Attachment #1
PES #521-79-3

521 0075-2
PD-AAG-315-B1

DUPLICATE

521007500170 1

AID ROLE IN HAITI'S MOTHERCRAFT NETWORK

From 1976, Toward the Future

AN EVALUATION OF BON-AID

CENTERS FOR EDUCATION AND NUTRITIONAL REHABILITATION *

Prepared by: Joyce M. King
Port-au-Prince
January 1979

* Should be read in conjunction with report prepared by Catherine J. Fort, "Cost Effectiveness of Mothercraft and Other Alternatives for Haiti".

The present evaluation is concerned with two stages of AID assistance toward nutrition improvement in Haiti. The first year of cooperation was devoted essentially to the establishment, strengthening and refinement of nutrition rehabilitation and education centers (CERNs). The second, present, stage--that governed by Project Agreement 77-10, has the objective of improving the nutritional status of the Haitian population by "increasing population coverage of nutrition activities by introducing and reinforcing nutrition services in the health delivery system". The current program envisages CERNs operating within a national, integrated network. It is normal, then, that greatest attention must be given here to the evaluation of the CERN. The CERN is a part of both phases of AID activity; it is an ongoing activity of infinite complexity. The integrated program, on the other hand, is still in embryonic form lacking such results as nutritional impact data. Implementation is in the equipment, training and retraining stage and at this time, the evaluation of phase two is little more than an administrative checklist of actions accomplished against the work plan agreed to by the two governments. Still in the future are the detailed planning necessary for project execution and operational decisions about how health and nutrition components might be forged at, say, the dispensary level.

Presented first are the findings, recommendations and suggested criteria or actions with regard to 1) the efficiency of the CERN as a means of improving nutrition status and 2) the integrated nutrition program including the role of the CERN and other alternatives for improving nutritional status of the target populations.

FINDINGS, RECOMMENDATIONS AND SUGGESTIONS

I. IMPROVING EFFICIENCY OF THE CERN

Introduction - The methodology used for studying the CERN, how the sample was selected and the field work carried out, and the problems and limitations of the data, are summarized as Annex I, just following the Recapitulative Tables.

Before taking up the principal findings and recommendations or suggestions, it will be useful to look at a "Profile" of CERN results which is based on the 12 that were studied in statistical detail as to performance during the period October 1977 to September 1978. The CERN and the child and mother beneficiaries in a composite or averaged profile look as follows.

The Cern

Attendees.	The total number of children in the CERN during the period studied		80
	Already in the CERN October 1977:	17	
	Admitted during the period:	63	
	Information relevant but not considered here. Exits:	46	
	In Center September 1978:	25	
Losses.	The number of children, who by the nature of the time frame, spent less than one month at either end of the year period; arbitrarily, we have taken 50% of that number (8) as the value to be subtracted--since they cannot be totally excluded or included ...		4
	Dropouts, those who were in the CERN for less than two months and were voluntarily or involuntarily dropouts of the CERN.....		8
	Deaths.....		1
"Beneficiaries"..... (Those who were cared for in the CERN for two or more months)			67

Carried Forward	67
Over age 5 beneficiaries.....	8
0-5 beneficiaries.....	59
Number whose nutritional status improved... (those who maintained a 0 weight-for-age gain or were above the Harvard standard) 71% gained; 29% lost 1/	42
Number who were saved from death.....	17?

The CERN Child

Average age at entrance into CERN:	33.4 months
Average birth order:	3.97
Length of stay in the CERN (for which the range is 2-16 months)	+ 5.4 months

Not taken into consideration is the length of time those still in the CERN will remain)

The CERN Mother

Number of theoretical mothers (number of child attendees)	80
Losses:	
Number of mothers with more than one sibling	6
Number of dropouts during the period studied	9
The number of mothers, who by the nature of the time frame, spend less than one month at either end of the period studied and for which we have arbitrarily taken 50% of that number to be subtracted.....	4
(It always refers to mothers who attended less than 10 sessions 2/).	
Cases where no mother/substitute comes:	.5
Total "educated" mothers.....	60.5

Intensity of Mother Education

10 or fewer "Sessions"	20%
11-20 Sessions.....	26%
21-30 Sessions.....	18%
31 + Sessions.....	26%

1/ In arriving at these percentages, edematous children were omitted.
2/ Sessions refer both to the days mothers help in the CERNs and to the special educational sessions given by the Responsable weekly. She would normally help 4 days a month and attend 4 meetings--or be present for 8 sessions.

Capability/Utilization of CERN - Beneficiaries Real and Projected. All of the Centers which AID has assisted over the period October 1976 through December 1978 are listed in Table I, together with closing dates and total capability in operating months and children months. This capability was 22,470 children months or 7,490 children trained in a four-month CERN program. During the same time, capability in trained mothers was 7,490; according to patterns used to compute benefits explained later, the mother education translates into 22,470 protected siblings. The combined recuperated children and protected children of the family would be nearly 30,000. Beyond the 7,490 affected households, community spillover benefits can be anticipated, but have not yet been measured systematically.

Forgetting the problems of dropouts, deaths etc. which are unpredictable in the planning of a program, there are significant losses which occur because the Center is not filled to capacity and because an average four-month cycle is the exception rather than the rule for the child-mother pair. Table II shows the planned utilization of the randomly-selected CERNs: an overall efficiency utilization of 65%. Maximum utilization would produce the following benefits: provide care for 105 children (35 children times three cycles); protect 315 children (siblings, three on the average that are born after the CERN child, times 105 mothers trained to protect them) for a total of 420 children. 12 months' operation of a center costs about $10,000 (See Cost-Effectiveness Report that is attached prepared by C. Fort). Therefore the most efficient use of a CERN would cost $24 for the lifelong nutritional rehabilitation of a child. Before getting to the actual utilization, we note the planned utilization in the CERNs studied

which showed that 76 children were to be rehabilitated and that 75.5 mothers were to be educated, or 76 children plus 226 protected children, 302 for a $33 per child cost.

