavers	51%
Massachusetts (ASPE staff, 2001)	1Q99	4th quarter after exit	Administrative	Single parent leavers	Total # of leavers who take up FS / total # of leavers	38%
	4Q96	12th month after exit	Administrative	Single-parent leavers	Total # of leavers who take up FS / total # of leavers	40%
Missouri (Acs & Loprest, 2001; ASPE staff, 2000; ASPE staff, 2001a) (Dion & Pavetti, 2000)	8/96-12/98	12th month after exit	Survey	Leavers (not specific)	Total # of leavers who take up FS / total # of leavers	42.7%
	7/97-6/98	12th month after exit	Survey	Leavers (not specific)	Total # of leavers who take up FS / total # of leavers	32%
New Jersey (Dion & Pavetti, 2000)	1Q97	4th quarter after exit	Administrative	Single-parent leavers	Total # of leavers who take up FS / total # of leavers	26%
	1Q97	12th month after exit	Administrative	Single-parent leavers	Total # of leavers who take up FS / total # of leavers	21%
South Carolina (ASPE staff, 2001)	1/97-3/98	12th month after exit	Administrative	Leavers (not specific)	Total # of leavers who take up FS / total # of leavers	29%
	4Q99-1Q00	4th quarter after exit	Survey	Single-parent leavers	Total # of leavers who take up FS / total # of leavers	61%
(ASPE staff, 2001)	4Q99-1Q00	Any time within a year after exit	Survey	Single-parent leavers	Total # of leavers who take up FS / total # of leavers	88%
	4/97-7/97	4th quarter after exit	Survey	Continuous leavers	Total # of leavers who take up FS / total # of leavers	57%
(Brauner & Loprest, 1999)	6/98-8/98	12th month after exit	Survey	Leavers	Total # of leavers who take up FS / total # of leavers	59.8%
(Dion & Pavetti, 2000)	9/ 98-12/98	12th month after exit	Survey	Leavers	Total # of leavers who take up FS / total # of leavers	59.0%
(Dion & Pavetti, 2000)	1/99-4/99	12th month after exit	Survey data	Leavers	Total # of leavers who take up FS / total # of leavers	61.0%

(table continues)

APPENDIX TABLE B1, continued

Study	Exit Cohort	Date Take-up Was Studied	Data	Population Studied	Definition of Take-Up	Estimated Take-Up
Texas (Brauner & Loprest, 1999)	11/97	6 months after exit	Survey	Continuous leavers	Total # of leavers who take up FS / total # of leavers	66%
Washington (Acs & Loprest, 2001; ASPE staff, 2000)	4Q97	4th quarter after exit	Administrative	Single-parent leavers	Total # of leavers who take up FS / total # of leavers	36%
(Brauner & Loprest, 1999)	8/98	12th month after exit	Survey	Single-parent, Continuous leavers	Total # of leavers who take up FS / total # of leavers	45%
(Dion & Pavetti, 2000)	10/96–12/98	12th month after exit	Administrative	Leavers	Total # of leavers who take up FS / total # of leavers	30%
(Dion & Pavetti, 2000)	10/98–11/98	12th month after exit	Survey	Leavers	Total # of leavers who take up FS / total # of leavers	45%
Wisconsin (Acs & Loprest, 2001; ASPE staff, 2000)	6/95–6/96	Any time within a year after exit	Administrative	Single-parent leavers	Total # of leavers who take up FS / total # of leavers	63%
(Acs & Loprest, 2001; ASPE staff, 2000)	6/95–6/96	12th month after exit	Administrative	Single-parent leavers	Total # of leavers who take up FS / total # of leavers	40%
(ASPE staff, 2001)	2Q98–4Q98	Any time within a year after exit	Administrative	Single-parent leavers	Total # of leavers who take up FS / total # of leavers	83%
(ASPE staff, 2001)	2Q98–4Q98	4th quarter after exit	Administrative	Single-parent leavers	Total # of leavers who take up FS / total # of leavers	63%
(Brauner & Loprest, 1999)	7/95–9/97	5th quarter after exit	Administrative	Continuous leavers	Total # of leavers who take up FS / total # of leavers	31%
(Brauner & Loprest, 1999)	1Q98	6–12 months after exit	Survey	Continuous leavers	Total # of leavers who take up FS / total # of leavers	49%
(Dion & Pavetti, 2000 – DWD ^b)	8/98–11/98	6–9 months after exit	Survey	Leavers	Total # of leavers who take up FS / total # of leavers	49%
(Dion & Pavetti, 2000 – IRP ^c)	8/95–12/97	12th month after exit	Administrative	Leavers	Total # of leavers who take up FS / total # of leavers	45.6%

(table continues)

APPENDIX TABLE B1, continued

Study	Exit Cohort	Date Take-up Was Studied	Data	Population Studied	Definition of Take-Up	Estimated Take-Up
Cuyahoga Co., Ohio (Acs & Loprest, 2001; ASPE staff, 2000; Dion & Pavetti, 2000) (ASPE staff, 2000)	3Q96	12th month after exit	Administrative	Single-parent leavers	Total # of leavers who take up FS / total # of leavers	39%
	3Q96	Any time within the year of exit	Administrative	Single-parent, continuous leavers	Total # of leavers who take up FS / total # of leavers	34.7%
	3Q96	Any time within the year of exit	Administrative	Single-parent leavers	Total # of leavers who take up FS / total # of leavers	57.3%
	3Q98	Any time within the year of exit	Administrative	Single-parent leavers	Total # of leavers who take up FS / total # of leavers	68%
	3Q98	4th quarter after exit	Administrative	Single-parent leavers	Total # of leavers who take up FS / total # of leavers	47%
	San Mateo Co., California (Acs & Loprest, 2001) (Acs & Loprest, 2001) (ASPE staff, 2000) (ASPE staff, 2000) (ASPE staff, 2001)	1997	Any time within the year of exit	Administrative	Single-parent leavers	Total # of leavers who take up FS / total # of leavers
1997		12th month after exit	Administrative	Single-parent leavers	Total # of leavers who take up FS / total # of leavers	10%
1997		4th quarter after exit	Administrative	Single-parent leavers	Total # of leavers who take up FS / total # of leavers	14.1%
4Q96		Any time within the year of exit	Administrative	Single-parent female leavers	Total # of leavers who take up FS / total # of leavers	27.5%
4Q98		12th month after exit	Administrative	Single-parent leavers	Total # of leavers who take up FS / total # of leavers	27%

^aCases that received benefits 5/95–5/96, but not 9/97.

^bStudy by the Wisconsin Department of Workforce Development.

^cStudy by the Institute for Research on Poverty.

