Nutrition Intervention And Public Policy: A Preliminary Analysis of State and Local WIC Programs

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Over the past two decades nutritional studies have become an increasingly important issue with regard to the health of our nation. We have become aware of the relationship between diet and health and the impact of good nutrition in the prevention of future health problems. (Huron Institute, 1973; Whitney and Hamilton, 1981) The federal government has recognized the importance of the nutritional status of the population particularly in its pregnant and lactating women, infants, and young children. The government enacted PL 92-439 in 1972, amending the Child Nutrition Act of 1966, and created the WIC (women, infants, and children) Program. The primary objective of the WIC Program is to provide cash funds to the states to provide certain foods of high nutritional value to pregnant and lactating women and to infants and children up to five years of age.

Since its inception, a number of studies have examined and evaluated the WIC Program. (Edozien et. al., 1979; Berkenfield and Schwartz, 1980; Kennedy et. **al.,** 1982; Rush, 1982) However, there have been no comprehensive studies and evaluations of how funds are provided by states to local agencies and how local agencies utilize those funds. This study specifically examines how local agencies receive their funds from state agencies and how they spend the funds allocated to them. The study will provide an analysis of local projects

financial arrangements and staff utilization. In a limited way, it will attempt to look at how efficiently local agencies are utilizing their funds by examining staffing patterns and cost per participant data. In an era of fiscal retrenchment, the findings of this study may be more significant to policy-makers, policy analysts, and human service administrators than other studies findings showing program results, if government budget cuts in health and health related programs continue to be the rule rather than the exception.

THE WIC PROGRAM: AN OVERVIEW

The federal government has made three well-known studies of the population in an attempt to evaluate nutritional status. Between 1968 and 1970, Arnold E. Shaefer conducted what is commonly referred to as the Ten-State Nutrition Survey. (U.S. DHEW, 1972) The purpose of the survey was to examine segments of the population that were most likely to be malnourished, the low-income population. It was not intended to be representative of the total population. The study found that Blacks and Mexican-Americans had generally lower values for specific nutrients and Anglos the highest values.

The HANES (Health and Nutritional Examination Survey) Study was also conducted by the federal government through the U.S. National Center for Health Statistics between 1971 and 1974 (Whitney and Hamilton, 1981). Unlike the Ten-State Nutrition Survey, this study took a larger sampling of the population and was not limited to low-income populations. Through its broader sampling, the study reinforced the finding of the Ten-State Nutrition Survey in that low-income individuals, especially minorities, were more likely to be malnourished.

A subsequent HANES II Study, conducted in 1977, focused on obtaining specific clinical data pertaining to iron-deficiency anemia. Data collected indicated that iron deficiency was a major problem. (Whitney and Hamilton, 1981) The Ten-State Nutrition Survey proved to be an extremely controversial publication. The ten states that were a part of the study (California, Massachusetts, Michigan, Texas, South Carolina,

New York, Kentucky, Louisiana, West Virginia, and Washington) protested that the study was not truly representative of their populations. The protests increased the publicity of the study.

The realization of the importance of nutrition coupled with the findings of these surveys seemed to be a motivating factor toward developing national programs to meet nutritional needs. Congressional efforts to fulfill some of these needs have historically been manifested in attempts to supplement the diets of people in various stages of life. Hearings before the Senate Select Committee on Nutrition and Human Needs verify the success of supplemental feeding programs in raising the nutritional status of individuals. (Senate Select Committee, 1973) The hearings reinforced the need to combine health care, nutritional education, and income distribution in the form of supplemental funds.

In September 1972, Congress passed PL 92-433 to operate on a pilot basis. This law amended the Child Nutrition Act of 1966 by adding Section 17 "which provided cash grants to states ... to provide certain supplemental foods through state and local agencies to pregnant or lactating women and to infants and children up to four years of age determined by competent professionals to be nutritional risks because of inadequate nutrition and income." (Senate Select Committee, 1973:139) The legislation authorized specific foods containing the nutrients found lacking in the diets of the population as studied in the Ten-State Nutrition Survey as well as the two HANES studies. The pilot program was called the WIC Program by its administering agency—the Food and Nutrition Service (FNS) of the Department of Agriculture. In addition to incorporating health care and food supplementation, the program also contained an evaluation component whereby individuals certified for the program were evaluated at approximately six-month intervals to determine improvement in nutritional status. Although nutrition education was encouraged by the program, it was not an allowable expense. (Austin and Hitt, 1979)