Maximal, Planned and Actual

Utilization and Efficiency of CERNS

Child Recuperation			Child Protection - Mother Education			
Maximum Utilization	105	100%	Maximum Utiliza.	105x3	315	100%
Planned utilization (Number of Attendees after Adjustment) 80-4	76	72%	Planned utilization (Number of Attendees after Adjustment) 80-4.5	75.5 x 3	226.5	72%
Actual utilization After the subtractions of deaths and dropouts , over 5 67-8	59	56%	Actual utilization After losses of dropouts 75.5-15 = 60.5 x 3		181.5	58%

Therefore against the maximal benefits that could be hoped for during the slightly more than two year period, the estimated benefits in children recuperated and children protected through mother education are as follows:

	Maximum	Actual Efficiency	Est. Real
Recuperated children	7,490	56%	4.194
Protected children (through mother education)	22,470	58%	13,033
Total	29,960		17,227
Cost per child	$24		$42.4

A. The CERN Operating Norms and their Application

Problems - The CERN operating guidelines are inadequate and not applied strictly. As the above-cited profile demonstrates, the CERN is not attaining the coverage that it could nor limiting its clients to the most nutritionally vulnerable, either in degree of malnutrition or age group. The reasons are multiple: CERNs often remain too long in one place resulting in an inability to respond to different, new needs out of the limited resources; children remain for long periods; and too little supervision fails to bring these shortcomings to the attention of the Bureau for timely correction.

The guidelines are complex, repetitious, unwieldy in content organization, vague, incomplete and at times ambivalent. The norms are a document of 20 unnumbered pages without an index. Section 3 which deals with where CERNs should be placed, is particularly lacking in clear direction as to how CERNs might be equitably utilized, now or within the integrated program. The N.B. following Section 8 on admission and exit criteria, is inappropriately labelled and its content is missing in the priorities listed just above it. The tone of the statement regarding mothers' responsibilities would not seem to encourage an atmosphere of CERN directors working with mothers to help themselves when it declares "Mothers will obey orders..." Important omissions are norms for supervision and for following up on children who left the center in a failing condition. Inadequate is the control of children who have exited; the guidelines note that "at least once a month a group of recuperated children will be weighed, etc..." A group has meant different things to different responsables, and this in-

formation on CERN "graduates" is vital for understanding the lasting effects of the CERN care.

Lack of diligent application of the norms is due both to omission (complexity of the norms and/or insufficient training) and commission (decisions taken in response to the pressure of otherwise-homeless children and/or of families' continuing, chronic need).

In the CERNs studied, 11.7% of the children admitted were either normal or in first degree malnutrition, while the norms would have only second and third degree cases admitted. 14% of the children who were in the CERNs at the close of the period studied were in normal or first degree malnutrition and had spent four months. All should have been exited according to the Norms and many others were well above the 92%weight for height (which is the stated exit norm) though this was not quantified in the study.

Supervision of the CERNs during the period October 1977 through September 1978 as reported by the Centers visited, was grossly inadequate. Visit intervals averaged seven months while one Center had not been visited for 17 months. Two CERNs had never had a supervisory visit (See Table VIII-A). All CERN responsables stated that they would like to have more supervision.

From the Profile, it is apparent that dropouts are high (and they are often unexplained), the number exited over a 12 months' period, low--46 (Table III), and the length of stay well above four months, probably closer to

six (see Table VI), all of which detract from more efficient coverage. Some children were in the CERN for 16 months. Average age at entrance was 33.4 months (See Table VI).

A CERN may run out of second and third degree eligible children after a relatively brief time. Community surveys indicate that an average of 25 under six years olds in third degree malnutrition (range of number was 12-60) and an average of 66 in second degree (range of number was 23-123) turned up out of the average of 220 children weighed and measured; the average of 91 eligibles theoretically could be cared for in one year.[1/]

Action - That the CERN Norms be refined as soon as possible and not later than August 1979, in time to be in effect by the first of September.

Suggested Criteria

a) Locating CERNs

An operating nutrition surveillance system throughout the country will eventually serve as the basis for making decisions about areas of greatest need. A modus operandi might be the broadening of the Bureau's present surveillance activity (which includes compiling nutritional status from a number of health institutions) and using it along with the expressed needs of the different regional health administrators, to determine where CERNs should be placed.

1/ Section I, Table No. V, my report of March 1978, "Analyses and Compilations of Nutrition Data and Studies".

If, in the national program to be implemented, a year of CERN presence is required at each dispensary level, a five-year plan might be developed which if that were the agreed target achievement date, would mean increasing slightly the number of CERNs operating at one time. If coordinated with the voluntary agency activities, adequate centers may be fleshed out with their participation to make up the approximate 60 that would be required to attain 4% of the under five population needing comprehensive care.[1/] Regional plans could emanate from such a national base.

b) Admission and Exit Criteria

The criteria for admission and exit must be expressed in a clear operating guideline, which requires the utilization of a single scale for determining level of malnutrition. It is a waste of manpower to make calculations for both weight-for-age and weight-for height; more important it is confusing for field staff to know a little about both. Since there remain advocates of both types of anthropometric indicators (and others, and not only in Haiti), perhaps a compromise which is internationally acceptable should be adopted which combines weight for age and weight for height (one was tried in India). Both types of raw data should be kept (so that comparisons can be made within the program and with other programs whichever of the two indicators they are using). But one calculation should be made; one graph should be used and the CERN responsable should feel confident about the validity and the utilization of the chosen instrument.

1/ Four percent of 900,000 under-five year olds: 36,000. 60 CERNs reaching 120 children each would cover 7200 annually and over five years, 36,000.