APPENDIX TABLE B2
Summary of Existing Studies: Medicaid Take-Up (adults)

Study	Exit Cohort	Date Take-Up Was Studied	Data	Population Studied	Estimated Take-Up
Arizona (Acs & Loprest, 2001) (Acs & Loprest, 2001)	1Q98	Any time within the year of exit	Administrative	Only head of household enrollment considered	72%
	1Q98	12th month after exit	Administrative	Only head of household enrollment considered	37%
(Acs & Loprest, 2001; ASPE staff, 2001) (ASPE staff, 2000)	1Q98	12–18 months after exit	Survey	Single-parent cases – adult	39%
	4Q96	Any time within the year of exit	Administrative	Single-parent cases – adult	84.9%
(ASPE staff, 2000; Dion) (ASPE staff, 2001)	4Q96	12th month after exit	Administrative	Single-parent cases – adult	46.5%
	1Q98	12th month after exit	Administrative	Adult leavers	40%
District of Columbia (Acs & Loprest, 2001)	4Q98	4th quarter after exit	Administrative	Adult leavers	48%
	4Q98	10–14 months after exit	Survey	All cases – adult	54%
(Acs & Loprest, 2001; ASPE staff, 2001) (ASPE staff, 2000)	4Q97	12th month after exit	Administrative	Any one on the case – children or adults	37.9
	2Q97	Any time within the year of exit	Administrative	Adult leavers	74%
Florida (Acs & Loprest, 2001) (Acs & Loprest, 2001; ASPE staff, 2001)	2Q97	12th month after exit	Administrative	Adult leavers	45%, 46% ^d
	1Q99–1Q00	4–6 months after exit	Survey	Adult leavers	66%
Georgia (ASPE staff, 2001)	3Q97–4Q98	Any time within the year of exit	Administrative	Leavers	69%
	4Q98	6–8 months after exit	Survey	All cases – adult	47%
Illinois (Acs & Loprest, 2001) (Acs & Loprest, 2001; ASPE staff, 2001)	3Q97–4Q98	12 months after exit	Administrative	Single adult head	40%
	9/97 ^a	16–28 months after exit	Survey	Continuous leavers	53%
(ASPE staff, 2000; ASPE staff, 2001)	11/95–1/96	12th month after exit	Administrative/ survey	Sanctioned & continuous leavers only	60%
	2Q99	12th month after exit	Administrative	Adult leavers	41%
Indiana (Brauner & Loprest, 1999)	2Q99	8–12 months after exit	Survey	Adult leavers	48%

(table continues)

APPENDIX TABLE B2, continued

Study	Exit Cohort	Date Take-Up was Studied	Data	Population Studied	Estimated Take-Up
Massachusetts (ASPE staff, 2001)	1Q99	6–16 months after exit	Survey	Adult leavers	81%
Mississippi (Dion & Pavetti, 2000)	6/98–10/98	6th month after exit	Survey	Adult leavers	58%
Missouri (Acs & Loprest, 2001; ASPE staff, 2001)	4Q96	4th quarter after exit	Administrative	Adult leavers	31%, 39% ^d
(Acs & Loprest, 2001; ASPE staff, 2001)	4Q98	26–34 months after exit	Survey	Single-parent cases – adult	33%
(ASPE staff, 2000)	4Q96	4th quarter after exit	Administrative	Single adult head of household	15.2%
(Dion & Pavetti, 2000)	8/96–12/98	12th month after exit	Survey	Adult leavers	19.6%
New Jersey (Dion & Pavetti, 2000)	7/97–6/98	12th month after exit	Survey	Adult leavers	62%
New York (Acs & Loprest, 2001; ASPE staff, 2000; ASPE staff, 2001)	1Q97	4th quarter after exit	Administrative	Adult leavers	35%
(Acs & Loprest, 2001; ASPE staff, 2000)	1Q97	4th quarter after exit	Administrative	Any member of household	45%
(ASPE staff, 2000)	1Q97	12th month after exit	Administrative	Any member of household	40%
(Dion & Pavetti, 2000)	1/97–3/98	12th month after exit	Survey	Adult leavers	48%
South Carolina (Dion & Pavetti, 2000)	6/98–8/98	12th month after exit	Survey	Adult leavers	79.9%
(Dion & Pavetti, 2000)	9/98–12/98	12th month after exit	Survey	Adult leavers	76.7%
(Dion & Pavetti, 2000)	1/99–4/99	12th month after exit	Survey	Adult leavers	77.6%
(Brauner & Loprest, 1999)	4/97–7/97	4th quarter after exit	Survey	Continuous leavers	79%
(ASPE staff, 2001)	4Q98–1Q99	4th quarter after exit	Administrative	Adult leavers	45%
Texas (Brauner & Loprest, 1999)	11/97	6 months	Survey	Continuous leavers	70%
Washington (Acs & Loprest, 2001; ASPE staff, 2000)	4Q97	4th quarter after exit	Administrative	All leavers (adults in two-parent households are counted separately)	43%
(Acs & Loprest, 2001)	10/98	6–8 months after exit	Survey	Single-parent leavers	53%
(ASPE staff, 2001)	4Q98	6–8 months after exit	Survey	Adult leavers	56%
(Dion & Pavetti, 2000)	10/98–11/98	12th month after exit	Administrative	Adult leavers	36%
(Brauner & Loprest, 1999)	8/98	12th month after exit	Survey	Continuous leavers	36%

(table continues)

APPENDIX TABLE B2, continued

Study	Exit Cohort	Date Take-Up was Studied	Data	Population Studied	Estimated Take-Up
Wisconsin (Acs & Loprest, 2001; ASPE staff, 2000) (Acs & Loprest, 2001; ASPE staff, 2000) (ASPE staff, 2001) (Dion & Pavetti, 2000 – DWD ^b) (Dion & Pavetti, 2000 – IRP ^c)	7/95–6/96	Any time within the year of exit	Administrative	Adult leavers	82%
	7/95–6/96	4th quarter after exit	Administrative	Adult leavers	63%
	2Q98–4Q98	4th quarter after exit	Administrative	Adult leavers	76%
	8/98–11/98	6–9 months after exit	Survey	Adult leavers	71%
	8/95–12/97	12th month after exit	Survey	Adult leavers	76.2%
	(Brauner & Loprest, 1999) (Brauner & Loprest, 1999)	7/97–9/97 1Q98–3/98	5th quarter after exit 6–12 months after exit	Administrative Survey	Continuous leavers Continuous leavers
Cuyahoga Co., Ohio (Acs & Loprest, 2001; Dion & Pavetti, 2000) (ASPE staff, 2000) (ASPE staff, 2001)	3Q96	4th quarter after exit	Administrative	Adult leavers	38%
	3Q96	Any time within the year of exit	Administrative	Single adult head of household	55.3%
	3Q98	4th quarter after exit	Administrative	Adult leavers	46%
San Mateo Co., California (Acs & Loprest, 2001) (Acs & Loprest, 2001) (ASPE staff, 2000) (ASPE staff, 2000)	1997	Any time within the year of exit	Administrative	Adult leavers	47%
	1997	12th month after exit	Administrative	Adult leavers	22%
	4Q96	12th month after exit	Administrative	Adult leavers	23.7%
	4Q96	Any time within the year of exit	Administrative	Adult leavers	47.1%

^aCases that received benefits between May 1995 and May 1996 but not in September 1997.

^bStudy by the Wisconsin Department of Workforce Development.

^cStudy by the Institute for Research on Poverty.

