Chapter Four
Results

This chapter presents record linkage results for FSP and WIC participants. The match rates are estimates of multiple program participation. Results are described in terms of the percent of WIC participants also participating in FSP, and the percent of FSP participants also participating in WIC. Rates of multiple program participation are presented for the December 2002 active caseload (contemporaneous participation) and for the three-year caseload (exposure). In the latter case, the timing of participation across programs is described.

In addition to the descriptive account of multiple program participation, three other analyses describe participation dynamics: WIC participation by siblings in FSP households; multiple program participation rates for January birth cohorts; and multivariate analyses of the characteristics associated with multiple program participation. The final section of this chapter compares probabilistic match results to simpler methods of merging FSP and WIC data to assess the relative accuracy of those methods.

Record Linkage Results for WIC Participants

Table 17 presents rates of contemporaneous multiple program participation for WIC participants active in December 2002 (i.e., the percent of WIC participants also participating in FSP in December). To put the results into context, the first three columns of the table show the total number of WIC participants in December, the percent with income at or below 130 percent of poverty at certification, and the percent that reported participation in the FSP at certification.[56] Match results are shown in columns 4 to 6. Column 4 shows the overall match results for the entire December 2002 WIC caseload; columns 5 and 6 show match results within the subgroups that did and did not report FSP participation when enrolling in WIC.

The overall percent of WIC participants matched to the FSP files (column 4) was 28 percent in Florida, 26 percent in Iowa, and 45 percent in Kentucky. The match rates vary slightly across participant category within States, with children having the highest match rate in all States.

Match rates, in the range of 26 to 45 percent across States, are significantly lower than the percent of WIC participants with income below 130 percent of poverty at certification (77 to 83 percent). This difference is due to at least three factors. First, WIC participants' income may change after WIC certification making them ineligible for FSP; second, WIC participants with income less than 130 percent of poverty may be ineligible for FSP due to FSP resource limits or non-financial FSP eligibility criteria (citizenship, residency, and immigration status); and third, WIC participants eligible for FSP may choose not to participate.

Match rates in all States are higher than the percent of WIC participants reporting FSP participation to the WIC program. The difference is 8 percentage points in Florida, 4 percentage points in Iowa, and over 20 percentage points in Kentucky. (The difference in Florida is disproportionately due to

[56] Income at or below 130% of poverty and adjunct eligibility status were measured at certification and may not reflect status in December 2002.

Table 17—Record linkage results for WIC participants, December 2002

	Active WIC caseload in December 2002			Percent of WIC caseload matched to FSP		
	Number participants	Percent income ≤130% poverty[1]	Percent reported FSP to WIC	Percent of total	Percent matched among those reporting FSP	Percent matched among those not reporting FSP
Florida						
Total WIC	403,477	82.84	20.06	28.32	73.41	14.04
Women						
Age 18 and under	11,467	88.57	21.39	24.59	67.43	10.06
Age 19-34	78,028	81.60	18.70	21.83	70.70	8.03
Age 35 and over	9,111	81.25	14.26	16.48	72.13	5.31
Total	98,606	82.38	18.60	21.65	70.36	8.00
Infants	112,352	82.77	3.78	23.55	59.07	21.89
Children						
Age 1	72,874	82.34	27.71	32.36	74.09	11.48
Age 2	50,772	83.14	30.94	35.18	76.17	11.43
Age 3	42,064	83.43	32.25	36.11	76.72	11.46
Age 4	26,809	84.70	33.17	36.65	75.09	10.49
Total	192,519	83.12	30.31	34.53	75.42	11.33
Iowa						
Total WIC	70,239	76.84	22.74	26.46	66.07	14.78
Women						
Age 18 and under	1,995	84.89	14.74	24.62	63.94	17.81
Age 19-34	13,965	76.23	18.75	25.88	69.49	15.79
Age 35 and over	1,025	74.00	14.34	20.79	69.38	12.53
Total	16,985	77.12	18.02	25.42	68.95	15.83
Infants	17,227	78.39	19.46	21.96	54.73	14.04
Children						
Age 1	13,404	75.50	25.04	27.21	65.57	14.40
Age 2	9,115	76.52	27.45	30.92	71.78	15.47
Age 3	8,084	75.64	27.57	29.53	69.45	14.31
Age 4	5,424	76.63	27.12	29.96	72.20	14.24
Total	36,027	75.96	26.53	29.08	69.12	14.62
Kentucky						
Total WIC	131,174	83.04	22.26	45.09	78.24	35.60
Women						
Age 18 and under	4,490	88.68	21.18	43.34	73.29	35.29
Age 19-34	26,750	81.55	21.71	42.06	78.55	31.94
Age 35 and over	1,498	77.96	21.03	38.32	83.49	26.29
Total	32,738	82.28	21.61	42.06	78.06	32.14
Infants	33,965	84.04	14.59	38.24	69.67	32.87
Children						
Age 1	24,104	82.50	22.52	47.59	79.24	38.39
Age 2	16,395	82.76	27.03	50.95	81.58	39.60
Age 3	13,823	83.93	29.52	52.35	81.99	39.93
Age 4	10,149	83.41	31.78	52.52	80.81	39.34
Total	64,471	83.04	26.62	50.24	80.79	39.15

[1] Percent is calculated over persons with nonmissing income, plus persons with missing income and reported participation in FSP or TANF; the latter are assumed to have income below this cutoff.

infants.) This difference may be due to two factors: a) the timing of the data and b) underreporting of FSP participation to the WIC program. Timing problems are due to the fact that WIC participants report FSP participation at certification, but December WIC participants were certified during the prior 6 months (or one year for infants) and FSP participation status can change over time with WIC participants going on or off FSP. On the other hand, FSP participation may be underreported to the WIC program. As noted earlier, WIC administrative data provide a lower bound estimate of FSP participation. WIC applicants who participate in multiple adjunct programs need to verify participation in only one program to establish WIC eligibility and there may be limits on the number of adjunct programs that local WIC staff can enter in WIC computer systems. [57]

Across States, between 66 and 78 percent of WIC participants reporting FSP participation at certification were still participating in December (column 5). Among WIC participants with no reported FSP at certification, 14 percent in Florida, 15 percent in Iowa, and 36 percent in Kentucky were receiving FSP in December (column 6).