After a slow and shaky start, the initial program regulations were published on July 11, 1973 in the **National Register**. The program regulations listed as objectives to "supply nutritious

foods to participants," "the collection and evaluation of data which will medically identify benefits of this food intervention program," and collect and analyze data "to measure the administrative efficiencies of various methods of making foods available to participants." The Department of Agriculture, the agency charged with implementing the program, encouraged "diversity in the design and operation of the WIC Program in the individual localities" and imposed what it considered a "minimum number of regulations." (Senate Select Committee, 1974:84) The initial regulations were "designed to carry out the department's intent to implement a small statistically valid medical evaluation of a program of food intervention for participants of high nutritional risk." (Austin and Hitt, 1979:84) Specifically, the regulations discussed the general purpose and scope of the program and outlined program administration; the eligibility of persons and local agencies; the application process by local agencies and state agency action on these applications; the selection criteria which would be applied to local agencies; the supplemental food packages to be made available; plus program operations such as use of funds, payments to states, records, and reports. (USDA, 1974:3)

The regulations gave responsibility for administering the program on a state level to the state health agency. The state agency was given responsibility for designing and operating a system which would make available the supplemental foods to participants. The state agency was also responsible for monitoring activities of local agencies and accounting to FNS all foods granted under the WIC Program as well as allocating these funds between the state and local agencies.

A local agency was considered eligible to complete the application process for WIC funds if:

1. it provides services to residents of an area in which a substantial proportion of the persons are low-incomed;
2. it serves a population of women, infants or children which is at nutritional risk;
3. its staff includes competent professionals who interview or examine persons receiving health services;
4. it has the personnel and expertise and its facilities include

> the equipment necessary for performing the measurements, tests and data collection specified by FNS for the WIC Program; and it maintains or is able to maintain adequate medical records. (Senate Select Committee, 1974: 3)

If local agencies felt that they met these conditions, they were asked to submit an application outlining their qualifications under these conditions through their state agency. With these requirements, WIC became the first federal nutrition program to use identifiable nutritional risk and low income as criteria for eligibility.

The regulations also addressed the required records and reports. Financial records were required in order to maintain complete and accurate accounting of all amounts received and disbursed for the WIC Program. Each local agency was required to keep a file of the food authorizations issued to each participant each month. The regulations stated that local agencies should measure and record at each certification visit certain data including the participant's height, weight, head circumference (infants only), and hemoglobin. After delivery of an infant, the local agency was also to record the duration of the pregnancy and birth weight of the infant.

Other regulations required monthly reports as specified by FNS showing use of funds, participation information and "data necessary to permit evaluation of administrative performance and of the effect of food intervention upon recipients." (Senate Select Committee, 1974:108) The regulations specified who should be eligible for the program. Specifically, only infants and children under four years of age and pregnant or lactating women would be eligible for the WIC Program if:

1. they reside in an approved project area;
2. they are eligible for treatment at less than full charge customarily made for such services by the local agency which serves the project area wherein they reside;
3. they are determined by a competent professional on the staff of the local agency to need supplemental foods. (Ibid., 109)

The regulations were very specific concerning eligibility and benefits under the program. However, because of the need to implement the program quickly only general guidelines were given concerning program operations as they related to reporting, records, and procedures for implementation. Copies of the regulations were not only published in the **Federal Register** but were also mailed directly to health departments of all states to encourage applicatiion to the program. (Austin and Hitt, 1979) In August 1973, San Diego, California, was selected as the first WIC project area to participate in the medical evaluation and, by the end of September 1973, nineteen additional WIC project areas had been selected. At the end of December 1973, over 200 WIC project areas had been selected, representing 45 states, Puerto Rico, and the Virgin Islands, with expectations of serving over 300,000 women, infants, and children. In January 1974, the first WIC project became operational in Pineville, Kentucky. (Austin and Hitt, 1979) In October 1975, Congress overrode President Ford's veto and enacted several changes in the program including raising the age of child participants to five years of age. (PL 94-105, October 7, 1975)