^dAcs & Loprest, 2001 and ASPE staff, 2001 reported slightly different take-up rates for the same exit cohort and so both figures have been included in this table.

APPENDIX TABLE B3
Summary of Existing Studies: Medicaid Take-Up (children)

Study	Exit Cohort	Date Take-Up Was studied	Data	Population Studied	Estimated Take-Up
Arizona (Acs & Loprest, 2001; ASPE staff, 2001)	1Q98	12–18 months after exit	Survey	Single-parent cases – children	51%
District of Columbia (Acs & Loprest, 2001; ASPE staff, 2001)	4Q98	12th month after exit	Survey	All cases – children	60%
	4Q98	12th month after exit	Administrative	All cases – children	48%
Florida (Acs & Loprest, 2001)	2Q97	Any time within the year of exit	Administrative	Children of leavers	78%
	2Q97	12th month after exit	Administrative	Children of leavers	51%
Georgia (ASPE staff, 2001)	2Q97	23–30 months after exit	Survey	Children of leavers	57%
	1Q99–1Q00	4–6 months after exit	Survey	Children of leavers	82%
Illinois (Acs & Loprest, 2001)	12/98	6–8 months after exit	Survey	All cases – children	53%
	4Q98	6–8 months after exit	Survey	All cases – children	53%
Iowa (ASPE staff, 2001)	2Q99	8–12 months after exit	Survey	Children of leavers	63%
	2Q99	12th month after exit	Administrative	Children of leavers	55%
Massachusetts (ASPE staff, 2001)	1Q99	6–16 months after exit	Survey	Children of leavers	83%
	4Q96	4th quarter after exit	Administrative	Children of leavers	87%, 86%
Missouri (Acs & Loprest, 2001; ASPE staff, 2001)	4Q96	4th quarter after exit	Administrative	Children of leavers	36.8%
	4Q98	26–34 months after exit	Survey	Single-parent cases – children	68%
Dion & Pavetti, 2000)	4Q96	12th month after exit	Survey	Children of leavers	37.6%

(table continues)

APPENDIX TABLE B3, continued

Study	Exit Cohort	Date Take-Up Was studied	Data	Population Studied	Estimated Take-Up
New York (Acs & Loprest, 2001; ASPE staff, 2000; ASPE staff, 2001)	1Q97	4th quarter after exit	Administrative	Children of leavers	34%
South Carolina (ASPE staff, 2001) (ASPE staff, 2001)	4Q98-1Q99	12-15 months	Survey	Children of leavers	85%
	4Q98-1Q99	4 th quarter after exit	Administrative	Children of leavers	68% ^a
Washington (Acs & Loprest, 2001; ASPE staff, 2001) (Dion & Pavetti, 2000) (Brauner & Loprest, 1999)	4Q98	6-8 months after exit	Survey	Children of single-parent leavers	67%
	10/98-11/98	12th month after exit	Administrative	Children of leavers	64%
Wisconsin (ASPE staff, 2001)	8/98	12th month after exit	Survey	Children of continuous leavers	64%
	2Q98-4Q98	4th quarter after exit	Administrative	Children of leavers	80%
San Mateo (Acs & Loprest, 2001) (Acs & Loprest, 2001)	1997	Any time within the year of exit	Administrative	Children of leavers	50%
	1997	12th month after exit	Administrative	Children of leavers	24%
(ASPE staff, 2000) (ASPE staff, 2000)	4Q96	Any time within the year of exit	Administrative	Children of adult leavers	48.4%
	4Q96	12th month after exit	Administrative	Children of adult leavers	26.2%
(ASPE staff, 2001) (ASPE staff, 2001)	4Q98	6-12 months after exit	Survey	Children of adult leavers	64%
	4Q98	12th month after exit	Administrative	Children of adult leavers	59%

APPENDIX TABLE B4

References for Noncash Benefit Take-up by Welfare Leavers

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- Ellwood, David T., and E. Kathleen Adams. 1990. "Medicaid Mysteries: Transitional Benefits, Medicaid Coverage, and Welfare Exits." *Health Care Financing Review 1990 Annual Supplement*.
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 - ◊ All three of these studies found low take-up rates among eligible welfare leavers.

APPENDIX C

Sample Definition

We extracted data from the CARES database for all 65,823 AFDC-Regular recipients in Wisconsin in September 1995 and all 30,980 recipients of either AFDC-Regular or W-2 cash benefits in Wisconsin in September 1997. For both samples, we excluded cases in which there were no children identified in the assistance group (n = 716, 1995; n = 195, 1997), cases in which the children were not cared for by a parent (n = 6,165, 1995; n = 3,543, 1997), cases in which the case head was receiving Supplemental Security Income (SSI) (n = 6,269, 1995; n = 5,516, 1997), cases in which the case head was less than 18 or more than 65 years old (n = 294, 1995; n = 91, 1997), cases in which the case head was a male (n = 1,679, 1995; n = 504, 1997), cases with two parents present in the household (n = 482, 1995; n = 136, 1997), and cases which were open in September but received \$0 in cash benefits in both September and October (n = 613, 1995; n = 387, 1997). Because of the change in eligibility for legal immigrants between 1995 and 1997, we also excluded cases in which any household member was not a U.S. citizen (n = 1,408, 1995; n = 870, 1997).

This results in final sample sizes of 48,197 for the 1995 cohort, and 19,738 for the 1997 cohort. Most of the analyses in this report are performed on the subset of each cohort that left cash assistance in the fourth quarter of the year (the leavers). Specifically, leavers are defined as those who received \$0 in cash assistance for two consecutive months between October and January. By this definition there were 7,879 leavers in the 1995 cohort and 7,828 leavers in the 1997 cohort.

Unlike some earlier reports on welfare leavers in Wisconsin (e.g., Cancian et al., 1999b) we include *all* leavers, even those who do not appear in any administrative records after leaving welfare (“disappears”). Thus these results are comparable in this respect to DHHS leavers’ studies in other states.

Food Stamp Variables

Information on Food Stamp receipt for all household members in our samples was obtained from the CARES database. This information covers the period July 1995 through December 1999 for the 1995 cohort and the period July 1997 through December 1999 for the 1997 cohort. These data were used to determine whether anyone in the household was receiving assistance in each of the quarters following exit, as well as the total amount of Food Stamp benefits received by the household.

Medicaid Variables

Information on Medicaid receipt for all household members in our samples was obtained from the CARES database. This information covers the period July 1995 through December 1999 for the 1995 cohort and the period July 1997 through December 1999 for the 1997 cohort. These data were used to determine whether anyone in the household was receiving assistance in each of the quarters following exit.⁵³

⁵³Note that receipt of Medicaid only indicates the person obtained a Medicaid card, not that he/she actually received medical services paid for by Medicaid.

Demographic Variables

The demographic variables were taken from the CARES database and reflect the characteristics as of September 1995/1997. These variables include mother's age, mother's education level, mother's race, the number of own and foster children in the household, the age of the youngest child in the household, the presence of other household members who are not part of the AFDC case, SSI status of children, and county of residence. For analysis purposes the counties are grouped as follows: Milwaukee County, other urban counties (Brown, Calumet, Chippewa, Dane, Douglas, Eau Claire, Kenosha, La Crosse, Marathon, Outagamie, Ozaukee, Pierce, Racine, Rock, St. Croix, Sheboygan, Washington, Waukesha, and Winnebago), and rural counties (all other counties).

