

Office of Research and Analysis

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Background

The Special Supplemental Nutrition Program for Women, Infants and Children (WIC) is administered by the Food and Nutrition Service of the U.S. Department of Agriculture (USDA). WIC was established in 1972 to counteract the negative effects of poverty and poor nutrition on prenatal and pediatric health. WIC provides a combination of direct nutritional supplementation, nutrition education and counseling, and increased access to health care and social service providers for pregnant, breastfeeding, and postpartum women; infants; and children up to age five.

Since 1992, FNS has produced biennial reports on WIC participant and program characteristics based on the WIC Minimum Data Set (MDS) compiled from state management information systems. The 20 items included in the MDS are collected as part of ongoing WIC operations and consist primarily of information related to participant eligibility.

This report presents findings from the National Survey of WIC Participants and Their Local Agencies (NSWP). The NSWP was fielded in spring of 1998 and collected information about WIC participants and their families, through interviews conducted in WIC service sites throughout the country. The NSWP was the first national survey of WIC enrollees since 1988. Over that ten-year period, the WIC program vastly expanded, with the number of enrollees growing from approximately 3.4 million in 1988 to over 8 million in 1998.

Purpose

The NSWP had two primary goals: to provide demographic information about WIC participants and their families, and to provide

national estimates of the case error rate and dollar error within the WIC program.

To achieve the first goal, NSWP interviewed approximately 3,000 WIC participants at 178 WIC service sites throughout the country. These interviews collected information about household composition, family income, nutrition and health risks, participation in other food assistance programs, food security, health insurance coverage, and the family's history of WIC enrollment.

Estimates of the WIC case error rate are based on a second, follow-up survey conducted in the homes of approximately 900 WIC participants. This second survey collected detailed information about family income and sought documentation of family income for verification.

Study Methods

The NSWP was designed to provide information on the characteristics of a nationally representative sample of WIC participants in the contiguous United States, certified for WIC during spring 1998. The sample is based on a multi-stage sample design, with 50 geographic primary sampling units (PSUs) selected at the first stage, 79 local WIC agencies selected at the second stage, and 178 WIC service sites selected at the third stage. WIC participants were randomly sampled for the study at the 178 WIC service sites as they appeared for WIC certification.

The NSWP consists of three surveys of WIC participants and a survey of the local WIC agencies certifying those WIC participants:

In-person survey. In-person interviews were completed with 3,114 WIC participants at 178 WIC service sites throughout the contiguous United States. WIC participants were randomly sampled at the time of their WIC certification

and most interviews were conducted in WIC clinics following certification. This survey achieved a response rate of 77 percent and provides most of the information for the first goal of the study^{3/4} to describe the demographic characteristics of WIC participants and their families.

In-home survey. Approximately one out of every three persons selected for in-person interviews was also selected for a follow-up interview in their home. The in-home survey was designed to verify income information through review of household income documents. In-home interviews were completed with 931 respondents. Data from this survey were used to estimate WIC certification error rates^{3/4} the second goal of the study.

Telephone follow-up. Approximately two-thirds of respondents to both the in-person and in-home surveys were chosen for telephone follow-up interviews. The telephone follow-up survey collected information about employment status and participation in adjunct programs four months into the WIC certification period. This survey was completed with 558 respondents.

Local agency survey. The local agency survey was conducted with the 79 agencies certifying WIC participants selected for the in-person survey. This mail survey collected information about local WIC agency organization and operations.

In addition to these surveys, WIC clinic staff completed nutritional risk checklists for each WIC participant with a completed in-person interview.

Findings

Key findings of the study are summarized here in an order corresponding to the structure of the report. A summary of caseload composition and growth is based on administrative data, followed by key findings from the NSWP surveys for the following topics:

- Participant Characteristics
- Characteristics of WIC women and mothers of WIC infants and children
- Characteristics of the WIC economic unit
- Income of WIC participants
- Food assistance, food spending, and food security
- Nutritional risk factors
- Incidence and duration of breastfeeding
- Health insurance coverage
- Factors affecting enrollment and continued participation
- WIC Income-Eligibility Determination and Errors in Income Certification
- Review of state WIC agency income eligibility guidelines
- Estimates of WIC income certification error

NSWP findings should be interpreted with the knowledge that a substantial number of WIC participants had prior WIC participation. Determining WIC's potential influence on patterns of participant characteristics is outside the scope of the NSWP report.