The Kentucky match results indicate a relatively large percentage of WIC participants either enroll in FSP after WIC certification or underreport FSP participation to the WIC program. The timing of enrollment in FSP relative to WIC could not be examined because Kentucky FSP data were available only for December 2002. The hypothesis that FSP participation is underreported to WIC was investigated by examining the match rate for WIC participants *certified* in December 2002 (a subset of those active in December). Of those certified in December, 22 percent reported FSP participation to the WIC program and 44 percent were matched to the FSP data for December 2002 (not shown in table). Kentucky WIC participants underreport FSP participation to the WIC program, although we do not have data to explain why they underreport.

Table 18 presents match results for the *three-year period* for Florida and Iowa (Kentucky FSP did not provide data for the three-year period). The results in this table describe exposure of WIC participants to FSP during the three-year period and the timing of FSP participation relative to WIC certification. To examine the timing of participation, the unit of observation in this table is WIC certifications, not WIC participants. A person may have multiple WIC certifications.

The first three columns of table 18 are similar to table 17, showing the total number of WIC certifications, the percent with income below 130 percent of poverty, and the percent with FSP reported to the WIC program. Column 4 shows that over 50 percent of WIC participants in Florida and Iowa participated in FSP sometime during the three-year period. This compares to 26-28 percent that participated in FSP in a single month (table 17). These results indicate that WIC participants may have income that fluctuates around the FSP income threshold, or that WIC applicants enroll in FSP as a result of WIC referrals. To provide greater detail on the dynamics of multiple program participation, the last three columns of table 18 describe the timing of FSP participation relative to WIC certification dates.

Except for infants in Iowa, there is a remarkable correspondence between the percent of WIC certifications with reported FSP participation, and the percent matched to the FSP file and active in FSP during the WIC certification month. Overall, 24 percent of Florida WIC certifications reported FSP participation and 25 percent were found to be active in FSP during the WIC certification month.

[57] Among the three States, Kentucky WIC participants were least likely to report more than one adjunct program (18.6% compared with 23% in Iowa and 24.7% in Florida).

Table 18—Record linkage results for WIC certifications during 3-year period, January 2000 - December 2002

	Number WIC certifications	Characteristics		Percent of WIC certifications matched to FSP			
		Percent income ≤130% poverty[1]	Percent reported FSP to WIC	Percent EVER received FSP	Percent matched and active in FSP:[2]		
					In WIC certif. month	During WIC certif. period	Before or after WIC certif. period
Florida							
Total WIC	1,933,091	81.77	24.22	52.32	24.86	12.98	14.48
Women							
Age 18 and under	93,285	85.59	23.58	52.51	23.59	11.56	17.37
Age 19-34	432,561	80.53	21.45	43.26	21.16	9.21	12.89
Age 35 and over	50,167	80.78	16.30	32.51	16.16	6.55	9.79
Total	576,013	81.37	21.35	43.82	21.12	9.36	13.35
Infants	358,872	81.85	13.44	44.56	10.95	27.85	5.76
Children							
Age 1	388,404	81.02	27.84	57.76	30.08	10.18	17.50
Age 2	254,128	82.04	30.60	61.73	32.62	10.04	19.07
Age 3	207,856	82.51	30.92	61.23	33.35	9.71	18.18
Age 4	147,818	83.52	31.72	61.31	34.26	8.02	19.03
Total	998,206	81.96	29.76	60.02	32.03	9.73	18.27
Iowa							
Total WIC	352,903	74.17	22.30	54.65	22.34	17.46	14.85
Women							
Age 18 and under	11,816	85.66	14.48	58.88	18.21	20.08	20.58
Age 19-34	76,682	76.51	18.40	51.37	21.33	15.97	14.06
Age 35 and over	5,411	73.66	14.06	41.21	18.59	11.53	11.09
Total	93,909	77.50	17.65	51.73	20.78	16.23	14.71
Infants	53,015	74.08	18.94	46.36	4.53	36.23	5.60
Children							
Age 1	74,475	72.28	23.93	56.37	26.21	13.90	16.26
Age 2	50,912	72.42	26.03	59.32	28.26	13.75	17.31
Age 3	44,592	72.73	26.20	59.39	28.48	13.26	17.65
Age 4	36,000	73.79	25.83	58.41	28.63	10.83	18.95
Total	205,979	72.67	25.27	58.11	27.63	13.19	17.29

Note: Kentucky is not included in the table because data for the three-year period was not available from Kentucky FSP.

1 Percent is calculated over persons with nonmissing income, plus persons with missing income and reported participation in FSP or TANF; the latter are assumed to have income below this cutoff.

2 Categories are mutually exclusive.

For Iowa, the percents nearly match exactly (22 percent). There appears to be slight underreporting of FSP participation to the WIC program for women (Florida only) and children (both States), and overreporting for infants (more severe in Iowa). The lower match rates for infants may occur because infant certification in WIC may incorporate information about the mother's FSP participation, while actual enrollment of an infant in FSP may occur with a lag. But we have no information for why this may occur more frequently in Iowa than Florida.

In Florida and Iowa, respectively, 13 and 17 percent of WIC certifications were of persons who enrolled in FSP after enrolling in WIC but during the WIC certification period, indicating the possible role of WIC referral services. An additional 14 percent of WIC certifications in each State were of persons who participated in FSP either before or after, but not during, the WIC certification period.

Altogether, for columns 7 and 8, more than one-fourth of all WIC certifications were of persons who matched to the FSP file but were not active in FSP during the WIC certification month.

Table 19 shows the match results for WIC certifications, broken out separately by FSP participation reported to WIC at the time of WIC certification. This table shows that, despite the remarkable correspondence in table 18 between reported FSP participation and match rates overall, there is some disagreement within subgroups of WIC participants that did and did not report FSP to the WIC program. Only 71-72 percent of WIC participants reporting FSP participation were found active in FSP during the WIC certification month, and nearly 10 percent of those with no reported FSP participation were found active in FSP during the WIC certification month.[58]

Record Linkage Results for FSP Participants

Record linkage results for December 2002 FSP participants are shown in table 20. These results show that, in all three States, approximately 30 percent of FSP women of childbearing age, infants, and children under age 5 (W-I-C) were matched to the WIC caseload in December 2002. All women of childbearing age are included in this analysis because pregnant women cannot be identified in the FSP data.