Earnings Variables

Earnings information came from the state Unemployment Insurance (UI) database. We have information on quarterly earnings of each household member from first quarter 1993 through fourth quarter 1999. These data were used to calculate the number of quarters the mother worked in the 2 years before we observe her (fourth quarter 1993 through third quarter 1995 for the 1995 cohort and fourth quarter 1995 through third quarter 1997 for the 1997 cohort) as well as her total earnings during this period. We also calculated total household earnings in each of the eight quarters after exit for the 1997 cohort and in each of the 16 quarters after exit for the 1995 cohort. This information is used to estimate Food Stamp and Medicaid eligibility in the quarters after exit as described below.

Geographic Variables

The percentage of female-headed households in the zip code of residence was taken from the 1990 census ZIP-Code-level database, STF3B.

Monthly county-level unemployment rates are from the Wisconsin Department of Workforce Development, Local Area Unemployment Statistics. The reported unemployment rates are for the entire county. For members of our samples who reside on an Indian reservation, unemployment rates for the following counties were used:

Indian Reservation	County Unemployment Rate Used
Red Cliff	Bayfield
Stockbridge Munsee	Shawano
Lac du Flambeau	Vilas
Bad River	Ashland
Oneida	Green Bay MSA

Estimation of Eligibility for Food Stamps and Medicaid

A household is considered to be eligible for Food Stamps in a given quarter if the total earnings of all household members, as reported in the Wisconsin UI database, are less than 130 percent of the federal poverty level. If a household was determined not to be eligible by this standard in a given quarter, but did receive Food Stamps during the quarter, the data were corrected to record that the family was eligible for Food Stamps. This occurred in between 1.6 and 3.4 percent of cases each quarter. This is due to our assumption that a family's earnings are spread evenly across the quarter, whereas a family may actually have had very little earnings in one month, making them eligible to receive Food Stamps in that month.

We calculated Medicaid eligibility for each household member based on the poverty-related criteria for eligibility. We do not have data available to estimate eligibility under the more lenient medically needy categories of eligibility. Household earnings were calculated as the total earnings reported in the UI database with deductions of \$90/month for work expenses and \$30/month plus 1/3 of the remainder earnings disregarded.⁵⁴

Based on these earnings, adults are eligible for Medicaid if household income is less than the amounts listed in Appendix Table C1. Pregnant women⁵⁵ and children up to age 6 are eligible if household income is less than 185 percent of the federal poverty level. Children between the ages of 6 and 19 born after September 30, 1983, are eligible if household income is less than 100 percent of the federal poverty level. If a person was determined not to be eligible by this standard in a given quarter, but did receive Medicaid during the quarter, the data were corrected to record that the person was eligible for Medicaid. This occurred in between 1.9 and 6.5 percent of cases each quarter. About half of these cases were eligible for a 12-month extension of their Medicaid benefits after obtaining work. The other cases are a combination of people who were eligible under the medically needy categories and the result of our smoothing of a family's earnings over the 3 months during a quarter.

APPENDIX TABLE C1
Medicaid Eligibility Limits, by Family Size

Family Size	Maximum Monthly Income
1	\$311
2	550
3	647
4	772
5	886
6	958
7	1,037
8	1,099

⁵⁴From October 1995 through August 1997, a person who was not eligible for AFDC did not receive the \$30 plus 1/3 disregard. Since we do not know whether each person is eligible for AFDC, we use the \$30 plus 1/3 disregard for everyone. We also estimated eligibility with only the \$90/month deduction and found that the change in our estimates was insignificant.

⁵⁵We do not have data indicating that a woman is pregnant. Therefore, mothers are assumed to be pregnant for the two quarters preceding the addition of a child into the household.

APPENDIX TABLE D1a
Probability of Food Stamp Take-Up among Families Eligible to Receive Food Stamps – U.S. Citizens Only
Coefficients and Standard Errors from Annual Probits – 1995 Cohort

	1996		1997		1998		1999	
	Coefficient	Std. Error						
Mother's Age								
Age	0.045	0.019**	0.044	0.019**	-0.003	0.019	0.001	0.018
Age squared	-0.000	0.000	-0.000	0.000	0.000	0.000	0.000	0.000
Mother's Education (compared to less than high school degree)								
High school graduate	-0.020	0.040	-0.030	0.039	-0.096	0.039**	-0.112	0.039***
More than high school graduate	0.022	0.052	-0.072	0.052	-0.060	0.052	-0.162	0.053***
Mother's Race (compared to white)								
African American	0.116	0.056**	0.115	0.055**	0.262	0.054***	0.321	0.054***
Hispanic	-0.023	0.081	-0.073	0.080	0.001	0.079	0.097	0.079
Other	-0.140	0.101	0.027	0.099	-0.011	0.098	-0.055	0.099
County of Residence (compared to other urban counties)								
Milwaukee	-0.087	0.055	-0.008	0.055	0.043	0.054	0.026	0.054
Rural counties	-0.033	0.044	-0.020	0.045	0.020	0.045	-0.047	0.046
Age of Youngest Child (compared to less than 1)								
1–5 years	0.125	0.062**	-0.132	0.074*	-0.325	0.066***	-0.217	0.069***
6–12 years	-0.055	0.074	-0.276	0.079***	-0.374	0.068***	-0.361	0.069***
13–18 years	-0.054	0.093	-0.322	0.096***	-0.396	0.091***	-0.214	0.096***
Number Children in Family (compared to 1)								
2	0.050	0.049	-0.013	0.047	0.089	0.048*	0.080	0.049
3 or more	0.116	0.060*	0.074	0.057	0.153	0.055***	0.222	0.055***
Any Adults Other than Mother Living in Household								
	0.829	0.053***	0.614	0.046***	0.594	0.044***	0.432	0.041***

(table continues)

APPENDIX TABLE D1a, continued

	1996		1997		1998		1999	
	Coefficient	Std. Error						
Any Child Receiving SSI	-0.224	0.071***	-0.059	0.067	0.124	0.066*	0.038	0.064
Number of Quarters Family Is Eligible to Receive Food Stamps (compared to 1)								
2	0.428	0.107***	0.409	0.105***	0.474	0.100***	0.451	0.098***
3	0.544	0.101***	0.739	0.101***	0.712	0.095***	0.621	0.096***
4	0.955	0.094***	1.021	0.094***	1.165	0.090***	1.002	0.090***
Monthly Amount of Food Stamp Eligibility (compared to \$25 or less)								
\$26–50	0.240	0.123*	0.208	0.131	0.218	0.134	0.370	0.139***
\$51–100	0.193	0.108*	0.302	0.109***	0.353	0.114***	0.558	0.121***
\$101–250	0.141	0.098	0.301	0.099***	0.408	0.104***	0.464	0.114***
> \$250	0.241	0.110**	0.473	0.110***	0.566	0.113***	0.703	0.121***
Number of Quarters Mother Worked during Year	0.180	0.014***	0.199	0.013***	0.243	0.013***	0.228	0.012***
Family Received Cash Welfare during Year	1.931	0.054***	2.003	0.064***	2.112	0.108***	1.305	0.073***
Number of Quarters Mother Worked in Previous Two Years^a (compared to 0)								
1–3	0.062	0.057	-0.021	0.057	0.036	0.057	0.082	0.056
4–7	0.116	0.059**	0.007	0.057	0.061	0.057	0.128	0.056**
8	0.236	0.070***	0.036	0.068	0.150	0.067**	0.199	0.066***
Number of Months Mother Received Welfare in Previous Two Years^a (compared to 6 or less)								
7–12	0.131	0.062**	0.095	0.063	0.050	0.065	-0.009	0.066
13–18	0.243	0.063***	0.217	0.063***	0.179	0.064***	0.064	0.064
19–24	0.199	0.050***	0.220	0.050***	0.218	0.051***	0.159	0.052***