In January 1977, the First National WIC Symposium was convened by the Children's Foundation, a non-profit anti-hunger organization. The purpose of the symposium was to encourage support and increase public knowledge of the program as well as to promote national discussions of the critical importance of adequate nutrition in pregnancy and early childhood. The final outcome of the symposium was to encourage commitment by legislators to expand the WIC Program to meet the needs of more individuals. (Fleming, 1977)

As of fiscal year 1983, WIC provided benefits to about 2.9 million persons monthly at a cost of $1.36 billion. About one-half million pregnant women participated in the program. (Kotelchuch **et. al.**, 1984) The WIC Program, then, has continued to receive public and political support, although not without political controversy. President Reagan recently attempted to decrease WIC funding and include the program in the Maternal and Child Health Block Grant. Although the WIC Program has been fortunate in funding allocations in the past, continued

budget cutbacks, scarce resources, and retrenchment politics indicate that funds will become tighter. Further, federal regulations have much room for interpretation of requirements for fiscal accounting and management of funds. Therefore, states are utilizing many different techniques for providing funds for WIC Program service operations on a local basis. Some techniques are more efficient and cost effective than others.

METHODOLOGY

In 1983 three hundred and eighty-six WIC Program projects were asked by mail to complete a questionnaire. The local projects were selected on a random basis (every fourth project) from the June 1979 **Directory of Special Supplemental Food Programs for Women, Infants and Children** published by the Children's Foundation in Washington, D.C. The Directory listed over 1500 projects from forty-nine states, Puerto Rico, Virgin Islands, and Indian areas across the United States. The questionnaire consisted of twenty-one items. The first two items requested general information about how long the project has been in operation. The next eleven items requested information concerning budget and funding methods while the last eight items concerned staffing patterns and utilization of WIC funds. The statement items were concise and required either a yes-no or multiple choice response.

Of the total questionnaires mailed (386), twenty-seven were returned because of inadequate or incorrect addresses. Of the projects receiving questionnaires, one hundred and twenty-nine responded. This was a response rate of 31.4 percent. The responses represented 42 of the 51 states and territories that received questionnaires. All respondents did not respond to all items. Thus, the total N varied from item to item. Table 1 shows the number of projects responding from the various states and territories.

PRELIMINARY DATA ANALYSIS

Survey Results

TABLE 1
NUMBER OF PROGRAMS BY STATE
RESPONDING TO SURVEY

State	Number	State	Number
AL	3	KY	7
AK	1	LA	3
AZ	1	ME	1
CA	5	MD	1
CO	1	MA	1
CT	3	MI	4
FL	4	MN	6
GA	3	MS	2
IL	3	MO	7
IA	1	MT	4

TABLE 1 (cont.)

KS	2	NB	2
NH	1	RI	1
NM	2	SC	1
NY	7	SD	4
NC	8	TN	1
ND	2	TX	12
OH	2	VT	1
OK	2	VA	2
OR	2	WA	2
PA	3	WV	1
PR	1	WI	1

N = 121

TABLE 2
SURVEY DATA CONCERNING FISCAL OPERATIONS
(Expressed in Percent)

		%
1. Length of time local Project has been in operation		
a. 0-6 mos.		0
b. 6-12 mos.		0
c. 1-3 yrs.	(n = 116)	2
d. over 3 yrs.		98
		100
2. Agencies receiving increases in funding in last 4 mos.		
a. yes		25
b. no	(n = 112)	75
		100
3. Method for receipt of WIC Administrative and operational grant money.		
a. Annual grant-administrative operations only.		52
b. Funds received based on predetermined monthly caseload.	(n = 112)	25
c. Combined annual grant for both operational and food dollar monies.		11
d. Other		12
		100

TABLE 2 (cont.)

4. When the local project does not control food dollar money it is controlled by:		
a. Region Office		6
b. State Agency	(n = 102)	93
c. Other		1
		100
5. Do projects control food dollar money by assigning maximum monthly participation levels?		
a. Yes		64
b. No	(n = 112)	36
		100
6. Anticipate FY82 budget:		
a. Unspent surplus (avg. of $6,825)		27
b. over expenditure (avg. of $11,441	(n = 110)	5
c. Utilization of all funds		68
		100
7. Funds spent for:		
a. Nutrition Education expenses		28
b. Admin. expenses	(n = 69)	72
		100

TABLE 2 (cont.)