A decision had to be made as to whether weight for age or weight for height should be used for the evaluation; an initial meeting with the Bureau of Nutrition Director clarified his unquestioned judgment that the weight for age standard should be used. Since others are not convinced that weight for age is the best indicator of progress in measuring a program, it might be of interest to the Bureau and a thesis writer to use the raw data and line up a weight for height study with the weight-for-age study that was made here. Time simply did not permit the luxury of doing that in the present work particularly since many of the percentage calculations were lacking i.e., the notation of weight was there but it sometimes had to be put in percentage of weight for age terms in order to arrive at results which would show percentage gain or loss according to the Standard.

It should be added that a very good Manual of Operating Guidelines is available in Haiti which, among many other things, offers a full description of how to calculate weight for height, and is ready for application in the country should the Director to decide to use this indicator in the future. Some conforming of the Manual to the CERN guidelines would be required. For example, the Manual refers to 90% and above as normal weight for height, while the CERN guidelines for exit require maintenance of 92% or above for one month; the CERN guidelines consider 85% weight for height as indicator of admission eligibility while the surveillance system used 80% as a critical indicator; the Manual states simply that 89% and under weight for height is malnutrition.

c) Limitation on Length of Stay

If CERN resources are to be reserved for the recuperable children and the educable mothers (and alternative programs in the nature of supplements, e.g. substituted at lower cost for these nevertheless neediest-category families), chronic cases must be taken out of the program through hard-and-fast rules regarding length of stay. Even shorter terms than the now-planned four-month cycle should be tried and the results compared with the ones we now have. In any case, the rule must be one cycle per mother, with the exceptions made only at the time of the supervisory visit. These suggestions are reinforced by results tabulated in the Projet Intégré suggesting that improved child health may occur as early as 12 days following the rehabilitation/education of the mother (as in the foyers de démonstration) and may not be very different after a three months cycle (72% of children improved in the Projet Intégré recuperation center)[1/] than after the longer-than-five months CERN cycle (71% of children improved). N.B. Long-term results (in continuing CERN-graduate improvement and sibling prevention) are not yet known.

d) Age of Children

Out of the total beneficiaries in the CERN profile, 8 out of 67, or 12%, were children over five years old. (See Table III and III-A). Unquestionably needy, these children are outside of the objectives of the CERN which is the recuperation of 0 to five year olds.

The norms also imply a priority to the care of younger (more vulnerable) children in the statement of admission criteria. Yet the Profile and details elaborated in Tables VI (average age of children at the time of entrance into the CERN) and Table VIII-D (age distribution of children

1/ preliminary information provided verbally by Mirbeille Henri at Petit-Goave, December 8, 1978. The final report shows a higher percentage gaining.

at the time of on-site visit) show that most of the children are older than 6-24 month age range favored in the Norms. Average age at entrance was 33.4 months, and the percentage of children under 24 months stood at 35%. Nearly 24% were over four years old.

The intentions of the guidelines must be enforced if impact on the most nutritionally vulnerable age group is to be achieved.

e) Supervision

Norms might call for a minimum of three visits annually, with priority given to visits of CERNs on the "opening" and "closing" dates of either cycles or of the facility itself.

Principal emphases of supervisory visits, beyond the points now covered in the supervisor's report might include: to upgrade the education techniques used and to refine the content to the area in question; to determine whether there are children who should be exited because of nutritional status and whether overall malnutrition has been reduced sufficiently to move the center to another location, and to motivate both CERN staff and mothers.

Responsibility for supervision of the CERNs needs to be shared between the Bureau of Nutrition and the Regional Health Administrators and lines of authority defined.

B. Dietary Adequacy

Problem - The level of weight gain (raw data) appears low despite the reasonable percentage of children who maintained weight for age or gained after an average plus 5.4 month stay in the CERN. Table V shows that the percentage of second and third degree malnutrition among CERN entrants was 88% while the percentage of second and third degree malnutrition among exitees was 74%. According to the data compiled on the same Table, after four months, the percentage in these two categories of malnutrition dropped only 2%, from 88 to 86. Edema was often reported as present in the same child over several months. Many affecting factors may contribute to slow recovery and the diminished rates of recuperation and/or greater weight-for-age progress including presence of other health problems, and the influence of environmental insults of the community and home, but knowledge about the adequacy of the CERN diet furnished and consumed is essential to the program. The Guidelines note that the feeding should provide 85% of nutritional needs (not specifying calories or proteins) and consist of locally available foods, "giving special attention to the most serious cases (children in third degree malnutrition with edema) and to children suffering from lack of appetite and marasmus."

The assumption is that other foods are provided at home. We asked 39 CERN mothers whether they gave beverages or food at home. 10% said they gave nothing and another 20% gave sweetened water or tea (herbal) only. In reply to the question of whether their children were "always hungry" at night (meaning giving annoying indications) most said that they were. This suggests to me that these 30% had nothing to give. The Responsables

who were asked the same question essentially confirmed the mother's answers.

With the assistance of Marie Christine Bertrand, an attempt was made during the evaluation to take CERN menus and food purchases for a month and ascertain adequacy. The methodology is a part of Annex I. Our efforts were unsuccessful as was well summarized by M.C. Bertrand principally because the method relied on the observations of the responsables, and the weights and portions noted in the records could not be verified. According to the information obtained, 2 centers were providing nearly 150% of protein needs and a third, over 300%. What may be evident is that the money given for food is adequate (this assumes that the stated purchases were indeed made) but that it is being divided among far more people than expected--i.e. the children and needy mothers. We considered any consumption behavior during our visit to be special due to our presence. One observation which may have significance is that the first food given upon arrival of the children is a calorie-rich gruel usually made of flour, oil, sugar, and milk (averaging one pound per 40 portions) which the children eat ravenously in large quantities. As a result they are not so hungry when the diner, more important in protein and other nutrients, is served a little later.