(table continues)

APPENDIX TABLE D1a, continued

	1996		1997		1998		1999	
	Coefficient	Std. Error						
Mother Had More than One Welfare Spell in Previous Two Years^a	0.093	0.042**	0.102	0.042**	0.063	0.042	0.038	0.042
% Female-Headed Households in ZIP Code of Residence	0.180	0.178	0.287	0.174*	0.344	0.171**	0.469	0.167***
Constant term	-3.114	0.309***	-3.247	0.317***	-2.711	0.314***	-2.820	0.311***
Log likelihood	-3553.2		-3602.5		-3582.6		-3571.6	
Sample size	7,543		7,262		6,990		6,837	

* Statistically significant at the 10% level.

** Statistically significant at the 5% level.

*** Statistically significant at the 1% level.

Note: Model also controls for missing race and percentage of female-headed households variables.

^aOctober 1993 through September 1995 for the 1995 cohort, and October 1995 through September 1997 for the 1997 cohort.

^bSeptember 1995 for the 1995 cohort and September 1997 for the 1997 cohort.

APPENDIX TABLE D1b
Probability of Food Stamp Take-Up among Families
Eligible to Receive Food Stamps – U.S. Citizens Only
Coefficients and Standard Errors from Annual Probits – 1997 Cohort

	1998		1999	
	Coefficient	Std. Error	Coefficient	Std. Error
Mother's Age				
Age	0.048	0.018***	0.006	0.017
Age squared	-0.001	0.000**	0.000	0.000
Mother's Education (compared to less than high school degree)				
High school graduate	0.042	0.043	-0.020	0.039
More than high school graduate	0.070	0.062	-0.052	0.057
Mother's Race (compared to white)				
African American	0.134	0.054**	0.246	0.050***
Hispanic	0.141	0.083*	-0.051	0.074
Other	0.285	0.107***	0.030	0.092
County of Residence (compared to other urban counties)				
Milwaukee	-0.057	0.054	0.052	0.050
Rural counties	-0.060	0.059	-0.112	0.055**
Age of Youngest Child (compared to less than 1)				
1–5 years	-0.061	0.055	-0.321	0.073**
6–12 years	-0.068	0.072	-0.387	0.082***
13–18 years	-0.016	0.114	-0.554	0.125***
Number Children in Family (compared to 1)				
2	0.175	0.058***	0.055	0.053
3 or more	0.267	0.072***	0.131	0.061**
Any Adults Other than Mother Living in Household				
	0.544	0.061***	0.318	0.047***
Any Child Receiving SSI				
	-0.189	0.070***	-0.138	0.061**
Number of Quarters Family Is Eligible to Receive Food Stamps (compared to 1)				
2	0.036	0.137	0.455	0.119***
3	0.146	0.130	0.857	0.117***
4	0.710	0.123***	1.323	0.109***

(table continues)

APPENDIX TABLE D1b, continued

	1998		1999	
	Coefficient	Std. Error	Coefficient	Std. Error
Monthly Amount of Food Stamp Eligibility (compared to \$25 or less)				
\$26–50	0.415	0.169**	0.427	0.162***
\$51–100	0.459	0.146***	0.312	0.132**
\$101–250	0.552	0.134***	0.458	0.122***
> \$250	0.785	0.146***	0.726	0.131***
Number of Quarters Mother Worked during Year	0.229	0.015***	0.232	0.013***
Family Received Cash Welfare during Year	1.471	0.079***	1.646	0.083***
Number of Quarters Mother Worked in Previous Two Years^a (compared to 0)				
1–3	-0.001	0.061	0.034	0.057
4–7	0.066	0.064	0.128	0.058**
8	0.155	0.082*	0.150	0.073**
Number of Months Mother Received Welfare in Previous Two Years^a (compared to 6 or less)				
7–12	0.117	0.067*	0.065	0.064
13–18	0.237	0.071***	0.090	0.065
19–24	0.397	0.060***	0.327	0.053***
Mother Had More than One Welfare Spell in Previous Two Years^a	0.032	0.047	0.052	0.043
% Female-Headed Households in ZIP Code of Residence	0.454	0.172***	0.449	0.157***
Constant term	-2.542	0.313***	-2.392	0.298***
Log likelihood	-2792.3		-3358.6	
Sample size	7,683		7,520	

*Statistically significant at the 10% level.

**Statistically significant at the 5% level.

***Statistically significant at the 1% level.

Note: Model also controls for missing race and percentage of female-headed households variables.

^aOctober 1993 through September 1995 for the 1995 cohort, and October 1995 through September 1997 for the 1997 cohort.

^bSeptember 1995 for the 1995 cohort and September 1997 for the 1997 cohort.

APPENDIX TABLE D2a
Probability of Medicaid Take-Up Among Mothers Eligible to Receive Medicaid – U.S. Citizens Only
Coefficients and Standard Errors from Annual Probits – 1995 Cohort

	1996		1997		1Q1998–2Q1999		3Q1999–4Q1999	
	Coefficient	Std. Error	Coefficient	Std. Error	Coefficient	Std. Error	Coefficient	Std. Error
Mother's Age								
Age	-0.007	0.021	-0.036	0.020*	-0.078	0.021***	-0.052	0.019***
Age squared	0.000	0.000	0.001	0.000*	0.001	0.000***	0.001	0.000**
Mother's Education (compared to less than high school degree)								
High school graduate	0.161	0.045***	0.122	0.043***	-0.015	0.042	-0.022	0.038
More than high school graduate	0.294	0.059***	0.177	0.056***	0.046	0.058	-0.047	0.052
Mother's Race (compared to white)								
African American	-0.205	0.064***	-0.018	0.061	0.033	0.061	-0.038	0.054
Hispanic	-0.059	0.093	-0.118	0.089	-0.090	0.090	-0.203	0.081**
Other	-0.169	0.112	0.019	0.109	-0.111	0.106	-0.048	0.094
County of Residence (compared to other urban counties)								
Milwaukee	-0.141	0.076*	0.085	0.069	-0.017	0.070	0.061	0.055
Rural counties	0.010	0.056*	0.081	0.055	0.214	0.055***	0.147	0.046***
Age of Youngest Child (compared to less than 1)								
1–5 years	0.014	0.070	-0.146	0.083*	-0.397	0.072***	-0.149	0.067**
6–12 years	-0.003	0.083	-0.174	0.088**	-0.372	0.075***	-0.215	0.069***
13–18 years	-0.007	0.104	-0.282	0.107***	-0.401	0.105***	-0.257	0.101**
Number Children in Family (compared to 1)								
2	0.112	0.049**	0.124	0.045***	0.254	0.047***	0.280	0.043***
3 or more	0.039	0.057	0.186	0.052***	0.358	0.052***	0.452	0.046***
Any Adults Other than Mother Living in Household								
	0.514	0.059***	0.372	0.051***	0.358	0.046***	0.248	0.041***