8. Projects utilizing indirect cost charges:	
a. Yes (avg. charge of 13.8%)	32
b. No (n = 113)	68
	100
9. Agencies required to submit monthly/quarterly fiscal reports outside of agency:	
a. Yes	81
b. No (n = 117)	19
	100

Note: All respondents did not respond to all items. Total N = 121

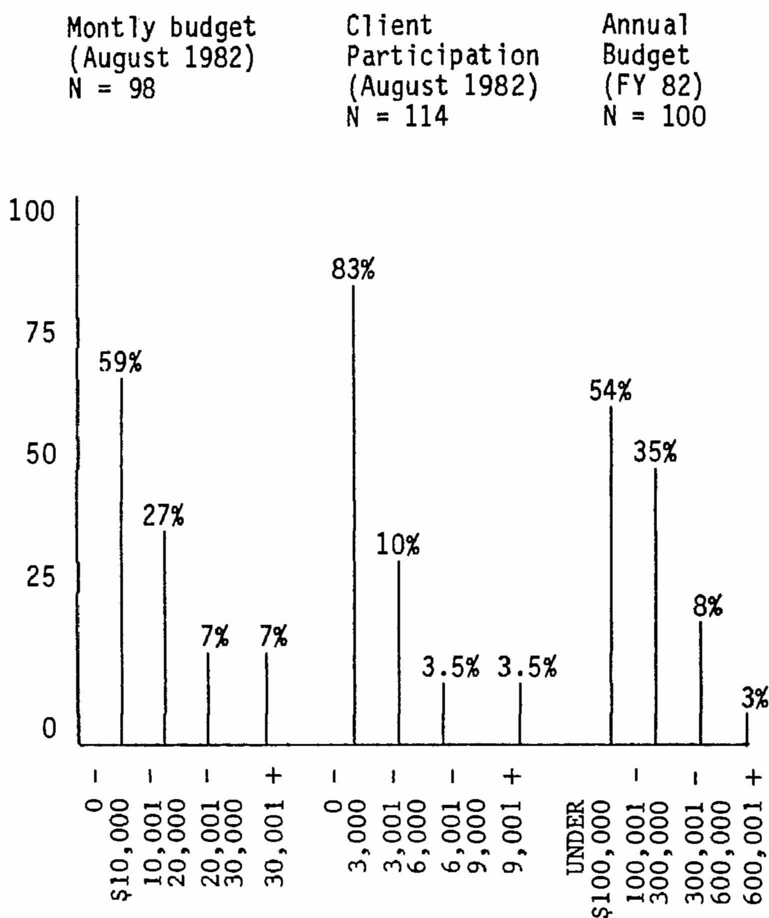
Nearly all or about 98% of the responding WIC projects have been in operation for one to three years. There were no projects which had been in operation less than one year. When asked about increases in funding, 75% had not received increases in funding in the previous four months while 25% had received increases. The majority of projects (52%) received their funds for program operations on an annual basis with the state administering agency retaining control over food dollar money. Of the remaining projects, 25% received various levels of funding each month with their funds based on the number of participants served each month. About 11% of the projects received funds to cover both program operation costs and food dollar costs, allowing them complete control of all aspects of their WIC operations. The remaining 12% had a variety of funding strategies which involved combinations of assigned monthly caseloads and operational funds. These data are presented in Table 2. Of those projects not controlling their food dollar budget, an overwhelming 93% indicated that their state administering agency retained control over food dollars. Of the remaining 7%, 6% indicated that their regional Department of Agriculture Office retained control of their food dollar budget.

In an attempt to determine what methods were utilized to prevent overspending of food dollars, projects were asked if they were assigned a maximum monthly participation level. The assignment could be either self-determined or established by the agency controlling the food dollar budget. Of the 112 respondents to this item, 64% indicated that they had an established monthly participation level while 36% did not.

Respondents were asked several items that provided an overview of WIC projects at the local level. Projects were asked what their annual and monthly administrative and operations budget was for fiscal year 1982; what were their participation levels; whether they over- or underspent or fully utilized foods; and what percentages of funds were spent on nutrition education and administration.