The NSWP sample is a nationally representative sample of WIC participants in spring 1998, interviewed at the time of WIC certification. Most WIC participants are certified for periods of 6 months; States may certify infants for up to one year and pregnant women for the duration of their pregnancy. Administrative data for spring 1998 show that 88 percent of WIC infants were certified for WIC within three months of birth; however, only 79 percent of WIC infants in the NSWP sample were certified within three months of birth. The characteristics of infants described in this report should be viewed in this context.

Participant Characteristics

WIC Caseload Composition and Growth, 1988 to 1998

The NSWP provides the first detailed picture of WIC participant characteristics and family circumstances since 1988. Over the ten years

from 1988 to 1998, the WIC program more than doubled in size. Average monthly WIC enrollment grew from about 3.4 million in 1988 to 8.0 million in 1998; over the same period annual WIC food expenditures grew from about \$1.4 billion to \$2.8 billion.

Along with caseload growth, there were substantial changes in the composition of the WIC caseload, as documented throughout the period by WIC administrative data. A disproportionate amount of WIC caseload growth occurred in the Western states, which accounted for 13 percent of total WIC participants in 1988, and 24 percent of WIC participants in 1998. This regional shift is reflected in the racial/ethnic distribution of WIC participants, with Hispanics becoming a larger proportion of the caseload (Hispanics were 21 percent of the caseload in 1988 and 32 percent in 1998).

From 1988 to 1998, pregnant women and infants decreased slightly as a percent of all WIC participants; breastfeeding women more than doubled; and children rose as a percentage of all WIC participants, from 47 percent in 1988 to 51 percent in 1998.

Characteristics of WIC Participants

The strength of the NSWP, in contrast to data available from WIC administrative files, is the detailed picture it provides of WIC participants and their families. This report describes the characteristics of WIC families in a consistent manner regardless of whether the sampled WIC participant was a woman, infant, or child. In particular, the report describes the characteristics of the mothers and mothers-to-be who come to the WIC program^{3/4} that is, the WIC women (pregnant, breastfeeding, or postpartum) and mothers of WIC infants and children.

Most women enrolled in WIC are in the prime childbearing years, ages 18 to 34. In 1998, less than 10 percent of women in WIC were under age 18 years, and only 7 percent were over age 35. Mothers of WIC infants and children were somewhat older, with less than 5 percent under age 18 and about 16 percent over age 35. Only

44 percent of women enrolled in WIC were married, whereas 51 percent of mothers of WIC infants and children were married.

The majority of WIC women and mothers have completed 12 years of education, but approximately 30 percent are beyond high school age and have not completed high school. Approximately 13 percent of WIC women are enrolled in college full-time or part-time at the time they enroll in WIC; and 15 percent of mothers of infants and children are enrolled in college full-time or part-time.

Approximately one-quarter of WIC women are employed at the time that they apply to the WIC program, and about 28 percent of WIC mothers are employed. The employment rate is highest among WIC pregnant women, with 32 percent employed.

For both WIC women and WIC mothers, more than half of those not employed were employed in the past year. The most common reason for not working is "keeping house" (this reason was given by 44 percent of pregnant women who were not working and over 60 percent of breastfeeding women, postpartum women, and mothers of infants and children who were not working).

Characteristics of the WIC Economic Unit

The average size of the WIC family or economic unit is 4.0 persons. Most WIC participants reside in single-family households, but 15 percent reside with extended family in multi-family households.

The majority of WIC participants (58 percent) have at least one other family member also participating in WIC. Evidence shows that WIC provides continuity of care for participants and their families.

Nearly 80 percent of mothers of WIC infants and children participated in WIC when pregnant with their children. When pregnant women participate in WIC while pregnant, both mother and child benefit; additionally, prenatal WIC enrollment is associated with earlier WIC

enrollment for infants. Enrollment of infants within the first month of life is twice as likely to occur when the mother participated in WIC while pregnant.