Match rates for FSP participants vary by participant category in a consistent way across States. The match rates for FSP women with no infant in the household are 6 to 7 percent; for postpartum women within 6 months of childbirth, the match rates are 79 to 88 percent; for postpartum women 7 to 12 months after childbirth, the match rates are 24 to 35 percent; 84 to 94 percent of FSP infants receive WIC; and 51 to 57 percent of FSP children receive WIC. The percent of FSP children participating in WIC at a point in time declines with age, consistent with evidence of an overall decline in WIC participation with age from WIC administrative data (Bartlett, et al., 2002).

The relative timing of participation in FSP and WIC is shown in table 21. This table examines the subset of FSP participants who were active in FSP anytime during the seven months from March to September 2001 (middle of the sample period), with age measured as of June 2001. Each person in this sample is characterized by their history of participation in FSP and WIC over the full three-year period, January 2000 to December 2002. The sample restriction alleviates the effects of left-truncation and right-truncation because each FSP participant in the sample (March – September) has a 15-month participation history prior to March and a 15-month participation history following September. The impact of left-truncation is eliminated for FSP women with infants because they are observed prior to the infant's birth date. Left-truncation is also eliminated for infants and children age 1-year-old because their participation histories are observed since birth. Left-truncation is not eliminated for older children.[59]

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[58] Analysis of participation dynamics across program is inherently imprecise. WIC data identify dates of enrollment, while FSP data identify months of benefit receipt but not the month in which individuals enroll for benefits. This difference should matter most for FSP participants enrolling toward the end of one month and receiving initial benefits the next month. Results presented in table 19 were not changed substantially by relaxing the definition of column 6 to be the "percent of WIC participants matched and active in FSP in WIC certification month or month after."

[59] FSP children who were 2-years-old in June 2001 were 7 months old in January 2000. The percent of 2-year-olds who ever participated in WIC may be underestimated because data are not available for from birth to age 7 months.

Table 19—Record linkage results for WIC certifications during 3-year period, by report of FSP to WIC program

	WIC certifications with reported FSP participation				WIC certifications with no reported FSP participation			
	Number WIC certifications	Percent matched and active in FSP:[1]			Number WIC certifications	Percent matched and active in FSP:[1]		
		In WIC certif. month	During WIC certif. period	Before or after WIC certif. period		In WIC certif. month	During WIC certif. period	Before or after WIC certif. period
Florida								
Total WIC	468,229	71.96	17.92	8.86	1,464,862	9.81	11.40	16.27
Women								
Age 18 and under	21,998	72.73	17.89	7.46	71,287	8.42	9.60	20.43
Age 19-34	92,784	75.54	15.59	6.86	339,777	6.31	7.47	14.54
Age 35 and over	8,175	76.39	14.58	5.72	41,992	4.44	4.99	10.59
Total	122,957	75.10	15.94	6.89	453,056	6.47	7.57	15.10
Infants	48,230	28.43	57.03	11.39	310,642	8.24	23.32	4.88
Children								
Age 1	108,126	73.90	14.02	11.41	280,278	13.18	8.70	19.85
Age 2	77,758	75.64	13.20	10.67	176,370	13.65	8.65	22.77
Age 3	64,269	78.63	12.77	8.01	143,587	13.08	8.34	22.73
Age 4	46,889	88.79	6.82	3.68	100,929	8.92	8.58	26.17
Total	297,042	77.73	12.40	9.26	701,164	12.66	8.59	22.08
Iowa								
Total WIC	78,680	70.80	21.82	3.73	274,223	8.43	16.21	18.04
Women								
Age 18 and under	1,711	70.25	21.10	4.27	10,105	9.40	19.91	23.34
Age 19-34	14,107	76.48	16.72	2.89	62,575	8.90	15.81	16.58
Age 35 and over	761	75.16	17.08	2.76	4,650	9.33	10.62	12.45
Total	16,579	75.78	17.18	3.02	77,330	8.99	16.03	17.22
Infants	10,042	15.46	75.78	0.94	42,973	1.97	26.99	6.69
Children								
Age 1	17,823	78.85	13.61	4.44	56,652	9.65	14.00	19.98
Age 2	13,252	79.81	13.13	4.22	37,660	10.12	13.97	21.91
Age 3	11,684	80.15	12.80	4.55	32,908	10.13	13.43	22.30
Age 4	9,300	81.67	11.25	4.96	26,700	10.16	10.68	23.82
Total	52,059	79.89	12.88	4.50	153,920	9.96	13.29	21.61

[1] Categories are mutually exclusive.

Table 21 shows that a significant number of FSP women with infants never participated in WIC – 17 percent in Florida and 9 percent in Iowa. One-third of FSP women with infants participated in the FSP before, during, and after WIC enrollment (in both Florida and Iowa). Nearly all FSP women participating in WIC did so concurrently with FSP for at least some period of time. FSP participation preceded WIC enrollment for over 30 percent of women in both States; WIC enrollment preceded FSP enrollment for 14 percent of women in Florida and 19 percent in Iowa.

Only 4 percent of Iowa FSP infants and 11 percent of Florida FSP infants were never in WIC during the three-year period. The majority of FSP infants received FSP while in WIC but not before or after

Table 20—Record linkage results for FSP participants, December 2002

	Florida		Iowa		Kentucky	
	Number FSP participants	Percent matched to WIC	Number FSP participants	Percent matched to WIC	Number FSP participants	Percent matched to WIC
Total W-I-C	388,817	29.4	60,345	31.0	200,013	29.6
Women with no infant in household[1]	211,875	6.8	33,138	5.9	117,515	5.7
Women up to 6 months postpartum	5,876	78.7	1,849	85.5	5,691	88.0
Women 7-12 months postpartum	9,805	24.1	2,228	35.3	6,053	33.8
Total women	227,556	9.4	37,215	11.6	129,259	10.7
Infants	29,953	87.7	4,655	83.8	14,016	94.3
Children						
Age 1	34,030	60.3	4,782	64.2	14,384	68.7
Age 2	33,712	52.2	4,763	60.1	14,526	57.1
Age 3	32,066	48.2	4,660	53.1	14,149	51.8
Age 4	31,500	41.7	4,270	48.2	13,679	48.8
Total children	131,308	50.8	18,475	56.6	56,738	56.7

[1] Includes women of childbearing age who never gave birth, were pregnant but did not have live birth, or are currently pregnant.

