Chapter Five
Summary and Conclusions

This study investigated the feasibility of linking administrative data from multiple USDA food assistance and nutrition programs (FANPs) for three States. Linked data provide a means of examining rates of multiple program participation, dynamics of participation across programs, and the characteristics of families who participate in some, but not all FANP programs for which they are eligible.

FSP and WIC data were matched using probabilistic record linkage methods, implemented with software from the U.S. Census Bureau. This software requires an understanding of the theory and application of probabilistic record linkage methods. For this study, the greatest difficulty in building linked files was due to the volume of data received for the three-year period for which administrative data were collected.

Probabilistic record linkage yields higher match rates when compared with simpler match methods, such as a merge by SSN or by name and date of birth. For the three States examined in this study, it was found that simpler match methods yielded relatively high rates of false negatives (failure to find a match between records for the same person), but very low rates of false positives (matching records for different people). False negatives were in the range of 5 to 8 percent, while false positives were less than one percent. Simpler match methods are most likely to yield unacceptable results for infants, who often have missing key identifiers in administrative data.

Match results showed that, for the three States studied, 84 to 94 percent of FSP infants participated in WIC during a single month; and 89 to 96 percent of FSP infants participated in WIC at some point during a three-year period. Among FSP children, 51 to 57 percent had contemporaneous WIC participation, and 61 to 74 percent of FSP children participated in WIC at some point during the three-year period. The latter estimates underestimate the percent of FSP children *ever* participating in WIC because the data were limited to a three-year period and participation histories are truncated.

The prevalence of contemporaneous FSP participation by WIC participants was estimated to be 28 percent in Florida, 26 percent in Iowa, and 45 percent in Kentucky. For Florida and Iowa, the match rates for WIC participants were consistent with the overall rates of reported FSP participation in the WIC administrative data. For Kentucky, the match rates suggest that WIC participants underreport FSP participation to the WIC program. The percent of WIC participants exposed to FSP during the three-year period was 52 percent in Florida and 55 percent in Iowa (this statistic could not be estimated for Kentucky).

Examination of birth cohorts through age five shows that overall program participation (participating in either FSP or WIC) declines with age, with most of the decline due to declining WIC participation at age 1 and at age 5 when WIC eligibility ends.

Multivariate analyses indicate that age, race/ethnicity, and household characteristics have a statistically significant association with WIC participation among FSP infants and children. Results were more consistent across States for children, than for infants. For FSP children, WIC participation declines with age. Household characteristics positively associated with WIC participation among FSP

children include: the number of adults in the household, the number of children under age five, and a married household head. Residence in a metropolitan area is negatively associated with WIC participation. The likelihood of WIC participation across racial/ethnic groups varied across States. Hispanic children in Florida and Kentucky were more likely to participate in WIC than other racial/ethnic groups, and black children in Iowa and Kentucky were less likely to participate in WIC than other racial/ethnic groups.

Multivariate analyses shows that receipt of TANF is positively associated with WIC participation among FSP children in all three States. Information about Medicaid enrollment was available only from Iowa and shows that Medicaid enrollment is also positively associated with WIC participation. Since the analysis was 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.

The results from this report cannot be generalized beyond the three States included in the study. The range of issues examined, however, can be applied to further studies. Linked administrative data may be less costly than survey data and provide a means of examining a large number of issues associated with multiple program participation. For example, the current study might be replicated with a larger time period so that the interaction of FSP and WIC can be examined for cohorts of children from birth to age 5. These methods may also be applied to data from other public assistance programs. Unfortunately, NSLP data were not available to this study, but future efforts to link NLSP and FSP could help us understand variations in FSP participation rates.