Figure 1 illustrates the responses to budget and participation items. These responses indicate that, although projects served as many as 15,000 participants per month, the majority of them (83%) served less than 3,000 per month. When looking at the

FIGURE 1
MONTHLY BUDGET, ANNUAL BUDGET, AND
CLIENT PARTICIPATION



monthly budget, 86% of the projects expended less than $20,000 for the month of August 1982. This corresponds to the average cost of $6.05 per participant. A majority (54%) of the projects had a fiscal year 1982 budget under $100,000 including 11% over $300,000.

Table 2 shows that of the 69 responding projects, 28% spent their funds on nutrition education activities and 72% on administration. About 68% of the responding projects utilized their authorized spending fully while 27% underspent and 5% overspent. Of those underspending, the average excess funds was $6,824.66. The average excess in spending was $11,440.75. Participants also indicated whether they had developed an indirect cost rate and what the rate was. Approximately 32% had an indirect cost rate while 68% were not utilizing indirect cost rates. The average indirect cost rate was 13.8% (Table 2).

The final portion of the questionnaire requested data on reporting procedures and staff utilization. A large majority (81%) of the projects completed either a monthly or quarterly report to an outside agency. Eighteen of the projects utilized more than one individual to complete these reports. Almost one-third of all projects used an accountant to prepare fiscal reports. Approximately 19% and 16% of the projects had project administrators and clerical staff, respectively, involved in the fiscal report preparation. In participation reports, a variety of levels of personnel was also utilized. Almost 40% of the projects used clerical staff to prepare participation reports. The next category most often marked was "Other" with a variety of personnel falling into this category. Nutritionists and administrators were the next highest utilization in preparing participation reports. Only a handful of programs used accountants or accounting technicians in preparing participation reports (Table 3).

The final five questionnaire items related to nutrition education and certification activities in the program and staff who provided the services. Since WIC is a nutrition program with an emphasis on prevention, the education portion of the program is particularly important. In general, two approaches are available to nutrition education. One approach is individual nutrition counseling which is a one-to-one educational effort

TABLE 3
PERSONNEL UTILIZED TO PERFORM VARIOUS FUNCTIONS*
(Expressed in Percent)**

	Fiscal Reports	Participation Rpts.	Ind. Counseling	Group Education	Elig. Determinations
Accountant	28	2			
Acctg. Tech.	11	1			
Administrator	19	10			
Clerk/Aide	10	38	24	20	13
LVN/LPN			9	8	9
Nutritionist	8	20	81	66	74
Others	13	22	9	13	10

TABLE 3 (cont.)

Physicians			2		6
R.N.	5	6	44	22	46

* 118 projects responding

** Percentages do not equal 100 because personnel perform multiple functions.

while the other approach is group education. For both approaches, nutritionists were the most often utilized to provide this service, four-fifths in individual counseling and two-thirds in group education. Registered nurses (R.N.) received the next highest responses with 44% of the projects using them to provide individual counseling and 22% to provide group education. In both approaches, clerks/aides were utilized 20-24% of the time. Licensed nurses (L.V.N./L.P.N.) had educational responsibilities in approximately 17% of respondents for both approaches. Physicians were not used to provide group education and only 2% of all respondents had physicians providing individual education. When projects were asked who ultimately was responsible for determining participant eligibility for the program, nutritionists again had this responsibility in about 75% of all projects. Of the remaining projects, approximately one-third utilized R.N.s to certify clients with the remainder of the projects being almost equally divided between clerks/L.V.N.S., physicians, and other staff (Table 3).

DISCUSSION

The results of the questionnaire provide some interesting and useful data regarding the operations of local WIC projects. WIC Program projects appear to be well-established in most states with the vast majority of the projects surveyed being in operation over three years. Approximately one of every four projects has received increases in funding in the last quarter of operations for fiscal year 1982.