Table 21—Timing of program participation for women, infants, and children active in FSP during March 2001—September 2001[1]

	FSP Participant Category[2]						
	Total	Women with infants[3]	Infants	Children Age 1	Children Age 2	Children Age 3	Children Age 4
Florida							
Number FSP participants	312,046	62,247	52,891	43,295	40,725	47,576	65,312
Timing of FSP relative to WIC[4]							
Percent							
Never received WIC (u)	29.2	17.0	10.8	15.8	26.2	38.3	59.9
FSP before WIC	0.8	0.9	0.8	1.0	1.4	0.8	0.1
FSP before and during WIC	13.8	14.0	5.9	24.1	29.3	15.6	2.1
FSP before, during, and after WIC	18.9	33.8	2.2	10.6	15.2	24.2	22.2
FSP during WIC (u)	20.8	9.0	60.3	30.7	18.8	10.4	2.1
FSP during and after WIC (u)	14.3	20.2	19.6	15.5	7.2	9.2	12.0
FSP after WIC (u)	1.6	4.0	0.3	1.8	1.4	0.9	1.0
Iowa							
Number FSP participants	49,719	12,631	7,842	6,417	6,335	7,066	9,428
Timing of FSP relative to WIC[4]							
Percent							
Never received WIC (u)	18.1	9.2	4.0	9.9	16.5	26.1	42.5
FSP before WIC	0.6	0.2	0.3	1.0	1.2	1.1	0.1
FSP before and during WIC	13.6	15.1	2.4	23.2	29.8	15.2	2.4
FSP before, during, and after WIC	20.8	32.4	1.1	10.1	14.2	27.1	28.6
FSP during WIC (u)	25.1	11.4	71.1	37.7	26.2	15.1	3.3
FSP during and after WIC (u)	19.2	26.6	20.8	16.2	10.2	13.6	20.3
FSP after WIC (u)	1.9	4.1	0.1	1.5	1.3	1.2	1.5

[1] The full data extract period (January 2000—December 2002) was used to determine the history of participation in FSP and WIC for the sample of FSP participants shown in this table.
[2] Age is measured as of June 2001.
[3] Women with infants in their FSP case and having 'relation-to-head' codes that are compatible with a mother-infant relationship (e.g., spouse -daughter, sister-niece, daughter-granddaughter); restricted to mother-infant pairs with infant date of birth after June 2000 and before July 2002.
[4] Categories are mutually exclusive.
(u) Estimates for children age 2-4 are underestimated due to left-truncation.

(60 percent in Florida and 71 percent in Iowa). An additional 19-20 percent of infants received FSP and WIC concurrently and continued to receive FSP after WIC participation ended.

The cohort of 1-year-old FSP participants is observed in the data since birth. Their participation histories are not impacted by left-truncation, yet they show very different multiple program participation dynamics, when compared to infants. The percent of FSP 1-year-olds never participating in WIC is 10 percent in Iowa and 16 percent in Florida (compared with 4 and 11 percent of infants). Only half as many 1-year-olds, compared to infants, received FSP while in WIC but not before or after (31 and 38 percent vs. 60 and 71 percent). About one-fourth of 1-year-olds have FSP participation preceding WIC participation (compared with only 3 and 6 percent of infants). The difference in participation dynamics for one-year-olds and infants reflects that fact that some one-year-olds were not eligible for FSP or WIC, or did not participate in programs for which they were eligible, during their infant year.

Cohorts of 2-, 3-, and 4-year-old FSP participants, shown in table 21, have incomplete participation histories due to left-truncation. The results for these age groups should be viewed with caution. Results show that the percent of FSP children never receiving WIC increases with age. This reflects both the incomplete participation histories and the decline in WIC participation with age (Bartlett, et al., 2002). For example, 4-year-old FSP participants are not observed prior to age 2½, but may have received WIC as infants. On the other hand, some 4-year-old FSP participants are in households experiencing a recent decline in income and never received WIC and, at age 4, are less likely to receive WIC than younger cohorts. Despite the limitations of data truncation, the data show that, among FSP children receiving WIC at some point in the three-year period, nearly all received FSP and WIC concurrently for some period of time. Across all age groups, in both States, fewer than 3 percent of FSP children received FSP only before WIC or only after WIC.

Timing of WIC participation by FSP mothers

Table 22 describes the timing of WIC participation for FSP women with infants born during the three-year period. Most FSP mothers (78 percent in Florida and 85 percent in Iowa) participated in WIC during the three-year period. Among Florida FSP mothers participating in WIC, 57 percent participated in WIC during both pregnancy and postpartum, 14 percent participated in WIC during pregnancy only, 26 percent participated postpartum only, and 3 percent did not participate in WIC during the last live birth. Iowa FSP mothers were more likely to participate in WIC during both pregnancy and postpartum, compared with Florida. Only 4 percent of Iowa mothers participated in WIC during pregnancy without postpartum participation, compared with 14 percent of Florida mothers.

WIC participation by FSP siblings

Throughout this report, multiple program participation is examined at the level of the individual program participant. Another way to look at program participation is from the family's perspective. FSP and WIC programs differ, however, in that FSP enrolls households while WIC enrolls individuals. FSP eligibility is driven primarily by financial considerations while WIC has categorical and nutritional risk criteria as well. As a result, families receiving benefits from both programs may not have all age-eligible children enrolled in WIC.

Table 22—Timing of WIC participation for FSP mothers[1]

	Florida	Iowa
Number women with infants	112,313	22,362
Percent ever participated in WIC	78.25	85.29
Of those ever in WIC, percent by timing of WIC participation during last live birth		
During pregnancy and postpartum	56.65	65.34
During pregnancy only	14.39	3.67
Postpartum only	25.60	28.34
No WIC participation with most recent child	3.36	2.65

1 Sample is limited to non-complex households, defined as FSP households with no individuals who change case number (i.e., household) during the three-year period.

Table 23 shows the WIC participation of FSP siblings during the three-year sample period. The number of children under age five is the count of all children in a household who were under age five at any time in the three-year period.[60] The main pattern observed in these data is that WIC participation by *any* children in a family is more likely as the number of children increases.

Florida FSP households with one child under age 5 have a 57 percent WIC participation rate; households with two, three, and four children have 74 percent, 84 percent, and 89 percent WIC participation rates, respectively.[61] Iowa FSP households with one child under age 5 have a 66 percent WIC participation rate; households with two, three, and four children have, respectively, 82 percent, 90 percent, and 93 percent WIC participation rates. As the number of siblings in a family increases from one to four, the probability that *all* siblings under age 5 participate in WIC during a three-year period declines from 57 percent to 33 percent in Florida and from 66 percent to 55 percent in Iowa.[62] As the number of siblings increase, however, the range of ages also increases and, as shown earlier, WIC participation declines with age. Part of this decline is also due to right-truncation of the data and would not be observed in data covering a longer time period.