(table continues)

APPENDIX TABLE D2a, continued

	1996		1997		1Q1998–2Q1999		3Q1999–4Q1999	
	Coefficient	Std. Error	Coefficient	Std. Error	Coefficient	Std. Error	Coefficient	Std. Error
Any Child Receiving SSI	-0.110	0.078	-0.004	0.072	0.214	0.070***	0.201	0.064***
Number of Quarters Mother Is Eligible to Receive Medicaid (compared to 1)								
2	0.401	0.085***	0.549	0.067***	0.421	0.089***	NA	NA
3	0.989	0.080***	0.712	0.068***	0.860	0.086***	NA	NA
4	1.548	0.072***	0.890	0.063***	1.210	0.086***	NA	NA
5	NA	NA	NA	NA	1.396	0.087***	NA	NA
6	NA	NA	NA	NA	1.705	0.079***	NA	NA
Eligible for Medicaid (as opposed to BadgerCare)	NA	NA	NA	NA	NA	NA	0.414	0.041***
BadgerCare Premium	NA	NA	NA	NA	NA	NA	-0.010	0.001***
Mother Worked for Firm Offering Health Insurance	0.021	0.067	0.100	0.066	0.301	0.078***	0.258	0.059***
Number of Quarters Mother Worked during Year	0.449	0.017***	0.306	0.016***	0.224	0.011***	0.164	0.014***
Family Received Cash Welfare during Year	2.044	0.075***	2.412	0.094***	2.028	0.104***	2.744	0.232***
HMOs Mandated in County (1996 only)	-0.013	0.066	NA	NA	NA	NA	NA	NA
Number of HMOs Covering Medicaid in County (1997–1999)	NA	NA	-0.000	0.017	0.011	0.017	0.037	0.023
Free Health Clinic in ZIP Code of Residence	-0.081	0.044*	-0.001	0.041	-0.037	0.042	-0.017	0.038

(table continues)

APPENDIX TABLE D2a, continued

	1996		1997		1Q1998–2Q1999		3Q1999–4Q1999	
	Coefficient	Std. Error	Coefficient	Std. Error	Coefficient	Std. Error	Coefficient	Std. Error
Number of Quarters Mother Worked in Previous Two Years^a (compared to 0)								
1–3	0.031	0.063	0.079	0.062	0.020	0.062	0.001	0.059
4–7	0.091	0.065	0.121	0.063*	0.089	0.063	0.122	0.058**
8	0.238	0.081***	0.264	0.075***	0.154	0.075**	0.103	0.068
Number of Months Mother Received Welfare in Previous Two Years^a (compared to 6 or less)								
7–12	0.102	0.069	0.137	0.067**	0.021	0.069	0.008	0.064
13–18	0.226	0.071***	0.381	0.068***	0.058	0.069	0.130	0.062**
19–24	0.300	0.056***	0.324	0.055***	0.157	0.055***	0.187	0.051***
Mother Had More than One Welfare Spell in Previous Two Years^a								
	0.140	0.049***	0.036	0.045	0.114	0.046**	0.053	0.041
% Female-Headed Households in ZIP Code of Residence								
	-0.245	0.210	-0.379	0.202*	0.130	0.202	0.158	0.174
Constant term	-2.371	0.339**	-1.625	0.341***	-1.595	0.345***	-0.887	0.302***
Log likelihood	-2654.6		-3095.0		-2963.9		-3729.4	
Sample size	7,284		6,473		6,107		6,928	

*Statistically significant at the 10% level.

**Statistically significant at the 5% level.

***Statistically significant at the 1% level.

Note: Model also controls for missing race and percentage of female-headed households variables.

^aOctober 1993 through September 1995 for the 1995 cohort, and October 1995 through September 1997 for the 1997 cohort.

^bSeptember 1995 for the 1995 cohort and September 1997 for the 1997 cohort.

APPENDIX TABLE D2b
Probability of Medicaid Take-Up among Mothers
Eligible to Receive Medicaid – U.S. Citizens Only
Coefficients and Standard Errors from Annual Probits – 1997 Cohort

	1Q1998–2Q1999		3Q1999–4Q1999	
	Coefficient	Std. Error	Coefficient	Std. Error
Mother's Age				
Age	-0.055	0.022**	-0.029	0.018*
Age squared	0.001	0.000***	0.000	0.000
Mother's Education (compared to less than high school degree)				
High school graduate	0.086	0.047	0.002	0.037
More than high school graduate	0.353	0.072***	-0.015	0.054
Mother's Race (compared to white)				
African American	-0.084	0.061	-0.129	0.047***
Hispanic	0.075	0.094	-0.255	0.072***
Other	0.186	0.121	-0.047	0.091
County of Residence (compared to other urban counties)				
Milwaukee	-0.191	0.077**	0.025	0.049
Rural counties	0.176	0.082**	0.164	0.058***
Age of Youngest Child (compared to less than 1)				
1–5 years	-0.010	0.062	-0.314	0.063***
6–12 years	-0.047	0.078	-0.285	0.072***
13–18 years	-0.278	0.124**	-0.582	0.121***
Number Children in Family (compared to 1)				
2	0.193	0.057***	0.174	0.046***
3 or more	0.144	0.061**	0.281	0.048***
Any Adults Other than Mother Living in Household				
	0.296	0.059***	0.254	0.047***
Any Child Receiving SSI				
	0.010	0.075	0.087	0.059
Number of Quarters Mother Is Eligible to Receive Medicaid (compared to 1)				
2	0.367	0.113***	NA	NA
3	1.025	0.111***	NA	NA
4	1.201	0.106***	NA	NA
5	1.562	0.107***	NA	NA
6	1.972	0.097***	NA	NA

(table continues)