While the study did not serve the purpose intended, i.e., a quick assessment of adequacy of funds to meet nutritional needs of the children, it is interesting to note that the results in percentage of adequacy of calories vis-a-vis adequacy of proteins came out to about the same ratio--one to two--as that found in studies made at Sans Fil and Portail Leogane in 1977. In those studies, 59-61% of calorie requirements and 97-130% of protein requirements were met.[1/]

Action - That dietary studies be made in selected CERNS at the earliest date to determine the adequacy of nutrients furnished and consumed by the CERN child, the number of consumers of the food prepared, and the adequacy of fund levels to meet 85% the needs.

- That a special formula be utilized for the first days (or)weeks in the CERN for the seriously malnourished child, such as the Kwash-Milk used in the Projet Intégré, and as described in the Manual of Norms (page 63);

That USAID provide funding for auxiliary teams to make week-long studies at four randomly-selected CERNs and participate in establishing a methodology and schedule for them;

That the results be disseminated to all governmental and private groups who can benefit from such information for their own programs.

1/ Section IV, Table No. 6-A and 6-B, my report of March 1978, op.cit.

C. Primary Focal Point and Objective - the Educated Mother.

Problem - Emphasis has drifted from focus on the mother and her educational needs for a preventative impact to more emphasis on the child and a curative effort. An average of 60 mothers a CERN (See Table VII) with 20% of those receiving less than adequate education makes the program expensive since the high rewards of preventative impact are lost. The program lacks innovative motivational input to stimulate greater mother interest and increased attendance; much too pedagogical an approach is used to teach the nutrition basics; and the content spans 22 subjects in relative depth. While child improvement is demonstrational, it is less effective than it might be given the present lengthy stays and low level of progress after four months.

To improve content of education, making it increasingly adaptable and applicable by the mothers requires more knowledge about child-rearing practices, distribution of food within the family, the utilization of fuel--all the restraints that might prevent modifications in care and feeding and the points where interventions are most likely to be effective.

Table VIII - J shows that the mother had learned the lessons taught quite well while the results of Table VIII - G suggest that she did not apply them well given a repeater rate of 27 for 40 mothers or 68%. Part of the explanation may be learned from Table VIII - J^2; 25% of the mothers

thought they could not apply at home what they had learned at the CERN, with 36% of the responsables agreeing!

A potentially invaluable teaching tool, the Road-to-Health card, is neglected. In the CERNs visited, the responsable utilized the graphs for her own calculation of nutritional status, did not see them as a dynamic visual instrument for motivating mothers. Only one believed that the mothers were capable of understanding it (See Table VIII-I). Part of the problem is the extremely poor design of the presently-used black-and-white hard-to-read, graph that is used in Haiti.

Action - That USAID and the Bureau of Nutrition pinpoint, based on needs, objectives sought in studies that are now planned--1) to learn more about community mores and 2) to overhaul education and training approaches and programs--so that they are completely relevant to the needs of the CERN (ascertaining appropriate messages and motivational techniques for CERN mothers) as well as to other needs.

That programs be redirected to the mothers by setting new targets for the future that are expressed first in terms of effect on mothers and families and that more emphasis be given to making these kinds of studies and analyzing them rather than the child recuperation results.

That new well-designed, attractive Road-to-Health cards be utilized, ordered with a plastic envelope (they are available in other countries)

and that they be given to the mothers for motivational purposes and for assuring continuity in child health knowledge for migrating families.

Suggestions

If, even among the "graduates" there are some 20% of the mothers who receive less than 10 training sessions, it likely that the 21 subjects are too lengthy and complex; the salient nutrition basics need to be presented simply, as early as possible after contact with the mother, and repeated.

Alternatives to the pedagogic approach should be tried--e.g. mother role playing, miniature market places for testing acquisition of knowledge.

Programs should be directed to "Mothers first" with incentives such as a diploma for "graduates" who complete an adequate number of sessions and come for followup.

New emphasis on home visits should be given, in which the responsable follows a protocol exploring with the mother the determinants of malnutrition in her own setting.

That education come to grips with the frequency with which children need to be fed, complicated by the mother's absence at work and the

fact that she often must leave something behind that can be fed to the child by another caretaker.

Mothers should be made more active recruiters of other children; and attempts should be made to get at the 15-19 year old women or new mothers not now reached through the CERN because eligibility for Center participation demands that the mother already have at least one malnourished child; CERN mothers could invite this strategic group to the educational sessions.

Community surveys to determine benefits for the entire community might be made prior to, one month following, and one year after, a CERN existence. A sampling might include six of the communities randomly selected, which would require 72 man days (24 days of three people weighing-measuring) and another 7-10 days for analysis. USAID might want to consider financing the analysis and funding supplemental survey hours.

Another suggestion concerns the strengthening of ties between the CERN and the best-continuity elements in the community (whether Community Council agents de santé or other). Once the CERN has moved on, the base for follow-up of exited children should be preserved preciously. Leaders selected from the community during operation of the CERN could hopefully constitute a core group around which such activities as selected supplementation might take place.

3. Training/Retraining Needs

Wide variations in capability in data gathering and reporting and in attitudes towards the mothers were found in the Centers visited (Tables VIII-A and VIII), suggesting that rather poor directors were retained along with excellent ones. The failure in performance requires correction through retraining or severance. The inspired responsable deserves a cadre of equally capable directors.

Areas that appeared to need refresher courses were: recognition of edema, its expected duration and the alarm that should be signalled by notations of edema month after month for the same child: (See raw data sheets); reorientation about the Road-to-Health card; recording more adequately dropouts; and giving more attention to home visits and child followup.

Action - Continued refresher training by the Bureau of Nutrition and decisions taken by BON and the Ministry of Health to dismiss incapable staff.

