
CHAPTER V: EMPLOYMENT, EARNINGS, WAGE PROGRESSION, AND FOOD STAMP RECEIPT AMONG FAMILIES AFTER LEAVING WELFARE

This chapter presents information on employment and earnings among families who left AFDC or Work First. Information is also presented on whether the families continued to receive public assistance through the Food Stamp program. The chapter also examines “wage progression” as evidenced in increased earnings among the cohorts over time.

A. EMPLOYMENT STATUS

The wage data submitted to the North Carolina Employment Security Commission by employers as part of the unemployment insurance program is a source of information on employment for most of the citizens of North Carolina.¹ Wage data are submitted quarterly for each employee. Included are total earnings for the quarter, as well as the industry and location of the employer. The file does not include information on hours worked, hourly wages, the start or end date of employment, or the specific occupation of the employee.

For this report, we were able to analyze two additional quarters of data compared to the second report in this series. Additional wage data were available through the second quarter of 1999 (January to June 1999) on the cohorts. **However, it should be noted that not all of the data for the last quarter has yet been updated in the wage record system. The data for this quarter will change as we receive updates in the future.** Our analysis focused on the four exit cohorts: the AFDC exit cohort and the three Work First exit cohorts.

Exhibit V-1: Employment Status by Quarter after Program Exit presents the employment data for the four cohorts for each quarter after exit. The data indicate that there was not a substantial difference between the AFDC exit cohorts and the Work First exit cohorts in terms of the percentage employed at different follow-up periods, with about two-thirds of the persons being employed each quarter.

Another key finding from the exhibit is that rates of employment are apparently affected by seasonal factors. In each year, rates of employment among all of the cohorts are lowest in the first quarter (January to March). To illustrate this finding, we have shaded the first calendar quarter in the follow-up periods for each cohort.

The data show that rates of employment among all four cohorts declined in the most recent two quarters included in the analysis (the first and second quarters of calendar 1999). For the January to March quarter, this is apparently due to seasonal factors. The decline in

Exhibit V-1

¹ Persons who are self-employed and those working for the federal government are two examples of workers who are not part of the unemployment insurance system. No information on employment is available for these workers from the Wage Data reports.

EMPLOYMENT STATUS BY QUARTER AFTER PROGRAM EXIT
(Child-Only Cases Excluded)

CALENDAR QUARTER	AFDC COHORT FEB 95 (N=6274)	WORK FIRST COHORT SEP 96 (N=6143)	WORK FIRST COHORT JUN 97 (N=6326)	WORK FIRST COHORT JUN 98 (N=5487)
1st Quarter	65.7%	68.1%	70.9%	69.6%
2nd Quarter	64.6%	63.3%	66.6%	66.4%
3rd Quarter	62.7%	64.4%	62.4%	61.1%
4th Quarter	61.6%	65.2%	65.6%	59.4%
5th Quarter	63.1%	64.7%	66.4%	
6th Quarter	64.2%	62.0%	66.1%	
7th Quarter	63.6%	64.8%	61.2%	
8 th Quarter	61.2%	65.4%	58.3%	
9 th Quarter	63.5%	64.9%		
10 th Quarter	64.5%	61.5%		
11 th Quarter	64.2%	58.1%		
12 th Quarter	62.4%			
13 th Quarter	64.8%			
14 th Quarter	64.8%			
15 th Quarter	65.1%			
16 th Quarter	61.6%			
17 th Quarter	59.0%			

NOTE: The shaded cells are the first calendar quarter of each year (January to March)

the second quarter of 1999 is a statistical artifact reflecting the delay in updating all of the wage record data for the most recent quarter.

Another finding from the exhibit is that the Work First cohorts had somewhat higher rates of employment than the AFDC cohort during the first quarter after exit. However, in subsequent quarters, the percentage employed in the Work First cohorts declined steadily and soon approximated the percentage employed in the AFDC cohort. For example, 70.9 percent of the June 1997 exit cohort were employed in the first quarter after exit, compared to only 65.7 percent of the AFDC exit cohort. However, the percentage employed among the June 1997 cohort declined steadily in later quarters. One explanation for this pattern may be that, under Work First, recipients may be motivated to leave welfare relatively quickly to obtain employment (due to such factors as work requirements, sanctions, and the prospect of reaching time limits), but the employment may not be as stable compared to the jobs obtained by persons leaving AFDC.