When local projects were questioned as to their responses concerning methods of receipt of WIC funds, their responses were interesting to observe. The method for contracting for funds seems to reflect a philosophy at the state level regarding the control and expenditure of funds. The complexity of the regulations, coupled with the flexibility in implementation, has allowed many state agencies to retain control of many aspects of the program. Slightly more than 50% of the local projects surveyed received their WIC funds in an annual grant to cover their project administrative and operational costs but not their food costs. Their state/regional agency maintained control of

food dollar funds. Of the remaining projects, 25% received their money based on a predetermined monthly caseload. Each project is assigned a maximum number of participants it can serve and is reimbursed monthly based on the number of clients it serves up to the maximum allowable participation. Funds received vary monthly based on the number of clients it served up to the maximum allowable participation level. With this funding technique, the state/regional agency is reimbursing the project for administrative and operational costs while maintaining control of food dollars.

Only 11% of the responding projects were given complete control over all financial aspects of their projects. Because of problems associated with administering food money, it appears that state/regional agencies have developed a more cost-effective system.

One problem presented by the food dollars is simply the large volume of red tape and the administrative procedures required to administer the funds. Food dollars may be as much as eight to ten times the amount of the funds used to operate a local WIC project. A project with half a million dollar administrative budget may have a food dollar budget of three to four million. Many local projects may not have the technical expertise to administer the large amount of funds. Another problem resulting from the administration of the food budget is that grocers who accept WIC food cards/vouchers may not redeem the food instruments for cash for several months. In the meantime, food money must be set aside to cover costs incurred when the food instruments are finally redeemed.

Still other administrative problems can occur at the local level which may be handled best at the state level. The WIC client population is a mobile group with at-large migrant constituency. Therefore, food instruments may be issued at one project and redeemed in another area. The sheer volume of food instruments that must be addressed might also overwhelm the local agency. As many as nine food instruments may be issued to each participant each month. Even more problems still arise when vendor relations are discussed and local projects are required to monitor compliance of local grocers to food card rules and regulations. Therefore, for states, with particularly

large participation levels, it may be more efficient and cost effective to retain the food budget at the state or regional level.

There was also some unexpected information obtained from several states regarding implementation of the WIC Program. Several of the smaller states have implemented the WIC Program at a state level. There are no local health agencies with which these states have contracted to administer the program. Instead, there are several branches of the state health agency located throughout the state to administer the program. This appears to be the same method that is used to provide all health services throughout these states. Therefore, integrating WIC into an already existing health service program seems logical. The major weakness of this approach is the lack of financial information to which the branches of the state office have access. In response to questions requiring financial information, respondents from the branches were unable to provide estimates of their own monthly expenses.

One final point the survey responses raised is with how the state and local agencies coordinate to control food dollar expenditure. If the local agency is issuing food instruments to participants which must be paid by the state agency, some method must be developed to control costs. Sixty-four percent of the local projects had assigned monthly caseloads to control expenditure of food dollar money. Using this technique, the administrator of the food dollar money can determine the average cost per food package issued to clients and project monthly costs. The questionnaire did not attempt to discover what techniques the other 36% of the local projects utilized to help control food dollars. Because this figure represents more than one-third of the projects surveyed, it would be interesting to learn how these projects deal with this aspect of program operations.

CONCLUSION

As noted earlier, there are several methods of channeling funds to the local level. States which have not already evaluated other possible approaches may choose to do so in an effort to determine the efficient method for their projects. On the

average, most projects were able to expend all of their alloted funds without going into the red. However, of those projects either overspending or underutilizing their funds, there was a tendency to be fiscally conservative, with 25% underutilizing their funds. These projects may need to review their expenditures to ensure that they are covering all their expenses. An indirect cost charge may help to recover some costs that are difficult to identify.

There was a general tendency throughout local projects to utilize professional staff heavily. Projects may need to review their staff utilization to determine if para-professionals can be substituted for a savings in personnel costs while still providing adequate levels of service. In many situations, para-professionals and non-professionals can be trained and supervised by professionals. Further, the preliminary findings point to a need for WIC administrators to compare the various methods of administering WIC programs to determine which method leads to greater overall operational efficiency. In an era of fiscal retrenchment, WIC programs must be prepared to do more with less.

In conclusion, this study has also uncovered more questions than it has answered. The study does not address regional differences or has it accumulated sufficient data to allow comparisons between different sizes of projects. The survey has also been unable to evaluate fully those projects that function as state branches in local areas. Despite these shortcomings, the WIC Program in general seems to be operating in line with legislative intention.

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