Monitoring System of CERNs - Quarterly Report

Statement or Problem - The monthly reports that are prepared in the CERNs are not pieced together efficiently to provide the information needed by the Bureau, or Regional Health Office, or USAID regarding movement into and out of the Center, the extent of nutritional improvement made, or the status upon entering. Unless great efforts are made in the Central Office to line up children in a tedious, lengthy manner

(as was employed to establish 12-month data for each center for the present study), it is impossible for a supervisor to detect recurring problems or consistent good performance, or to know what is being accomplished in numbers admitted, exited, improved, etc., in short, the effectiveness of its inputs.

Action - The quarterly report should become the monitoring device and the continuing evaluation document. It will be such if the following minimal information is included: 1) Quarterly and cumulative totals (from the time a CERN opens) for Admissions, Exits and number remaining in the Center; 2) Quarterly and cumulative breakouts of nutritional status[1/] divided into three groups--new admissions, exitees, other attendees; 3) Quarterly and cumulative totals or percentages of deaths, dropouts, siblings, readmissions, mothers educated.

Suggestion - It might be useful to have a management expert make recommendations for a system of data collecting, the form of compiled data to be submitted from regions in the future, as a national surveillance system is being developed but also to serve vital present needs more efficiently for the CERN network and for the surveillance work how done by the Bureau of Nutrition.

Expertise in report format and data compilation would be needed.

II. THE INTEGRATED PROGRAM

A. Attaining Broader Coverage

Problem or Statement - It is estimated that the BON/USAID network

1/ according to either percentage in each degree, or percentage who maintained weight-for-age or gained and percentage who lost.

of CERNs cares for some 1,800 under-five-year-olds and protects another 5,400 siblings. (We expect our mothers to have seven children; we know the CERN child is on the average the fourth one; the three subsequent ones are protected thanks to her education). If we assume an under-five population of 900,000 and arbitrarily choose 30% as the number of seriously malnourished (according to the most recent nationwide survey based on weight for age, the percentage of second and third degree malnutrition among under six year olds was 52%), we have a target population of 270,000 under five year olds. We omit for now other vulnerable groups such as nursing and pregnant women. The estimated cost of operating a CERN for 12 months is $10,000. A single CERN is reaching about 60 under five year olds and protecting right now another living sibling at home for each CERN mother, or 60 more protected children thanks to the program. Thus at the rate of 120 per CERN and with the target populations in the range of 270,000, it can be seen that going the CERN route to meet the problem is quite impossible in terms of cost and feasibility of implementing, say, 2,200 CERNS! Planning them over a long time frame (but what would even doubling the number we have today do to the already-strained personnel resources!) would place our goal date somewhere in the middle of the 21st century.

Present attempts to plan broader coverage by whatever means, are hampered by the lack of agreed strategy and priorities. Two analyses that could be useful to such planning are still in the process of preparation--namely the forthcoming "Projections and Policies" from the Haitian body designated to formulate nutrition policy--the Division de Formulation de Politiques

Alimentaires et Nutritionnelles (DIFPAN), and the results of the national nutrition survey for which data gathering was completed in February of last year. The latter especially is expected to point to areas and age groups deserving priority attention.

Comment - A more equitable distribution of available services and resources should be made among all of Haiti's seriously malnourished children. While alternative programs may of necessity be less comprehensive (reserving the least diluted for edematous and third degree children), a compromise is required with regard to services delivered. Such a compromise is less sinister when compared with present triage of selecting the 1.3% of the seriously malnourished population who will benefit from the 30 CERNs. (60 recuperated and 60 protected children times 30 CERNs divided by the 270,000 in need).

The right kinds of education programs can reach areas where it might be logistically impossible to have a CERN (because of inacessibility or where distances between clients are so large that groupings in sufficient number are impossible). Program alternatives are discussed in Section C.

The initial steps that will be required for a national integrated program--i.e., the training of personnel to train others in how to record nutritional status data on the Road-to-Health cards and the physical signs of edema, and developing a rational system of data-gathering and analysis--do not depend heavily on the refined directions hoped for from a national nutrition policy and strategy. Educated guesses can be made on the basis of existing information as to where first steps should be taken; there might also be more important considerations than need at the outset of the program--such as

potential cooperation and chances for success.

B. Reorienting Bureau of Nutrition Activities

Problem - It seems unlikely that the Bureau of Nutrition can respond to the envisaged training, education and supervisory needs for launching a national scale nutrition effort without diminishing the present level of assistance to the CERN operation.

While many of the projected activities that would incorporate nutrition into the health systems of the North and South regions have proceeded somewhat on schedule, it is now urgent that plans proceed for implementation if the program is not to fall far behind schedule. The plans presumably will include all of the pre-decision meetings for delegation of responsibilities vis-a-vis the CERNs to regional health administrators, designating personnel and estimated Bureau time to be reserved for the CERN program and establishing functions, norms, and field schedules for other personnel who will be a part of the nutrition component in the integrated health program. Elaborating nutrition education programs, the resources required, targets, selecting and trying alternative program solutions, refining operating manuals and coordinating a national nutrition monitoring entity, would appear to be the principal assignments at the Bureau, acting as the heart of the nutrition emphasis in the integrated field program.

Action required - Intensive discussions among the Bureau of Nutrition, USAID and Ministry of Health officials concerned as to a mutually agreeable plan to achieve this transition and move into the full action phase.

C. Looking at Alternatives

Statement or Problem - Among the possible approaches or interventions that might be carried out in the health/nutrition sector, the CERN package probably represents the most comprehensive group of ingredients--supervised food supplementation, demonstration-type, participatory mother education, activities to change the environment, notably agricultural improvement. It is an expensive route in money and in manpower. Dollar for dollar with other programs, the CERN may not be able to compete with activities that are concerned with more recuperable children. A virtue of the CERN has been its direct route to the hardest core needy mother, but she may not be as educable as the mothers in other programs.