Exhibit V-2: Number of Quarters Worked after Exit shows the number of quarters that members of the cohorts were employed during the different follow-up periods. *The data*

Exhibit V-2
NUMBER OF QUARTERS WORKED AFTER EXIT

(Child-Only Cases Excluded)

NUMBER OF QUARTERS EMPLOYED	AFDC COHORT FEB 95	WORK FIRST COHORT SEP 96	WORK FIRST COHORT JUN 97	WORK FIRST COHORT JUN 98
0	9.9%	11.9%	12.2%	17.9%
1	2.9%	4.2%	5.4%	9.3%
2	3.1%	3.8%	5.4%	12.3%
3	2.6%	4.2%	5.8%	19.1%
4	2.6%	4.2%	6.5%	41.3%
5	2.8%	4.2%	8.5%	
6	2.9%	4.9%	9.9%	
7	3.1%	5.9%	14.5%	
8	3.5%	7.3%	31.8%	
9	3.5%	8.8%		
10	3.5%	13.7%		
11	4.2%	26.8%		
12	4.6%			
13	4.8%			
14	5.7%			
15	7.3%			
16	11.5%			
17	21.4%			
TOTAL	100.0% (N=6,274)	100.0% (N=6,143)	100.0% (N=6326)	100.0% (N=5487)

indicate that about 10 percent of the AFDC exit cohort and 12 percent of the Work First cohort had never been employed. About 12.2 percent of the June 1997 exit cohort and 17.9 percent of the June 1998 exit cohort had never been employed, but these numbers are artificially high due to the shorter follow-up period.

To standardize the follow-up period for the two original cohorts, *Exhibit V-3: Number of Quarters Worked After Exit, Original Cohorts* shows the number of quarters worked during the first 11 quarters after exit for the two cohorts. The data show that there was little difference between the two cohorts in terms of employment patterns. The percentage who had never been employed was 12.4 percent for the AFDC exit cohort and 11.9 percent for the Work First cohort. The percentage who had been employed for all 11 quarters was slightly higher for the AFDC exit cohort (29.9 percent) than for the Work First cohort (26.8 percent).

To standardize the follow-up period for all four cohorts, *Exhibit V-4: Number of Quarters Worked During the First Four Quarters After Exit (All Cohorts)* presents data on the number of quarters employed during the first four quarters after exit. The data indicate that

Exhibit V-3
NUMBER OF QUARTERS WORKED AFTER EXIT,
ORIGINAL COHORTS

(Child-Only Cases Excluded)

NUMBER OF QUARTERS EMPLOYED	AFDC COHORT FEB 95	WORK FIRST COHORT SEP 96
0	12.4%	11.9%
1	4.1%	4.2%
2	4.5%	3.8%
3	4.3%	4.2%
4	3.9%	4.2%
5	4.9%	4.2%
6	5.1%	4.9%
7	5.7%	5.9%
8	6.0%	7.3%
9	8.0%	8.8%
10	11.4%	13.7%
11	29.9%	26.8%
TOTAL	100.0% (N=6,274)	100.0% (N=6,143)

Exhibit V-4
NUMBER OF QUARTERS WORKED DURING THE FIRST
FOUR QUARTERS AFTER EXIT, ALL COHORTS
 (Child-Only Cases Excluded)

NUMBER OF QUARTERS EMPLOYED	AFDC COHORT FEB 95	WORK FIRST COHORT SEP 96	WORK FIRST COHORT JUN 97	WORK FIRST COHORT JUN 98
0	20.9%	19.4%	17.1%	17.9%
1	9.4%	9.4%	10.0%	9.3%
2	10.0%	9.8%	10.8%	12.3%
3	13.6%	13.5%	14.3%	19.1%
4	46.1%	47.9%	47.7%	41.3%
TOTAL	100.0% (N=6,274)	100.0% (N=6,143)	100.0% (N=6326)	100.0% (N=5487)

the percentage who were never employed during the first four quarters after exit was slightly higher among the AFDC exit cohort (20.9 percent) than among the two most recent Work First exit cohorts (17.1 and 17.9 percent, respectively). However, the percentage who were employed for all four quarters was lower in the June 1998 exit cohort (41.3 percent) than

among the other exit cohorts. It is too early to tell, however, whether this simply reflects time lags in the most recent wage data.