Slightly less than half (45 percent) of WIC infants and children have siblings who are also age-eligible for WIC. Most age-eligible siblings also participate in WIC. The likelihood of a sibling's participation, however, declines with the sibling's age: 94 percent of siblings under 1 year old participate in WIC, compared to 70 percent of siblings who are 4 years old.

Income of the WIC Economic Unit

The income cutoff for WIC eligibility is 185 percent of the federal poverty level. Nearly two-thirds of WIC participants reside in families with income below the poverty level and 23 percent have income between 100 and 150 percent of the poverty level (Figure 8). Six percent of WIC participants have income above 185 percent of poverty; some of these participants qualify for WIC on the basis of established eligibility for Medicaid, whereas others were certified in error, as is discussed further in a later section.

Although WIC families are low-income, nearly three-fourths of all WIC participants reside in families with wage earners. In addition to wages, the most common sources of income for WIC families are TANF (received by 15 percent of families) and alimony or child support (received by 11 percent). Income from unemployment insurance, social security, Supplemental Security Income (SSI), or other welfare programs is received by fewer than 6 percent of WIC families.

On average, WIC families with wage income receive about \$1,400 per month in wage income. For other income sources, the average amounts received by those with income are: TANF (\$386), alimony (\$289), Social Security (\$635), other welfare (\$385), and SSI (\$529). Due to the low rates of receipt of non-wage income, the average receipt of non-wage income is less than \$200 per month when measured across all WIC families.

Food Assistance, Food Spending, and Food Security

The NSWP found that nearly one-half (47 percent) of families with WIC participants received some other source of food assistance at the time that they enrolled in WIC. USDA programs were the most common source of assistance, with 33 percent of families receiving food stamps, 27 percent participating in the National School Lunch Program, and 21 percent participating in the School Breakfast Program. Local food pantries were a source of food assistance for fewer than 5 percent of WIC families.

On average, WIC families spend 25 dollars per person on food each week, with the great majority (85 percent) of food spending for food at home. Based on their experiences in the 12 months prior to WIC certification, slightly less than one-fourth of WIC families lack food security. Food security is a new composite measure based on responses to 18 survey questions developed by USDA. Fifteen percent of WIC participants are "food insecure without hunger," 7 percent are "food insecure with hunger, moderate" and about 2 percent are "food insecure with hunger, severe".

Nutritional Risk Factors

Applicants to the WIC program must demonstrate nutritional risk, defined by detrimental or abnormal nutritional conditions, nutritionally related medical conditions, dietary deficiencies that impair or endanger health, or conditions that predispose persons to inadequate nutritional patterns or nutritionally related medical conditions. One of the goals of NSWP was to collect comparable data on the incidence of nutrition risks for all sampled persons.

NSWP found that the majority of WIC participants have more than one nutrition risk at the time they enroll in the program. The number of nutrition risks varies substantially, however, by participant category. Only 15 percent of all women have a single risk, whereas 42 percent have four or more risks. In contrast, 44 percent

of infants and children have a single risk, and 13 percent have four or more risks.

By far, the most prevalent nutrition risk among all WIC enrollees is the failure to meet dietary guidelines. More than two-thirds of all women and children who enroll in WIC are at dietary risk. Other common risks for women are overweight (43 percent) and risk of anemia (30 percent). The risks most common among children, other than failure to meet dietary guidelines, are risk of anemia (24 percent), overweight (17 percent), and short stature (14 percent). Many infants do not exhibit a specific nutrition risk but are enrolled in WIC on the basis of their mother's current enrollment and documented risk; 42 percent of all infants have no other risk.

Incidence and Duration of Breastfeeding

NSWP examined the breastfeeding experience of WIC participants and their siblings. One-half of WIC children and 56 percent of WIC infants had been breastfed for at least some period of time. Among WIC children who were breastfed, the median duration of breastfeeding was about 4 months and 85 percent were breastfed at least one month. The median duration of breastfeeding among infants was not determined because 60 percent of infants who were breastfed were still breastfeeding at the time of the NSWP interview.