APPENDIX TABLE D2b, continued

	1Q1998–2Q1999		3Q1999–4Q1999	
	Coefficient	Std. Error	Coefficient	Std. Error
Eligible for Medicaid (as opposed to BadgerCare)	NA	NA	0.829	0.040***
BadgerCare Premium	NA	NA	-0.012	0.002***
Mother Worked for Firm Offering Health Insurance	-0.140	0.085*	0.073	0.058
Number of Quarters Mother Worked during Year	0.247	0.013***	0.233	0.013***
Family Received Cash Welfare during Year	1.618	0.095***	2.422	0.167***
Number of HMOs Covering Medicaid in County (1997–1999)	0.019	0.023	0.005	0.028
Free Health Clinic in ZIP Code of Residence	0.045	0.048	-0.022	0.037
Number of Quarters Mother Worked in Previous Two Years^a (compared to 0)				
1–3	0.048	0.072	-0.001	0.057
4–7	0.024	0.074	0.094	0.059
8	0.164	0.094*	0.179	0.072**
Number of Months Mother Received Welfare in Previous Two Years^a (compared to 6 or less)				
7–12	0.248	0.077***	0.225	0.062***
13–18	0.270	0.080***	0.197	0.063***
19–24	0.407	0.066***	0.389	0.052***
Mother Had More than One Welfare Spell in Previous Two Years^a	0.006	0.052	-0.004	0.041
% Female-Headed Households in ZIP Code of Residence	-0.306	0.190	0.006	0.147

(table continues)

APPENDIX TABLE D2b, continued

	1Q1998–2Q1999		3Q1999–4Q1999	
	Coefficient	Std. Error	Coefficient	Std. Error
Constant term	-1.266	0.362***	-0.590	0.286**
Log likelihood	-2202.2		-3811.7	
Sample size	7,544		7,471	

* Statistically significant at the 10% level.

** Statistically significant at the 5% level.

*** Statistically significant at the 1% level.

Note: Model also controls for missing race and percentage of female-headed households variables.

^aOctober 1993 through September 1995 for the 1995 cohort, and October 1995 through September 1997 for the 1997 cohort.

^bSeptember 1995 for the 1995 cohort and September 1997 for the 1997 cohort.

APPENDIX TABLE D3a
Probability of Medicaid Take-Up Among Children Eligible to Receive Medicaid – U.S. Citizens Only
Coefficients and Standard Errors from Annual Probits – 1995 Cohort

	1996		1997		1Q1998–2Q1999		3Q1999–4Q1999	
	Coefficient	Std. Error	Coefficient	Std. Error	Coefficient	Std. Error	Coefficient	Std. Error
Mother's Age								
Age	0.010	0.016	-0.033	0.015**	-0.056	0.015***	-0.056	0.014***
Age squared	-0.000	0.000	0.001	0.000***	0.001	0.000***	0.001	0.000***
Mother's Education (compared to less than high school degree)								
High school graduate	0.106	0.032***	0.036	0.029	0.009	0.028	-0.033	0.026
More than high school graduate	0.277	0.044***	0.067	0.039*	0.030	0.038	-0.100	0.036***
Mother's Race (compared to white)								
African American	-0.224	0.045***	-0.012	0.041	0.082	0.039**	0.116	0.037***
Hispanic	-0.232	0.062***	-0.113	0.057**	-0.045	0.055	-0.059	0.053
Other	-0.073	0.081	0.003	0.073	-0.019	0.068	-0.044	0.063
County of Residence (compared to other urban counties)								
Milwaukee	-0.241	0.054***	0.039	0.047	0.067	0.045	0.040	0.038
Rural counties	0.093	0.043**	0.159	0.039***	0.159	0.037***	0.137	0.033***
Child's Age (compared to less than 1)								
1–5 years	-0.320	0.070***	-1.027	0.115***	-1.117	0.100***	-1.086	0.103***
6–12 years	-0.307	0.074***	-1.023	0.116***	-1.155	0.101***	-1.221	0.102***
13–18 years	-0.221	0.081***	-0.949	0.120***	-0.964	0.107***	-1.201	0.108***
Number of Other Children in the Family	-0.019	0.012	0.058	0.011***	0.089	0.010***	0.046	0.010***
Any Adults Other than Mother Living in Household	0.737	0.045***	0.591	0.035***	0.525	0.030***	0.253	0.028***
Any Child Receiving SSI	0.785	0.089***	0.794	0.075***	0.670	0.064***	0.191	0.046***

(table continues)

APPENDIX TABLE D3a, continued

	1996		1997		1Q1998–2Q1999		3Q1999–4Q1999	
	Coefficient	Std. Error	Coefficient	Std. Error	Coefficient	Std. Error	Coefficient	Std. Error
Number of Quarters Child Is Eligible to Receive Medicaid (compared to 1)								
2	0.630	0.089***	0.395	0.068***	0.565	0.078***	NA	NA
3	0.816	0.080***	0.577	0.065***	0.907	0.074***	NA	NA
4	1.074	0.068***	0.880	0.057***	1.011	0.074***	NA	NA
5	NA	NA	NA	NA	1.041	0.073***	NA	NA
6	NA	NA	NA	NA	1.498	0.066***	NA	NA
Eligible for Medicaid (as opposed to BadgerCare)	NA	NA	NA	NA	NA	NA	0.751	0.039***
BadgerCare Premium	NA	NA	NA	NA	NA	NA	-0.005	0.001***
Number of Quarters Mother Is Eligible to Receive Medicaid	0.152	0.014***	0.039	0.012***	0.019	0.008**	NA	NA
Mother is Eligible to Receive Medicaid	NA	NA	NA	NA	NA	NA	-0.292	0.031***
Any Other Noneligible Children in Family	-0.827	0.083***	-0.833	0.064***	-0.564	0.054***	NA	NA
Another Child in Household Eligible to Receive Medicaid	NA	NA	NA	NA	NA	NA	0.477	0.032***
Mother Worked for Firm Offering Health Insurance	0.222	0.047***	0.173	0.043***	0.359	0.047***	0.284	0.041***
Number of Quarters Mother Worked during Year	0.349	0.012***	0.271	0.011***	0.186	0.007***	0.180	0.009***
Family Received Cash Welfare during Year	1.651	0.053***	1.794	0.053***	1.461	0.065***	1.464	0.084***
HMOs Mandated in County (1996 only)	0.067	0.050	NA	NA	NA	NA	NA	NA

(table continues)

APPENDIX TABLE D3a, continued

	1996		1997		1Q1998–2Q1999		3Q1999–4Q1999	
	Coefficient	Std. Error	Coefficient	Std. Error	Coefficient	Std. Error	Coefficient	Std. Error
Number of HMOs Covering Medicaid in County (1997–1999)	NA	NA	-0.009	0.012	-0.010	0.012	0.006	0.016
Free Health Clinic in ZIP Code of Residence	-0.143	0.032***	0.029	0.028	-0.035	0.028	0.011	0.026
Number of Quarters Mother Worked in Previous Two Years^a (compared to 0)								
1–3	-0.077	0.045*	0.082	0.042*	0.042	0.041	0.066	0.039*
4–7	0.047	0.047	0.078	0.043*	0.112	0.042***	0.150	0.040***
8	0.179	0.059***	0.236	0.051***	0.272	0.049***	0.186	0.046***
Number of Months Mother Received Welfare in Previous Two Years^a (compared to 6 or less)								
7–12	0.202	0.051***	0.104	0.047**	0.129	0.046***	0.057	0.046
13–18	0.317	0.053***	0.332	0.048***	0.308	0.047***	0.199	0.045***
19–24	0.437	0.040***	0.407	0.037***	0.425	0.037***	0.354	0.036***
Mother Had More than One Welfare Spell in Previous Two Years^a	0.104	0.036***	0.185	0.032***	0.110	0.030***	0.072	0.029**
% Female-Headed Households in ZIP Code of Residence	0.269	0.147*	-0.318	0.134**	-0.026	0.128	0.250	0.119**
Constant term	-2.373	0.269**	-0.752	0.275***	-0.934	0.267***	-0.123	0.242
Log likelihood	-4955.5		-6520.0		-6931.6		-7797.1	
Sample size	14,635		13,827		13,544		13,947	

* Statistically significant at the 10% level.