B. TYPE OF INDUSTRY IN WHICH PERSONS WERE EMPLOYED

Although the Wage Data files do not contain information on the specific occupation of each employee, the reports filed by employers do contain the Standard Industrial Classification (SIC) Code for the employer’s business. *Exhibit V-5: Industries in Which Cohort Members Were Employed* presents data on type of employment among those persons who were employed. The data show that employment patterns among the four cohorts were similar in terms of type of employment. However, the data indicate that the more recent exit cohorts are somewhat more likely to be engaged in services and retail industries compared to the original cohorts. About 66.3 percent of the AFDC cohort were engaged in retail and services, compared to 69.4 percent of the September 1996 cohort, 70.7 percent of the June 1997 cohort, and 74.4 percent of the June 1998 cohort. Conversely, the percentage of persons employed in manufacturing is lower among the more recent exit cohorts. One explanation for this is that the more recent welfare leavers are more likely to obtain employment in retail and service jobs than earlier welfare leavers under the AFDC program. An alternate explanation is that persons who leave welfare may initially be likely to obtain jobs in retail and services may move to other types of jobs over time.

C. EARNINGS AMONG EMPLOYED PERSONS

The Wage Data files provide information on the total amount paid to each employee. By linking the individuals to the cases in our AFDC and Work First cohorts, we have computed a figure for the total earnings per case for each quarter after leaving AFDC or Work First.²

Exhibit V-6: Median Quarterly Earnings Among Persons Employed After Program Exit, shows the median earnings among those cases with any earnings for each quarter after program exit. Child-only cases and cases with no earnings reported were excluded from the calculation.

The data indicate that in the 11th quarter of follow-up, median earnings were \$3,091 among the AFDC cohort, compared to \$2,772 among the September 1996 exit cohort. The data also show evidence of wage progression among both cohorts. Among the AFDC cohort,

**Exhibit V-5
INDUSTRIES IN WHICH COHORT MEMBERS WERE EMPLOYED**

INDUSTRY	AFDC COHORT FEB 95	WORK FIRST COHORT SEP 96	WORK FIRST COHORT JUN 97	WORK FIRST COHORT JUN 98
Services	40.5%	40.9%	41.7%	43.1%

² If an individual had earnings reported from more than one employer, we added all earnings together to produce the quarterly earnings figure. If more than one individual in a case had earnings reported, we added all earnings to produce the total quarterly earnings figure for the case.

Retail trade	25.8%	28.5%	29.0%	31.3%
Manufacturing	17.7%	16.0%	15.8%	13.1%
Construction	3.2%	3.0%	3.3%	2.3%
Finance, insurance & real estate	3.0%	2.3%	1.9%	2.1%
Wholesale trade	2.8%	2.7%	2.8%	2.6%
Transportation & public utilities	2.5%	1.9%	1.6%	2.0%
Public administration	2.0%	1.8%	1.4%	0.9%
Agriculture, forestry, & fishing	1.1%	1.0%	0.9%	0.9%
Mining	0.0%	0.0%	0.0%	0.1%
Non Classifiable establishments	0.0%	0.1%	0.1%	0.1%
TOTAL	100.0%	100.0%	100.0%	100.0%

median earnings increased from \$2,075 in the first quarter to \$3,091 in the 17th quarter, an increase of 49 percent. Among the work first cohorts, there is also evidence of wage progression. For example, earnings among the September 1996 exit cohort increased from \$2,251 in the first quarter after exit to \$2,772 in the 11th quarter, an increase of 23.1 percent.

One of the major findings from Exhibit V-6 is that *earnings follow a seasonal pattern, with the highest earnings occurring during the fourth quarter (October to December) in each calendar year*. This pattern is true for all of the four cohorts. In the exhibit, we have shaded the fourth quarter earnings for each cohort. As indicated, earnings in this quarter reach a spike each year before declining again in the first quarter of the following year. This means that the fourth quarter each year is not only associated with increased rates of employment, but also with increased earnings among those employed.