NSWP found that the decision to breastfeed carries over multiple children in a family. Among WIC infants with siblings, 78 percent of breastfed infants had siblings who were breastfed, whereas only 17 percent of non-breastfed infants had siblings who were breastfed. Similarly, among WIC children with siblings, 86 percent of breastfed children had siblings who were breastfed, whereas only 18 percent of non-breastfed children had siblings who were breastfed.

Health Insurance Coverage

WIC is not a health care provider, but to ensure that WIC participants receive health care, WIC provides screening and referrals to other health,

welfare and social service agencies. NSWP found that 83 percent of WIC enrollees had health insurance at the time that they applied to WIC. Most WIC enrollees receive health insurance from the government's Medicaid program (58 percent); about one-fourth have employer-provided insurance.

Because Medicaid eligibility varies across states, all WIC enrollees are not eligible for Medicaid. At the time NSWP was fielded, Medicaid income-eligibility was at or above the WIC income limit in 29 of the 50 states.⁵ NSWP found that even in states where all WIC participants are eligible for Medicaid, 14 percent of WIC participants have no health insurance.

The potential impact of WIC referrals on health insurance coverage can be seen in the different rates of health insurance for NSWP respondents enrolling in WIC for the first time, compared to those recertifying in WIC. In states where all WIC participants are Medicaid-eligible, prior WIC experience is associated with a statistically significant ten-percentage point increase in the Medicaid enrollment rate; 57 percent of first-time WIC participants were enrolled in Medicaid, compared to 67 percent of WIC re-enrollees.

Factors Affecting Enrollment and Continued Participation

NSWP included a "customer satisfaction" module to ask respondents how they learned about the WIC program and whether they perceived barriers to WIC participation. Respondents with prior WIC experience were also asked about their satisfaction with WIC food benefits, their rating of the value of WIC services, whether they ever missed WIC appointments, and their experience shopping for WIC foods.

Most WIC enrollees learn about WIC from friends, family members, and doctors (each was cited by about one-third of respondents). Relatively few WIC participants cited program advertisements as a source of information referring them to the WIC program.

Few NSWSP respondents perceived "big problems" or barriers to WIC participation. Respondents were asked about several categories of potential problems. Only "transportation to the clinic" was perceived as a big problem by more than 5 percent of respondents. Between 10 and 15 percent of respondents reported "somewhat of a problem" with factors affecting access to WIC clinics, but overall, the majority of respondents did not perceive barriers to WIC participation.

NSWP respondents who had prior WIC experience were asked about satisfaction with WIC foods. Except for breakfast cereals, more than 80 percent reported being "very satisfied" with brands, and less than 15 percent reported they were only "fairly satisfied." Breakfast cereals received the greatest dissatisfaction response, with 10 percent of respondents "not satisfied" with brands of cereals, and 28 percent only "fairly satisfied."

The distribution of satisfaction with food quantities was consistent across all food categories. More than 80 percent of respondents were "very satisfied" with quantities of food, including breakfast cereal. These high levels of satisfaction with brands and quantities of food correlate well with respondents' answers to questions of whether they usually purchased all food items listed on the food voucher. Nearly 93 percent of respondents said they usually purchased all items. No single WIC food category was identified as being particularly prone to being not purchased. With respect to prior use of food vouchers at the store, 83.9 percent of respondents said it was "easy" to use the vouchers, 14.2 percent said "sometimes confusing," and 1.9 percent said shopping with vouchers was "often confusing."

The WIC program may yield many intangible benefits for participants in addition to the tangible benefits of supplemental foods, nutrition education, and referrals to other health and social service agencies. NSWSP asked those respondents with prior WIC experience to rate the value of potential WIC benefits on a scale of 0 to 5. Of the 12 potential benefits presented to respondents, only 2 received an average rating

below 4: "time to talk with other mothers" and "taught me about breastfeeding." The highest rated benefits are "vouchers for foods I know are nutritious" (4.7), "money saved on grocery bills" (4.5), "nutrition information" (4.4), and "checking blood, height, and weight" (4.4).