Multiple Program Participation by January Birth Cohorts

This study examined three-year snapshots of FSP and WIC caseloads. Within these caseloads, rates of multiple program participation for children decline with age. To present this "age effect" clearly, table 24 shows rates of program participation for cohorts of January births in each year, as a percent of all births. Included in this analysis are all children in the FSP and WIC files with January birth dates. Cohorts are shown in columns labeled infants to 4-year-olds, according to age in January 2000.

60 A household with 2 siblings under age five may include one child who turns 5-years-old during the sample period and another who is born after the first turns 5.

61 Derived by adding figures in a column, excluding the row for zero children matched to WIC data.

62 WIC enrollment of siblings is not necessarily contemporaneous.

Table 23—WIC participation of FSP siblings[1]

	Number of children under age five in FSP household			
	One	Two	Three	Four
Florida				
FSP households with children under age five, by number of children under age five				
Number	175,182	80,816	23,191	6,261
Percent	61.4	28.3	8.1	2.2
Distribution of households by number of children matched to WIC data[2]				
Zero	43.4	26.2	16.2	10.8
One	56.6	23.4	12.8	8.9
Two	–	50.4	30.4	17.5
Three	–	–	40.6	30.1
Four	–	–	–	32.6
Iowa				
FSP households with children under age five, by number of children under age five				
Number	26,511	13,769	4,019	784
Percent	58.8	30.5	8.9	1.7
Distribution of households by number of children matched to WIC data[2]				
Zero	34.0	18.0	9.8	7.4
One	66.0	16.3	5.5	3.7
Two	–	65.7	24.1	8.2
Three	–	–	60.5	26.3
Four	–	–	–	54.5

1 Sample is limited to non-complex households, defined as FSP households with no individuals who change case number (i.e., household) during the three-year period.
2 WIC participation of FSP children is observed only during the three-year period from January 2000 - December 2002. As a result, percent of FSP children ever participating in WIC is underestimated.
– Not applicable.

The rate of participation in FSP or WIC, for January birth cohorts as a percent of all births, declines from 69 percent for infants to 39 percent for 4-year-olds in Florida; and from 58 percent for infants to 33 percent for 4-year-olds in Iowa. The percent *ever* participating is underestimated, however, because the three-year-snapshot provides a complete participation history only for the cohort of infants in January 2000.

The real decline in program participation with age is seen in the change in participation rates *within* cohort over time. For example, Florida infants had a rate of participation in *FSP or WIC* of 59 percent during 2000, declining to 47 percent during 2001, and falling further to 42 percent during 2002. In other words, participation declined 13 percentage points between birth and 1-year of age, and declined 5 percentage points between age 1 and 2. The decline in participation from age 2 to 3 years old is observed for the 1-year-olds cohort from 2001 to 2002 (column 2), or the 2-year-olds cohort from 2000 to 2001 (column 3). These cohorts both had a decline in *FSP or WIC* participation from age 2 to age 3 of less than 2 percentage points.[63]

[63] The comparable change in WIC participation rates from age 2- to 3-years-old for different FSP cohorts indicates only a small "year effect" during the 2000-2002 time period. The "year effect" is the effect of economic factors that increase or decrease program participation over time. Comparison across columns, on the diagonals, shows only a small "year effect" across all cohorts.

Table 24—Participation in FSP and WIC for January birth cohorts

	Florida					Iowa				
	Age in January 2000									
	Infants	1-year-olds	2-year-olds	3-year-olds	4-year-olds	Infants	1-year-olds	2-year-olds	3-year-olds	4-year-olds
January births in the State[1]	17,010	16,419	16,311	16,032	15,783	3,189	3,130	3,119	3,055	3,095
In FSP or WIC ever during 2000-2002										
Number	11,742	9,488	8,466	7,446	6,085	1,837	1,580	1,367	1,157	1,008
Percent of all births in the State	69.0	57.8	51.9	46.4	38.6	57.6	50.5	43.8	37.9	32.6
Participation rates by year										
Percent in FSP*or* WIC										
2000	59.3	45.4	39.2	36.2	30.2	49.6	40.2	33.1	30.0	27.2
2001	46.5	39.6	37.5	33.7	22.3	41.2	35.4	31.3	27.8	16.0
2002	41.6	38.4	36.0	24.6	22.5	37.0	34.5	30.4	18.3	16.0
Percent in FSP*and* WIC										
2000	24.1	16.6	13.9	11.5	8.8	19.3	16.4	11.8	10.4	9.0
2001	17.8	13.8	12.9	9.7	–	16.6	14.0	12.3	9.3	–
2002	15.0	13.3	11.3	–	–	14.5	12.6	10.4	–	–
Percent in FSP only										
2000	4.6	10.4	12.2	14.0	14.6	1.4	4.2	6.7	7.0	7.6
2001	8.4	11.0	12.0	14.5	21.9	4.9	6.7	6.4	7.9	15.9
2002	11.6	12.0	13.9	23.9	22.5	7.5	8.8	9.0	18.1	16.0
Percent in WIC only										
2000	30.5	18.5	13.1	10.6	6.7	28.9	19.6	14.6	12.6	10.6
2001	20.3	14.8	12.6	9.6	–	19.7	14.6	12.6	10.6	–
2002	15.0	13.0	10.8	–	–	15.0	13.2	10.9	–	–

[1] Source: Centers for Disease Control and Prevention, *National Vital Statistics Reports* (various issues). Total annual births is divided by 12 to estimate births in January. The denominator for all percentages is the total number of children in the birth cohort.

– Not applicable.

Rates of multiple program participation are shown as the "percent in FSP *and* WIC." Multiple program participation for Florida and Iowa children declines less with age than rates of participation in "FSP or WIC". (Changes in the percent of "FSP or WIC" reflect changes in three groups: FSP and WIC; FSP-only; and WIC-only.) Between birth and age one, most of the 13-percentage-point decline in overall participation for Florida children is due to a 10-percentage-point decline in children participating in WIC only; an additional 6 percentage point decline is offset by a 4-percentage-point increase in children participating in FSP only.