This seasonal phenomenon should be taken into account when analyzing earnings progression. Specifically, it is important in comparing wage progression across different cohorts to ensure that seasonal factors are taken into account. This approach is shown in *Exhibit V-7: Median Quarterly Earnings in the Fourth Quarter of Each Year*. When we compare only the fourth quarter for each cohort, we find that earnings for the AFDC exit cohort increased by the following percentages each year: 12.4 percent, 14.9 percent, and 11.3 percent. The annual increases for the September 1996 exit cohort based on fourth quarter

Exhibit V-6
MEDIAN QUARTERLY EARNINGS AMONG
PERSONS EMPLOYED AFTER LEAVING WELFARE

QUARTER AFTER EXIT	AFDC COHORT FEB 95	WORK FIRST COHORT SEP 96	WORK FIRST COHORT JUN 97	WORK FIRST COHORT JUN 98
1	\$ 2,075	\$ 2,251	\$ 2,134	\$ 1,995
2	2,031	2,083	2,393	2,210
3	2,359	2,271	2,181	1,968
4	2,211	2,275	2,373	2,024
5	2,346	2,632	2,385	
6	2,363	2,432	2,721	
7	2,652	2,589	2,432	
8	2,530	2,667	2,482	
9	2,646	2,954		
10	2,660	2,647		
11	3,047	2,772		
12	2,792			
13	2,993			
14	3,050			
15	3,392			
16	2,962			
17	3,091			

Note: The shaded cells represent the fourth quarter in each calendar year percent.

Exhibit V-7
MEDIAN QUARTERLY EARNINGS IN THE FOURTH QUARTER
OF EACH FOLLOW-UP YEAR

YEAR AFTER EXIT	AFDC COHORT FEB 95	WORK FIRST COHORT SEP 96	WORK FIRST COHORT JUN 97	WORK FIRST COHORT JUN 98
1	\$ 2,359	\$ 2,251	\$ 2,393	\$ 2,210
2	2,652	2,632	2,721	
3	3,047	2,954		
4	3,392			

earnings were 16.9 percent and 12.2 percent. The annual increase for the June 1997 exit cohort was 13.7 percent. When seasonal factors are controlled for, *it is apparent that the annual*

increases in earnings are roughly the same for all of these three cohorts. For the June 1998 exit cohort, we only have four quarters of follow-up data, so we were not able to conduct a seasonal analysis of earnings progression.

Exhibit V-8: Earnings Progression Among Persons Employed After Leaving Welfare (Original Cohorts) provides a graphic illustration of the increase in earnings among persons employed in the original two cohorts. The exhibit shows a steady increase in earnings among both cohorts. For the Work First cohort, the exhibit shows the projected increases in earnings through the 17th quarter, based on a linear forecast

It should be noted that the increase in earnings may not be a reflection only of advancement within a specific job. Other studies of wage progression have shown that increases in wages are often due to persons moving into higher-paying jobs rather than earning more in the existing jobs. The increase in earnings may also be a reflection of increased hours worked.

For employed persons with earnings, *Exhibit V-9: Quarterly Earnings of the AFDC and Work First Exit Cohorts*, shows earnings data during the 11th quarter after exit for the two original cohorts and during the fourth quarter for the two new cohorts. For the AFDC cohort, the figures are from the fourth quarter of 1997. For the Work First cohorts, the data are for the second quarter of 1999.

The exhibit shows that 82.6 percent of the employed cases in the AFDC cohort and 78.6 percent of the employed cases in the September 1996 exit cohort had median earnings of \$1,000 or higher. The higher earnings among the AFDC cohort, however, probably reflect the seasonal factors discussed above. The higher earnings may also reflect the fact that the AFDC exit cohort had been off welfare for a longer period of time than the September 1996 exit cohort and had been able to gain more work experience. About 32.9 percent of the employed families in the AFDC exit cohort had earnings higher than \$4,000, compared to 28.7 percent of employed families in the September 1996 exit cohort.