In Haiti for the next several years, it may be impossible to deliver perceptible nutrition impact without supplementary food as part of the package. Yet it is interesting to observe the reduction in the 1-4 mortality rate in the Projet Intégré census tract that "delivered" surveillance only--i.e., increased mother awareness via the effective use of the Road-to-Health visual graph of weight-for-age nutritional status.

For the rural areas, the proposal for a health delivery system now under consideration by our two governments, appears to be a useful vehicle for attaching strengthening nutrition components. The health delivery program has nutritional improvement objectives, requires nutritional status baseline data and would seem to constitute the framework for the rural nutrition surveillance system.

To ensure that the system reaches the most nutritionally needy, special

recruiting efforts may have to be made by the health agent lest the most seriously malnourished fall into the cohort of the 30-40% of children who do not go to clinics in Haiti, based on the recent experience of the Projet Intégré.

To add a meaningful nutrition education component to the delivery system, a nutrition-trained auxiliary could operate out of the dispensary, (serving 8-10,000 people and some 1,600 households) help with the teaching and recording of nutritional status data gathering and reporting, hold 20 foyers to reach 300 households a year and help deliver food supplements as well as health services to the beneficiaries qualifying under the Bureau of Nutrition Norms.

Action - The attached study of the cost effectiveness of different programs which have been tried in Haiti with the objectives of reducing infant mortality and morbidity and improving nutritional status should be discussed among USAID, the Bureau of Nutrition, appropriate health officials and representatives of the voluntary and international agencies in some kind of regularized manner . This structure, which might be the sub-committee mentioned above, could serve other purposes such as cross-fertilization, clearing house, and operational base for disaster response.

A study of the supplementary food needs and sources for varying packages will be made over the next few weeks and should provide additional guidance for this group. An up-to-date précis on where Akamil production stands would be a useful beginning for looking at the potential for new kinds of programs.

TABLE I ALL AID - ASSISTED-CERMS - OCTOBER 1976 - DECEMBER 1978. TOTAL CAPABILITY.

	Transferred From	Transferred To	Oct 76	Nov 76	Dec 76	Jan 77	Feb 77	Mar 77	Apr 77	May 77	June 77	July 77	Aug 77	Sept 77	Oct 77	Nov 77	Dec 77	Jan 78	Feb 78	Mar 78	Apr 78	May 78	June 78	July 78	Aug 78	Sept 78	Oct 78	Nov 78	Dec 78	Capability in Months	Capability in Children Months	OCT.77-SEPT. 78 Capability in Months	OCT.77-SEPT. 78 Capability in Children Months
1. Vialet			x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	27	945	12	420
2. Santo	T-1		x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x												16	560	4	140
3. Fond Droit	T-2		x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x												16	560	4	140
4. Croix Des Peres	T-3		x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x												16	560	4	140
5. Portail Leogane				x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	26	910	12	420
6. Maissade				x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	26	910	12	420
7. La Vallee				x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	26	910	12	420
8. Orangers	T-4			x	x	x	x	x	x	x	x	x	x	x	x	x	x	x												15	525	4	140
9. Peredo	T-5					x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x		23	805	12	420
10. La Montagne	T-6					x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x		23	805	12	420
11. Chevalier	T-7					x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x								17	595	8	280
12. Seguin	T-8					x	x	x	x	x	x	x																		7	245	0	-
13. La Faussette						x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	24	840	12	420
14. Blockhauss						x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	24	840	12	420
15. Bainet						x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	24	840	12	420
16. Pilate						x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	24	840	12	420
17. Gens de Nantes							x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	23	805	12	420
18. Carice							x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	23	805	12	420
19. Thomonde								x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	22	770	12	420
20. St. Jean Du Sud	T-9									x	x	x	x	x	x	x	x	x												9	315	4	140
21. Pont Salomon	T-10										x	x	x	x	x	x	x	x	x	x	x	x	x	x	x					15	525	11	385
22. Marc Eric										x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	20	700	12	420
23. Port-A-Piment										x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x		19	665	12	420
24. Pestel													x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	17	595	12	420
25. Bas Gris-Gris														x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	16	560	12	420
26. Mapou														x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	16	560	12	420
27. Oriani																x	x	x	x	x	x	x	x	x	x	x	x			12	420	11	385
28. Belle Anse	T-11													x	x	x	x	x	x	x	x	x	x	x						12	420	11	385
29. Bonyotte		T-1																			x	x	x	x	x	x	x	x	x	9	315	6	210
30. Decouze		T-2																	x	x	x	x	x	x	x	x	x	x	x	11	385	8	280
31. La Colline		T-3															x	x	x	x	x	x	x	x	x	x	x	x	x	13	455	10	350
32. LaFond		T-4																	x	x	x	x	x	x	x	x	x	x	x	11	385	8	280
33. Turette		T-5																											x	1	35	-	-
34. La Croix		T-6																											x	1	35	-	-
35. Meyer		T-7																					x	x	x	x	x	x	x	7	245	4	140
36. Fond Jean Noel		T-8											x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	17	595	12	420
37. Carrefour Joute		T-9																	x	x	x	x	x	x	x	x	x	x	x	11	385	8	280
38. Formont		T-10																								x	x	x	x	4	140	1	35
39. Prechet		T-11																								x	x	x	x	4	140	1	35
40. Segur																								x	x	x	x	x	x	6	210	3	105
41. Couette																					x	x	x	x	x	x	x	x	x	9	315	6	210
TOTALS																														642	22,470	344	12,040