After age 1-year, FSP-only participation increases slightly until age 4 and then there is a large jump in FSP-only participation from age 4 to age 5, concurrent with the loss of WIC eligibility. (At age 5, children change categories from *FSP and WIC* to *FSP only*.) The increase in FSP-only participation from age 4 to 5 is 7 percentage points for the Florida cohort of 4-year-olds (2000 to 2001) and 9 percentage points for the Florida cohort of 3-year-olds (2001 to 2002). Increases in FSP-only participation of 10 and 8 percentage points are observed for the Iowa 4-year-old and 3-year-old cohorts, respectively.

Multivariate Analyses of Characteristics Associated With Multiple Program Participation

All FSP infants and children are income-eligible for WIC. As seen in previous tables, over 80 percent of FSP infants participate in WIC but only 50 to 60 percent of FSP children participate in WIC. This section examines the characteristics associated with WIC participation for infants and children participating in FSP in December 2002.

Table 25 shows descriptive statistics for FSP infants and children, as measured from FSP administrative data. Participant characteristics are age, race, relationship to household head, and receipt of TANF and Medicaid. Household characteristics include the number of adults, number of children under age five, type of household head, income as a percent of the poverty level, and residence in a metropolitan county.[64] Race categories differ somewhat across States; Florida and Kentucky FSP data did not include information on Medicaid enrollment; and Florida data did not include household income.

In the three States, the average age of FSP infants in December 2002 was 6-7 months and FSP children were an average of 36 months. The race distributions of infants and of children are comparable within State, but there are large differences across States. Over 40 percent of Florida FSP infants and children are black, 28 percent are white, and 27 percent are Hispanic. In contrast, two-thirds of Iowa FSP participants are white and over 5 percent have race coded as "unknown'.[65] Kentucky FSP participants are 78 percent white and 18-19 percent black, with less than 3 percent Hispanic.

Most FSP infants and children are the sons or daughters of the FSP household head; grandchildren, however, are not uncommon and "other children" include foster children, non-relatives, siblings, and nieces/nephews. The percent of FSP infants and children also receiving TANF varies by State: from about one-fifth in Florida to about one-half in Iowa and about 90 percent in Kentucky.

[64] A "metro" county is a county located within a Metropolitan Statistical Area (MSA).

[65] The unknown race category originally included 45 percent of infants and 14 percent of children; mother's race (when available) was used to recode unknown race of children.

Table 25—Mean characteristics of FSP infants and children, December 2002

	Infants			Children		
	Florida	Iowa	Kentucky	Florida	Iowa	Kentucky
Number observations	29,978	4,655	14,016	131,984	18,485	56,832
Percent matched to WIC file	87.8	83.8	94.3	50.8	56.6	56.6
Characteristics of child						
Age in months	7.2	6.6	6.4	36.0	35.9	36.2
Race						
White	27.8	65.5	78.5	27.3	69.6	78.0
Asian	0.4	0.6	0.3	0.3	0.8	0.3
Black	42.8	14.5	18.1	45.5	14.7	19.4
Hispanic	26.9	6.9	2.8	24.9	7.1	2.1
American Indian	–	0.7	0.0	–	0.8	0.0
Other race	2.1	–	–	1.9	–	–
Unknown race	–	9.4	0.2	–	6.0	0.2
Relation to HH head						
Son/daughter	86.4	96.0	92.6	88.5	97.0	94.3
Grandchild	7.4	3.4	5.7	4.8	2.1	3.6
Other child	6.1	0.6	1.7	6.7	0.8	2.1
Recieving TANF	21.6	51.6	92.7	18.1	47.0	88.4
Enrolled in Medicaid	–	96.1	–	–	94.7	–
Characteristics of household						
# Adults	1.0	1.3	1.4	1.0	1.3	1.4
# Children under 5	1.6	1.6	1.6	1.6	1.6	1.5
Type of household head						
Female head, unmarried	61.5	73.3	67.4	64.0	71.5	67.5
Married head	14.0	21.5	28.0	14.4	22.6	27.8
Male head, unmarried	4.8	2.2	2.2	5.4	2.9	3.0
No adults in household	22.1	3.3	2.4	19.0	3.2	1.8
Income as % poverty	–	38.9	45.1	–	43.1	50.2
Resides in Metro county	90.7	53.0	41.6	91.0	51.7	42.1

– Data not available.

The average number of adults in the FSP household ranges from 1.0 in Florida to 1.3 in Iowa and 1.4 in Kentucky. The number of children under age 5 is virtually the same across States (1.6 in all categories except 1.5 for Kentucky children). The household head is characterized as either married, unmarried male or female, or "no adults in household." Married household heads comprise less than 30 percent of FSP households with infants and children in all three States. The percent with married heads varies: 28 percent in Kentucky, 22 percent in Iowa and 14 percent in Florida. FSP households with no adults are more common in Florida (about 20 percent versus about 3 percent in Iowa and about 2 percent in Kentucky). The percent of FSP infants and children residing in metropolitan areas varies from 91 percent in Florida to 53 percent of Iowa and 42 percent in Kentucky.

Table 26 shows the results of multivariate logistic regressions. The dependent variable is the binomial "match" variable denoting whether the FSP participant was enrolled in WIC in December 2002. Logistic regressions were specified without county dummies (Model 1) and with county dummies (Model 2). The county dummies capture any effect that is shared by participants within a county that

is not already captured by other variables included in the regression. Such effects may include differences in local WIC agency funding levels or differences in WIC outreach efforts at the local level. Nearly all Florida local agencies are county agencies; about 75 percent of Kentucky local agencies are county agencies, while 25 percent are local health departments; and local agencies in Iowa include a mix of county health departments and community organizations with jurisdictions that may not coincide with county boundaries.

Logistic regression results are presented in table 26 as odds ratios. An odds ratio greater than one indicates that the variable is positively associated with WIC participation; an odds ratio less than one indicates negative association. The odds ratios are for a one-unit change in continuous variables (e.g., age and poverty). For binomial variables (e.g., race indicators), the odds ratio is the odds of WIC participation for someone with the characteristic compared to someone without.[66]

The model statistics include the log-likelihood, Nagelkerke R-square, and Hosmer-Lemeshow goodness of fit test. The R-square statistics indicate that no more than 15 percent of the variation in WIC participation rates is explained by available variables. R-squares are very low for the infant models without county dummies, largely because participation rates are above 80 percent for infants (i.e., nonparticipation is somewhat rare). The Hosmer-Lemeshow tests have Chi-squares with p values greater than .05 for all models except Florida children (model 1) and Kentucky children (model 2), indicating that the model fits the data at an acceptable level. While explanatory variables are limited by available data, many of these variables attain statistical significance, except in the Iowa infant models.