To standardize on the length of the follow-up periods and to control for seasonal earnings fluctuations, *Exhibit V-10: Quarterly Earnings in the Fourth Quarter After Exit* presents quarterly earnings amounts for all cohorts during the fourth quarter after they exited from welfare. The fourth follow-up quarter after exit was the first quarter of 1996 for the AFDC cohort, the third quarter of 1997 for the September 1996 cohort, the second quarter of 1998 for the June 1997 exit cohort, and the second quarter of 1999 for the June 1998 cohort. The data show that earnings distributions among the four cohorts were roughly comparable when examined over a standardized follow-up period with seasonal factors controlled. However, earnings were slightly higher among the June 1998 exit cohort than the earlier exit cohorts. Some of the differences between the earlier and later cohorts, however, may be due to wage inflation between early 1996 and 1999.

**Exhibit V-8:
EARNINGS PROGRESSION AMONG PERSONS EMPLOYED
AFTER LEAVING WELFARE**

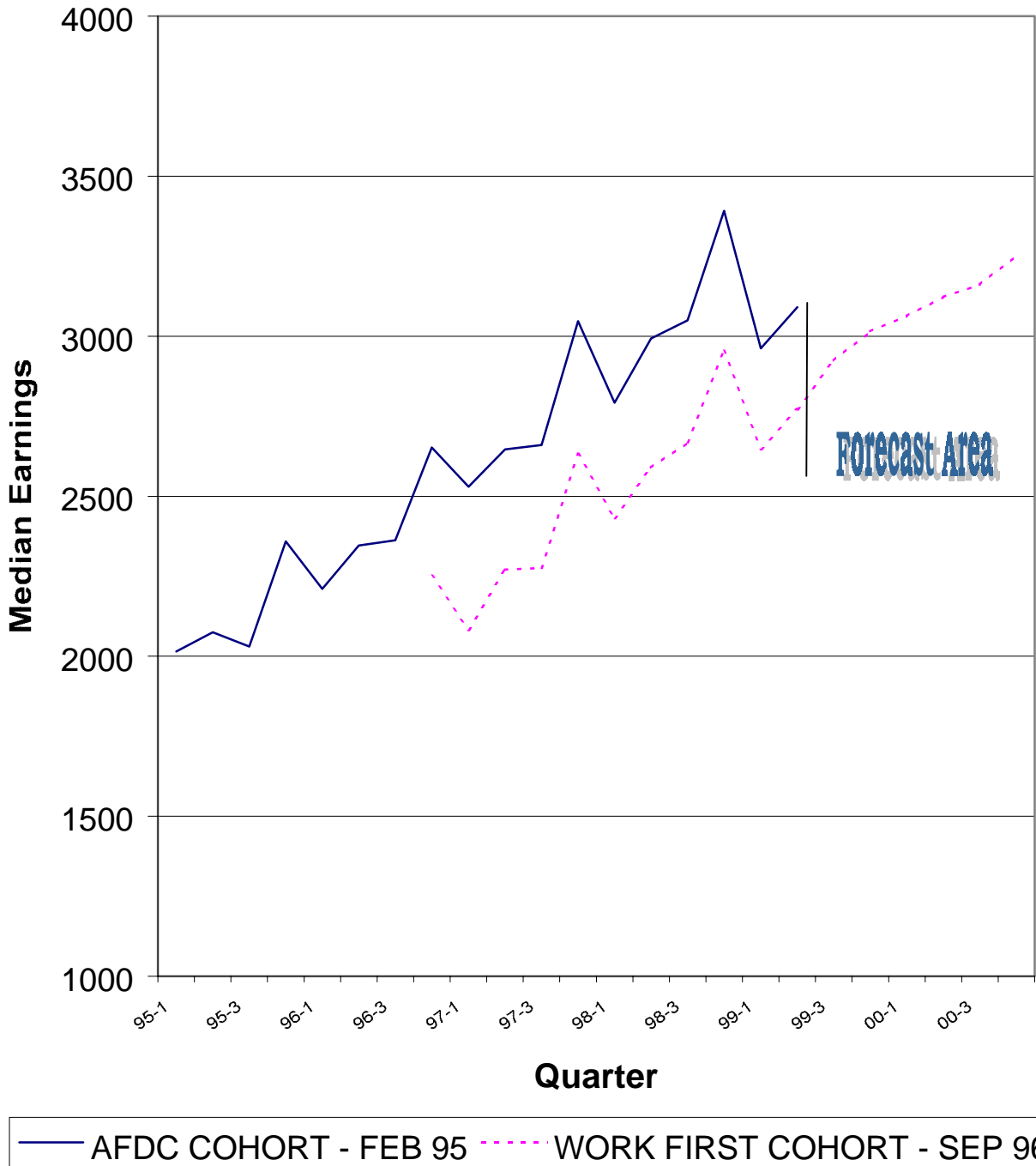


Exhibit V-9
QUARTERLY EARNINGS OF THE EXIT COHORTS
 ELEVEN QUARTERS AFTER EXIT FOR THE AFDC & WORK 1ST SEP 96 COHORTS
 FOUR QUARTERS AFTER EXIT FOR THE JUNE 97 & JUNE 98 COHORTS

(Cases With Earnings Reported)

QUARTERLY EARNINGS	AFDC COHORT FEB 95	WORK FIRST COHORT SEP 96	WORK FIRST COHORT JUN 97	WORK FIRST COHORT JUN 98
\$1 to \$999	17.4%	21.4%	23.3%	28.1%
\$1,000 to \$1,999	15.0%	16.1%	19.3%	21.5%
\$2,000 to \$2,999	16.5%	16.8%	20.7%	19.1%
\$3,000 to \$3,999	18.1%	17.1%	15.7%	14.7%
\$4,000 to \$4,999	13.9%	12.3%	10.1%	8.8%
\$5,000 and Over	19.0%	16.4%	10.9%	7.8%
TOTAL	100.0% (N=4028)	100.0% (N=3570)	100.0% (N=4152)	100.0% (N=3258)

Exhibit V-10

QUARTERLY EARNINGS IN THE FOURTH QUARTER AFTER EXIT

(Cases With Earnings Reported)