TABLE II

CAPABILITY AND UTILIZATION, SELECTED CERNS, OCTOBER, 1977 - SEPTEMBER, 1978

Center	Months in Operation during Period	Maximum Capacity (a) x 35 Children or, Children Months	Average Number of Children per Month	Total Children Months Utilized	% Utilization of Center Months (d) ÷ (b); or (c) ÷ 35	Maximum Capacity for Children/Cycles during Period	Total Number of Children Enrolled during Period	Cycles Utilized (1 for 35 different Children) (g) ÷ 35	% Utilization of Cycle Capability (h) ÷ (f)	Overall Center Efficiency Utilization of Center Months and Cycle Capability (i)
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	%
BAINET	12	420	23.1	277	66%	3	78	2.2	74%	49%
BLOCKHAUSS	12	420	30.7	368	88%	3	69	1.97	66%	58%
BONYOTTE	6	210	28.8	173	82%	1.5	62	1.7	118%	97%
CARICE	12	420	27.7	332	79%	3	85	2.4	81%	64%
FOND JEAN NOEL	12	420	27.5	330	79%	3	87	2.5	83%	65%
LA COLLINE	10	350	30	300	86%	2.5	91	2.6	104%	89%
LA FAUSSETTE	12	420	28.5	342	81%	3	74	2.1	70%	57%
MAISSADE	12	420	24.3	292	70%	3	66	1.9	63%	44%
MARC ERIC	12	420	26	312	74%	3	90	2.6	86%	63%
PESTEL	12	420	28.4	341	81%	3	75	2.14	71%	58%
PILATE	12	420	28.6	343	82%	3	100	2.9	95%	78%
PORTAIL LEOGANE										
AVERAGE		394	27.6	310	79%		80*	2.3*	83%	65%

*Omits Bonyotte and La Colline which functioned less than 12 months

TABLE III — PROFILE "A" OF CHILDREN FROM RANDOMLY SELECTED CERNS, PERIOD FROM OCTOBER 1977 TO SEPTEMBER 1978 ADMISSION, DROPOUTS, BENEFICIARIES, NUMBER OF 0-5 YEAR OLDS

	Number Admitted During Period	Dropouts 1/	Deaths	Children Who Spent less Than One Month at either End of Time Frame 2/	50% of the Afore-Mentioned	2 Months + More CERN Beneficiaries during Period 3/	Over Five Years of Age	0-5 Year Old Beneficiaries
BAINET	78	12	1	(16)	8	57	7	50
BLOCKHAUSS	69	–	2	(12)	6	61	13	48
BONYOTTE	62	7	2	(15)	7.5	45.5	–	45.5
CARICE	85	7	–	(8)	4	74	5	69
FOND JEAN NOEL	87	–	3	(23)	11.5	72.5	16	57.5
LA COLLINE	91	26	4	(4)	2	59	3	56
LA FAUSSETTE	74	7	–	(2)	1	66	5	61
MAISSADE	66	6	–	(5)	2.5	58.5	5	53.5
MARC ERIC	90	1	–	(3)	1.5	87.5	10	77.5
PESTEL	75	6	2	(8)	4	63	13	50
PILATE	100	13	–	(5)	2.5	84.5	10	74.5
PORTAIL LEOGANE								
AVERAGE	80	8	1	(+8)	+4	67	8	59

1/ Dropouts refer to children who were in the CERN less than two months; the number does not necessarily correspond to "dropout" mothers who may have completed minimal education despite death or child dropout.

2/ See detailed for this calculation on Table III-A

3/ Beneficiaries are known in other programs as "rehabilitated" children; in this case, they have been cared for in the CERN two months or more.

TABLE III-A - DETAILED BREAKOUT OF ADMISSIONS, ATTENDEES OF LESS THAN ONE MONTH

	Total Number Enrolled during the Period	Number in the CERN Oct 1977	Number who Attended month or less at Beginning of Period	Number of Admissions during the Period	Number Exited During Period	Number in Center at Close of Period	Number in the CERN Sept. 1978 Who Attended Month or less
BAINET	78	25	16	53	56	9	0
BLOCKHAUSS	69	6	0	63	37	31	12
BONYOTTE	62	0	0	62	22	31	15
CARICE	85	10	7	75	42	26	1
FOND JEAN NOEL	87	30	0	57	52	32	23
LA COLLINE	91	0	0	91	35	26	4
LA FAUSSETTE	74	12	0	62	41	26	2
MAISSADE	66	25	3	41	42	18	2
MARC ERIC	90	24	0	66	76	12	3
PESTEL	75	23	4	52	43	24	4
PILATE	100	30	5	70	57	30	0
AVERAGE	80	17	2.3	63	46	25	6.5

TABLE IV PROFILE "B" OF CHILDREN FROM RANDOMLY-SELECTED CERNS, PERIOD FROM OCTOBER 1977 - SEPTEMBER 1978

GROWTH PERFORMANCE ACCORDING TO THE BOSTON STANDARD, PERCENTAGES ABOVE AND BELOW.

	Admissions	Dropouts and Deaths	Edematous Children	Data Insufficient	Number Included Present Study	Percent 0 or Above Stand.	Percent Below Standard
BAINET	78	12	0	17	48	71	29
BLOCKHAUSS	69	2	2	11	54	54	46
BONYOTTE	62	9	4	16	33	73	27
CARICE	85	7	5	10	63	69	31
FOND JEAN NOEL	87	3	1	22	61	77	23
LA COLLINE	91	30	4	10	47	60	40
LA FAUSSETTE	74	7	0	2	65	69	31
MAISSADE	66	6	0	6	54	68	32
MARC ERIC	90	1	0	13	76	99	1
PESTEL	75	8	3	7	57	81	19
PILATE	100	13	3	12	72	65	35
PORTAIL LEOGANE							
AVERAGE	79.7	9	2	11.5	57.3	71%	29

1. Dropouts include children who were in the CERN for less than two months.
2. Insufficient data means that children could not be included because comparative weights were not available, that birthdates were unknown and weight-for-age calculations could not be made.
3. Edematous children are omitted because initial loss of water (and therefore of weight) indicates progress. Children who had edema upon admission but for whom a) several months have elapsed since a notation of "edema" was made in health record or b) who are in an upswing of weight gain are included in the study.
4. Marc Eric data considered incorrect. Excluding data from this CERN would have made the percent of children at 0 or above Standard, 69% and the percent below Standard, 31%.