In an effort to operate efficiently, most WIC service sites schedule appointments with participants for measurement of health and nutrition status, nutrition education, and voucher pickup. Nearly one-half (45.6 percent) of prior WIC participants said they had missed one or more appointments at the WIC clinic, although 19.3 percent said that they had missed only one appointment. The most common reasons given for missing an appointment were "forgot to go" (42.5 percent) and "trouble finding transportation" (29.9 percent).

WIC Income-Eligibility Determination and Errors in Income Certification

The NSWSP provided data for estimating the national case error rate in WIC certification. Incidence of errors in income eligibility were determined by collecting information about participants' family income and comparing income to WIC income-eligibility guidelines. The report reviews WIC income-eligibility guidelines for the 26 states and 79 local WIC agencies represented in the NSWSP sample, and presents estimates of certification error.

WIC Income Eligibility Guidelines

In 1988, the WIC Income Verification Study reviewed policies and procedures for WIC income eligibility determination in 25 states. That study found policies and procedures for determining WIC countable income showed near complete agreement across states, but policies and procedures for determining an applicant's economic unit (family size) indicated significant state-to-state variation, sometimes due to contradictory guidelines. In 1998, the NSWSP found that policies for determining WIC countable income remained nearly unchanged since 1988, still showing near complete agreement across states. Policies for determining an applicant's economic unit (family size) again

showed state-to-state variation. In contrast to 1988, however, most of the variation across states stems from rules regarding households with separate economic units and applicants who are minors, and remaining variation is due to differences in the comprehensiveness of guidelines and not from contradictory guidelines.

In 1998, state WIC agency policies did not reveal contrary guidelines, as they had in 1988. Most of the uniformity in guidelines that developed during the ten-year period between studies appears to be due to FNS instructions and written guidelines, which are evident in state WIC manuals.

Estimates of WIC Income Certification Error for the Contiguous United States

The WIC case error rate is the percentage of enrollees certified to receive, but not eligible for, WIC benefits; the dollar error is the amount of total WIC food funds spent on ineligible participants. Estimates of certification error are based on in-home interviews with a national sample of WIC participants in the contiguous United States in spring 1998. In FY 1998, the contiguous United States accounted for 96 percent of WIC participants and 95 percent of federal WIC food expenditures.

NSWP in-home interviews were designed to verify income information through review of income documents, when available. This survey preceded implementation of provisions requiring WIC participants to document income at WIC certification as provided in the William F. Goodling Child Nutrition Reauthorization Act of 1998.

Analysis of WIC certification case error yielded an estimate of the error rate for the contiguous United States of 4.5 percent. This estimate is associated with a 95 percent confidence interval. The confidence interval indicates that we are 95 percent confident that the national WIC income-eligibility error rate falls between 2.8 and 6.2 percent, with the most likely value at 4.5 percent.

The estimate of the case error rate yields a corresponding estimate of annual dollar error for the contiguous U.S. of \$120 million, out of a total of \$2.6 billion in WIC food benefits disbursed in FY 1998. The 95 percent confidence interval extends from \$68.9 to \$171.9 million dollars, or from 2.3 to 5.7 percent of annual WIC food costs.

NSWP findings show that most applicants certified for WIC are correctly determined to be income-eligible. For those found ineligible, it is not possible to make statements about sources of error because the sample size of ineligible participants is not large enough to yield statistical precision.

An important finding of this study is that the WIC certification error rate estimate for FY 1998 is not statistically different from the error rate estimate for FY 1988. During this ten-year period the WIC program experienced enormous growth. For FY 1988 - the last time that WIC certification error was analyzed - findings revealed a case error rate of 5.7 percent and dollar error of \$84 million out of total WIC food costs of \$1.5 billion. For FY 1998, we estimate a case error rate of 4.5 percent for the contiguous United States and dollar error of \$120 million out of total WIC food costs of \$2.6 billion. In addition, this study found a statistically significant relationship between the case error rate and the income documentation policy of WIC agencies. The error rate among cases enrolled at agencies requiring income documentation was 2.9%, compared to 6.4% for those enrolled at agencies that did not require income documentation. The provisions of the William F. Goodling Child Nutrition Reauthorization Act of 1998, requiring income documentation at all WIC agencies, became effective in 2000.

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