QUARTERLY EARNINGS	AFDC COHORT FEB 95	WORK FIRST COHORT SEP 96	WORK FIRST COHORT JUN 97	WORK FIRST COHORT JUN 98
\$1 to \$999	24.7%	23.5%	23.3%	28.1%
\$1,000 to \$1,999	20.9%	20.6%	19.3%	21.5%
\$2,000 to \$2,999	22.6%	22.2%	20.7%	19.1%
\$3,000 to \$3,999	16.9%	15.3%	15.7%	14.7%
\$4,000 to \$4,999	8.1%	9.1%	10.1%	8.8%
\$5,000 and Over	6.8%	9.4%	10.9%	7.8%
TOTAL	100.0% (N=3862)	100.0% (N=4008)	100.0% (N=4152)	100.0% (N=3258)

D. FOOD STAMP RECEIPT

Information from the administrative information system used by the Food Stamp program is included in the longitudinal database used for this study. *Exhibit V-11: Food Stamp Participation Rates Among the Exit Cohorts* presents data on Food Stamp receipt among the exit cohorts at different annual intervals after leaving welfare.

The data indicate that, one year after leaving welfare, Food Stamp participation was higher among families in the June 1997 exit cohort (38.2 percent) and the June 1998 exit cohort (39.7 percent) than in the original two cohorts. However, among the June 1997 exit cohort, Food Stamp participation after two years was about the same as for the earlier cohorts. Three years after leaving welfare, a slightly higher percentage of families in the September 1996 exit cohort were receiving Food Stamps than families in the AFDC exit cohort.

Exhibit V-11
FOOD STAMP PARTICIPATION AMONG THE
EXIT COHORTS AFTER LEAVING WELFARE
(NUMBER AND PERCENTAGE RECEIVING FOOD STAMPS)

FOLLOW-UP PERIOD	AFDC COHORT FEB 95	WORK FIRST COHORT SEP 96	WORK FIRST COHORT JUN 97	WORK FIRST COHORT JUN 98
12 Months After Exit	2394 (33.2%)	2453 (32.6%)	2763 (38.2%)	2519 (39.7%)
24 Months After Exit	2121 (29.4%)	2183 (29.0%)	2296 (31.7%)	
36 Months After Exit	2013 (27.9%)	2345 (31.1%)		
48 Months After Exit	1725 (23.9%)			
TOTAL COHORT	7217 (100.0%)	7531 (100.0%)	7236 (100.0%)	6349 (100.0%)