Results are shown in table 26 separately for infants and children. The infant models did not produce consistent results across States, while the children models provided many consistent results across States. For FSP infants, age in months and TANF participation were positively associated with WIC participation in Florida and Kentucky, but not in Iowa. The Florida data show that residing with a grandparent has a large impact on the odds of WIC participation for FSP infants. Number of adults in the household increases WIC participation in Florida, but number of children under age 5 reduces the likelihood of WIC participation in Florida and Kentucky.

In Florida, black and Hispanic FSP infants were more likely to participate in WIC than white FSP infants (36 and 43 percent more likely, respectively). Black FSP infants were also more likely to be WIC participants in Kentucky. Race was not related to WIC participation among Iowa FSP infants, except the “unknown” race category.

For FSP children, the characteristics related to WIC participation showed consistency across States with the exception of race. Hispanic FSP children were more likely to participate in WIC than white FSP children in Florida and Kentucky (70 percent and 87 percent more likely respectively). Black FSP children were less likely to participate in WIC than white FSP children in Iowa and Kentucky (23 percent and 6 percent less likely, respectively – according to model 2).

For FSP children in all three States, the likelihood of WIC participation declines 2 percent with every month increase in age. The number of adults in the household, number of children under age five,

[66] The odds ratio may be thought of as an approximate relative risk. An odds ratio of 1.2 indicates that WIC participation is 20 percent more likely for a person with the characteristic than one without.

Table 26—Characteristics associated with WIC participation: Odds ratio estimates from logistic regressions

	Infants					
	Florida		Iowa		Kentucky	
	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2
Number observations	29,978	29,978	4,655	4,655	14,016	14,016
Characteristics of child						
Age (months)	1.04 *	1.04 *	1.00	1.00	1.09 *	1.09 *
Race[1]						
Asian	0.66	0.70	0.85	0.78	1.51	1.82
Black	1.20 *	1.36 *	1.17	1.13	1.00	1.31**
Hispanic	1.35 *	1.43 *	0.94	0.79	1.09	1.24
American Indian	–	–	0.86	0.89	–	–
Other race	0.81	0.88	–	–	–	–
Unknown race	–	–	0.47 *	0.53 *	1.03	1.42
Relation to HH head[1]						
Grandchild	1.31 *	1.26 *	0.85	0.90	1.02	1.03
Other child	1.03	1.00	1.71	1.70	0.52 *	0.51 *
Recieving TANF	0.98	1.10**	0.93	0.92	2.72 *	2.71 *
Enrolled in Medicaid	–	–	1.03	1.07	–	–
Characteristics of household						
# Adults	1.16 *	1.17 *	1.20	1.20	1.18	1.14
# Children under 5	0.88 *	0.85 *	0.91	0.91	0.78 *	0.77 *
Type of household head[1]						
Married	0.87 *	0.89	0.87	0.88	1.19	1.12
Male head, unmarried	1.06	1.12	1.02	1.05	0.58 *	0.55 *
No adults in household	1.06	1.11	1.08	1.12	1.09	1.31
Income as % poverty	–	–	1.00	1.00	1.00 *	1.00 *
Resides in Metro county	0.94	–	1.09	–	0.62 *	–
County dummies included	no	yes	no	yes	no	yes
Model statistics						
R-Square	0.01	0.08	0.02	0.06	0.05	0.10
Log Likelihood	-11069.7	-10499.6	-2031.4	-1979.0	-2930.9	-2818.4
Hosmer-Lemeshow goodness of fit test						
Chi-square	7.39	14.92	4.45	6.90	6.61	10.49
P value	0.49	0.06	0.81	0.55	0.58	0.23

[1] Omitted categories are: Race=white, Relation to head=own child, Type of household head=Female head, unmarried.
– Data not available.
* Denotes significance at <.01 level. ** Denotes significance at <.05 level.

married household head, and participation in TANF are positively related to WIC participation.[67] A married household head increases the likelihood of WIC participation for FSP children by 25 to 39 percent across States. In all three States, children in households with no adults are also more likely to participate in WIC than children in female-headed households, but children in no-adult households are rare in Iowa and Kentucky. Residence in a metropolitan area is negatively related to WIC participation in all three States, even though the percent residing in metropolitan areas varies from 42 percent in Kentucky, to about 52 percent in Iowa and 91 percent in Florida.

[67] Removing TANF from the model does not change the estimates on the marital status of the household head.

Table 26—Characteristics associated with WIC participation: Odds ratio estimates from logistic regressions — Continued

	Children					
	Florida		Iowa		Kentucky	
	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2
Number observations	131,984	131,984	18,485	18,485	56,832	56,832
Characteristics of child						
Age (months)	0.98 *	0.98 *	0.98 *	0.98 *	0.98 *	0.98 *
Race[1]						
Asian	1.06	1.21	0.69 *	0.73	1.11	1.53**
Black	0.83 *	0.98	0.77 *	0.77 *	0.79 *	0.94**
Hispanic	1.39 *	1.70 *	1.08	1.14	1.62 *	1.87 *
American Indian	–	–	0.99	0.95	–	–
Other race	0.94	1.09**	–	–	–	–
Unknown race	–	–	0.51 *	0.51 *	0.93	1.21
Relation to HH head[1]						
Grandchild	1.01	1.04	1.16	1.18	1.41 *	1.40 *
Other child	1.04	1.02	0.94	0.94	0.98	0.98
Recieving TANF	1.12 *	1.17 *	1.33 *	1.33 *	1.80 *	1.79 *
Enrolled in Medicaid	–	–	1.18 *	1.19 *	–	–
Characteristics of household						
# Adults	1.20 *	1.19 *	1.24 *	1.23 *	1.11 *	1.08 *
# Children under 5	1.23 *	1.22 *	1.44 *	1.44 *	1.29 *	1.31 *
Type of household head[1]						
Married	1.32 *	1.34 *	1.25 *	1.26 *	1.39 *	1.33 *
Male head, unmarried	1.01	1.03	0.86	0.89	0.97	0.92
No adults in household	1.57 *	1.69 *	2.54 *	2.71 *	1.77 *	1.82 *
Income as % poverty	–	–	1.01 *	1.01 *	1.00 *	1.00 *
Resides in Metro county	0.66 *	–	0.87 *	–	0.57 *	–
County dummies included	no	yes	no	yes	no	yes
Model statistics						
R-Square	0.06	0.10	0.09	0.10	0.11	0.15
Log Likelihood	-88198.4	-86509.1	-12013.4	-11903.4	-36349.2	-35577.8
Hosmer-Lemeshow goodness of fit test						
Chi-square	31.32	13.71	7.77	8.04	9.74	17.86
P value	0.00	0.09	0.46	0.43	0.28	0.02

[1] Omitted categories are: Race=white, Relation to head=own child, Type of household head=Female head, unmarried.
– Data not available.
* Denotes significance at <.01 level. ** Denotes significance at <.05 level.