** Statistically significant at the 5% level.

*** Statistically significant at the 1% level.

Note: Model also controls for missing race and percentage of female-headed households variables.

^aOctober 1993 through September 1995 for the 1995 cohort, and October 1995 through September 1997 for the 1997 cohort.

^bSeptember 1995 for the 1995 cohort and September 1997 for the 1997 cohort.

APPENDIX TABLE D3b
Probability of Medicaid Take-Up Among Children
Eligible to Receive Medicaid – U.S. Citizens Only
Coefficients and Standard Errors from Annual Probits – 1997 Cohort

	1Q1998–2Q1999		3Q1999–4Q1999	
	Coefficient	Std. Error	Coefficient	Std. Error
Mother's Age				
Age	-0.047	0.018***	-0.067	0.013***
Age squared	0.001	0.000***	0.001	0.000***
Mother's Education (compared to less than high school degree)				
High school graduate	0.057	0.037	0.036	0.027
More than high school graduate	0.258	0.058***	-0.010	0.039
Mother's Race (compared to white)				
African American	-0.090	0.048**	0.042	0.034
Hispanic	0.022	0.072	-0.168	0.049***
Other	0.209	0.093**	-0.054	0.062
County of Residence (compared to other urban counties)				
Milwaukee	-0.177	0.062***	0.049	0.035
Rural counties	0.074	0.066	0.154	0.043***
Child's Age (compared to less than 1)				
1–5 years	-0.281	0.070***	-0.597	0.088***
6–12 years	-0.350	0.073***	-0.563	0.089***
13–18 years	-0.299	0.087***	-0.568	0.095***
Number of Other Children in the Family	0.229	0.047***	-0.051	0.055
Any Adults Other than Mother Living in Household	0.396	0.048***	0.378	0.033***
Any Child Receiving SSI	0.720	0.111***	0.104	0.041**
Number of Quarters Child Is Eligible to Receive Medicaid (compared to 1)				
2	0.527	0.123***	NA	NA
3	0.956	0.125***	NA	NA
4	1.239	0.118***	NA	NA
5	1.094	0.108***	NA	NA
6	1.624	0.090***	NA	NA

(table continues)

APPENDIX TABLE D3b, continued

	1Q1998–2Q1999		3Q1999–4Q1999	
	Coefficient	Std. Error	Coefficient	Std. Error
Eligible for Medicaid (as opposed to BadgerCare)	NA	NA	0.929	0.050***
BadgerCare Premium	NA	NA	-0.004	0.001***
Number of Quarters Mother Is Eligible to Receive Medicaid	0.062	0.012***	NA	NA
Mother Is Eligible to Receive Medicaid	NA	NA	0.136	0.031***
Any Other Noneligible Children in Family	-0.821	0.113***	NA	NA
Another Child in Household Eligible to Receive Medicaid	NA	NA	0.383	0.048***
Mother Worked for Firm Offering Health Insurance	0.110	0.063*	0.025	0.042
Number of Quarters Mother Worked during Year	0.224	0.010***	0.283	0.009***
Family Received Cash Welfare during Year	1.109	0.056***	1.360	0.058***
Number of HMOs Covering Medicaid in County (1997–1999)	0.023	0.020	0.012	0.021
Free Health Clinic in ZIP Code of Residence	0.024	0.038	-0.070	0.027***
Number of Quarters Mother Worked in Previous Two Years^a (compared to 0)				
1–3	0.010	0.052	0.035	0.039
4–7	0.005	0.056	0.110	0.041***
8	0.352	0.079***	0.205	0.052***
Number of Months Mother Received Welfare in Previous Two Years^a (compared to 6 or less)				
7–12	0.268	0.065***	0.241	0.048***
13–18	0.306	0.064***	0.241	0.047***
19–24	0.449	0.051***	0.418	0.038***

(table continues)

APPENDIX TABLE D3b, continued

	1Q1998–2Q1999		3Q1999–4Q1999	
	Coefficient	Std. Error	Coefficient	Std. Error
Mother Had More than One Welfare Spell in Previous Two Years^a	0.008	0.041	0.033	0.029
% Female-Headed Households in ZIP Code of Residence	-0.253	0.146*	0.133	0.106
Constant term	-1.079	0.307***	-0.057	0.229
Log likelihood	-3399.2		-7092.5	
Sample size	17,485		17,851	

* Statistically significant at the 10% level.

** Statistically significant at the 5% level.

*** Statistically significant at the 1% level.

Note: Model also controls for missing race and percentage of female-headed households variables.

^aOctober 1993 through September 1995 for the 1995 cohort, and October 1995 through September 1997 for the 1997 cohort.

^bSeptember 1995 for the 1995 cohort and September 1997 for the 1997 cohort.

APPENDIX E

The Kaplan-Meier method⁵⁶ of estimating the survivor function is a nonparametric, maximum-likelihood estimate of the survivor function. Specifically, if n_t is the number of children still receiving Medicaid in quarter t , and d_t is the number of children who stopped receiving Medicaid before time t , then the survivor function is:

$$\hat{S}(t) = \prod_{j|t_j \leq t} \left(\frac{n_j - d_j}{n_j} \right)$$

(Kalbfleisch and Prentice, 1980, p. 12).

In essence, $S(t)$, the survival function over time, t , is expressed as a product of conditional probabilities. In the case here, t is expressed in quarters, 8 for the 1997 cohort and 16 for the 1995 cohort. The survival curves do not drop to zero because some observations are censored; that is, we do not observe the full period over which they are receiving benefits.

For the estimates presented in Figures 4a and 5a, we have limited the sample to those who were eligible to receive Medicaid for the entire time period. We also follow the children only until their first exit from Medicaid; we do not attempt to track returns and subsequent exits. Therefore, the survivor functions presented in the figures can be very easily interpreted. The percentage shown in each quarter is the proportion of eligible children who have continuously received Medicaid since exiting cash welfare.

For example, in Figure 4a, 100 percent of the children receive Medicaid before leaving cash welfare (quarter zero). However, by the first quarter after exit, only 70 percent of the children are receiving benefits. Another way of interpreting this is that 30 percent of the eligible children in the 1995 cohort failed to receive Medicaid benefits for even one quarter after exiting cash welfare. Likewise, by the 16th quarter after exit, fewer than 30 percent of the children are still receiving Medicaid benefits. This implies that cumulatively over 70 percent of the eligible children stopped receiving Medicaid benefits at some point in the first 4 years after exit.

⁵⁶This is also known as the Product Limit estimator.

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