Iowa FSP data include a measure of Medicaid enrollment. The logistic regression results indicate that children enrolled in Medicaid are 19 percent more likely to participate in WIC, all else equal. This result is consistent with the TANF result. Since the regressions are limited to FSP participants, the Medicaid and TANF results suggest that WIC participation is more likely when children are enrolled in *multiple* other public assistance programs.

Iowa and Kentucky FSP data include a measure of income, which is expressed as a percent of the poverty level in the logistic regressions (with a scale of 1 to 100). Income is positively associated with WIC participation, although the magnitude of the effect is small. In Iowa, WIC participation is

one percent more likely with every one percent increase in income expressed as a percent of the poverty level.[68] (The Kentucky odds ratio for income is 1.005.)

Overall, the logistic regressions suggest that WIC participation by FSP children declines with age and is negatively associated with residence in a metropolitan area. WIC participation is positively associated with black and Hispanic race/ethnicity, a married household head, receipt of TANF, and the number of adults and children under age 5 in the household.[69] There is also evidence from the Iowa data that WIC participation by FSP participants is more likely when families also participate in Medicaid.

Comparison of Match Methods

An important question for this study was evaluation of probabilistic record linkage methods relative to other matching methods. This comparison depends on the availability and quality of individual identifiers. Table 27 shows match results by four different match-merge specifications and by probabilistic record linkage. The four methods used for match-merge were: merge by SSN (except for Iowa), merge by name and date of birth, merge by SSN or name and date of birth, merge by FSP/TANF/Medicaid ID number (Florida only).

Match-merge methods produced match rates that were lower than the rates achieved by probabilistic record matching. Merge by "SSN or name and date of birth" produced match rates within one percentage point of probabilistic matching for Florida and Kentucky, and within four percentage points in Iowa. Merge results depend on the presence of nonmissing identifiers. For Florida and Iowa infants, the merge methods relying on only one identifier performed poorly due to missing data for those identifiers.

The performance of match-merge methods cannot be evaluated solely on the overall match rates. The bottom panel of table 27 shows the percent of false positive and false negative matches, based on comparison of match-merge results to probabilistic record matching results. False positives are defined as a match of records belonging to two different people. False negatives are defined as failure to find a match between records for the same person. When merging by SSN, the prevalence of false positives is low, indicating a high quality of SSN information in both FSP and WIC administrative records.[70] The prevalence of false negatives, however, is more than 6 percent overall and is 17 percent for infants. When merging by name and date of birth, the prevalence of false positives ranges from less than one percent in Florida to 7 percent in Iowa, reflecting varying data quality or different degrees of homogeneity in the data.[71] False negatives are mainly in the 5 to 7 percent range when merging by name and date of birth.

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68 Income expressed as a percent of the poverty level is standardized for household size.

69 Bitler, et al. (2003) examined the correlates of WIC participation in administrative data, CPS, and SIPP. Their results are consistent with the findings presented here. They found that WIC participation is positively associated with Hispanic ethnicity and being married, and negatively associated with Asian ethnicity and residence in a metropolitan area. They also found that WIC participation is higher in States requiring fewer visits to the WIC office.

70 FSP validates SSN but WIC does not.

71 Homogeneity results in false positives if particular names are common within a State.

With the exception of infants, simple match methods resulted in few false positives but significant numbers of false negatives. These results suggest that simple merge methods may be adequate for some research purposes, depending on data quality and incidence of missing identifiers.

Table 27—Percent of WIC participants matched to FSP by different match methods, December 2002

	Number WIC participants	Percent of WIC participants matched to FSP					
		Match-merge methods				Probabalistic linkage	
		By SSN	By Name & DOB	By SSN or Name & DOB	By FSP/TANF/ Medicaid ID	With SSN	Without SSN
Florida							
Total WIC	403,477	21.9	23.9	27.3	20.6	28.3	–
Women	98,606	19.9	19.0	21.4	19.6	21.7	–
Infants	112,352	6.7	19.4	20.7	2.0	23.6	–
Children	192,519	31.8	29.0	34.1	31.9	34.5	–
Iowa							
Total WIC	70,239	–	22.8	22.8	–	–	26.6
Women	16,985	–	20.3	20.3	–	–	25.5
Infants	17,227	–	20.0	20.0	–	–	22.0
Children	36,027	–	25.4	25.4	–	–	29.2
Kentucky							
Total WIC	131,174	38.4	38.9	44.2	–	45.1	44.8
Women	32,738	41.8	37.4	42.0	–	42.1	41.5
Infants	33,965	21.0	32.4	36.1	–	38.2	38.1
Children	64,471	45.9	43.1	49.6	–	50.2	50.0

– Data not available.

	Percent in error when matched by					
	SSN		Name & DOB		FSP/TANF/ Medicaid ID	
	False positive	False negative	False positive	False negative	False positive	False negative
Florida						
Total WIC	0.4	6.5	0.2	4.5	0.3	7.8
Women	0.1	1.8	0.0	2.7	0.1	2.1
Infants	0.9	16.9	0.4	4.2	0.8	21.6
Children	0.2	2.7	0.1	5.6	0.2	2.7
Iowa						
Total WIC	–	–	6.5	5.2	–	–
Women	–	–	0.0	5.2	–	–
Infants	–	–	11.8	4.4	–	–
Children	–	–	6.9	5.6	–	–
Kentucky						
Total WIC	0.4	6.7	1.0	6.5	–	–
Women	0.1	0.3	0.1	4.7	–	–
Infants	1.0	17.4	3.5	7.0	–	–
Children	0.2	4.4	0.2	7.1	–	–

– Data not available.