TABLE V PROFILE "C" OF CHILDREN FROM RANDOMLY SELECTED CERNS, PERIOD FROM OCTOBER 1977 TO SEPTEMBER 1978

NUTRITIONAL STATUS OF ENTRANTS, EXITEES AND PRESENT ATTENDEES, BASED ON BOSTON WEIGHT-FOR-AGE STANDARD AND EXPRESSED IN DEGREES OF MALNUTRITION OR NORMAL STATUS ACCORDING TO GOMEZ' SCALE.

	ENTRANTS 1/					EXITEES 2/					ATTENDEES 3/				
		(In Percentage)					(In Percentage)					(In Percentage)			
	Number	N	1st	2nd	3rd	Number	N	1st	2nd	3rd	Number	N	1st	2nd	3rd
BAINET	46	2	26	48	24	36	6	22	58	14	8	–	37.5	62.5	–
BLOCKHAUSS	63	2	8	57	33	37	–	27	59	14	20	–	10	50	40
BONYOTTE	61	–	11	59	30	22	–	27	46	27	8	–	–	87.5	12.5
CARICE	67	–	9	51	40	46	2	31	41	26	24	–	17	58	25
FOND JEAN NOEL	60	2	7	63	28	47	–	21	55	24	11	–	–	45	55
LA COLLINE	80	–	17.5	42.5	40	32	–	37	41	22	13	–	23	62	15
LA FAUSSETTE	60	–	–	53	47	41	–	10	58	32	15	–	13.3	53.3	33.3
MAISSADE	66	–	14	44	42	38	–	24	47	29	14	–	–	57	43
MARC ERIC 4/	67	–	16	57	27	57	19	32	30	19	29	21	24	41	14
PESTEL	52	–	–	38	62	41	–	15	46	39	5	–	7	53	40
PILATE	61	2	16	57	25	54	–	9	61	30	8	–	–	62.5	37.5
PORTAIL LEOGANE															
AVERAGE		1	11	52	36		3	23	49	25		2	12	57	29

N.B. Edematous children are counted as third degree. Does not include children for whom comparative weights were lacking.

1/ Entrants include only those children who were admitted to the CERN during the period studied, not those already in the CERN in October 1977. Not included are over five-year-olds or children whose birthdates are unknown.

2/ Exitees include only those children who exited the CERN after a duration of at least two months. Exitees never include dropouts or attendees of less than two months although included are children who may have left the CERN without having attained "recuperation" status according to the norms (92% weight for height) or in the judgment of the CERN director.

3/ Attendees are children who are still in the CERN, but have been there for four months or more and should be "recuperated" if four-month duration criterion is valid.

4/ Data for Marc Eric are questionable in all respects except for entrant information recorded by BON personnel.

TABLE VI PROFILE "D" OF CHILDREN FROM RANDOMLY SELECTED CERNS, PERIOD FROM OCTOBER 1977 TO SEPTEMBER 1978
LENGTH OF STAY, AVERAGE AGE

	Length of Stay in[1] Months and Percent Remaining CERN	Average Age at[2] Entrance (in Months)
BAINET	5.3 (13%)	31
BLOCKHAUSS	6.6 (34%)	37.6
BONYOTTE	4.1 (35%)	26.7
CARICE	4.5 (35%)	32.7
FOND JEAN NOEL	5.4 (16%)	40.9
LA COLLINE	5.04 (27%)	24.5
LA FAUSSETTE	6.02 (40%)	28.2
MAISSADE	5.9 (29%)	36
MARC ERIC	3.95 (3%)	35.3
PESTEL	6.38 (25%)	38.25
PILATE	5.76 (12%)	35.8
PORTAIL LEOGANE		
AVERAGE	5.4 (24%)	33.4

[1] Does not include dropouts or deaths. For those children remaining in the CERN after September 1978, we have included only those who were in the CERN for at least three months. Between parentheses following the number of months is the percentage of children still in the CERN after September 1978.

[2] Only the ages of children who entered on or after October are included to reduce errors in transferring age information ...

TABLE VI a

LENGTH OF STAY OF CHILDREN IN SELECTED CERNS CONCERNING
THOSE WHO ATTENDED OCTOBER 1977 - SEPTEMBER 1978

(*) The number of children who were still in the CERNS after September 1978 is indicated in parentheses following the number of children noted in each category of time.

Center	Total Number	No. Still in Center	1 Month		2 - 3 Month		4 Months		5 - 8 Months		9 - 12 Month		13 +	
			No.(*)	%	No.(*)	%	No.(*)	%	No.(*)	%	No.(*)	%	No.(*)	%
BAINET	78	9	12	15%	15(1)	19%	11(3)	14%	31(3)	40%	9(2)	12%	-	-
BLOCKHAUSS	69	31	12(12)	17%	2	3%	11(4)	16%	32(7)	47%	7(4)	10%	5(4)	7%
BONYOTTE	62	30	23(14)	37%	19(7)	31%	5(2)	8%	15(7)	24%	-	-	-	-
CARICE	76	25	8(1)	10.5	17	22%	8(1)	10.5	43(23)	57%	-	-	-	-
FOND JEAN NOEL	86	31	23(21)	27%	8	9%	8(1)	9%	45(9)	53%	2	2%	-	-
LA COLLINE	91	26	33(4)	36%	26(9)	28%	7(1)	8%	17(5)	19%	8(7)	9%	-	-
LA FAUSSETTE	62	26	9	14%	19(9)	31%	6(1)	10%	18(7)	29%	10(9)	16%	-	-
MAISSADE	59	18	8(2)	13%	11(2)	9%	8(8)	13%	27(5)	46%	4	7%	1(1)	2%
MARC ERIC	74	12	4(3)	5%	30(7)	41%	28(2)	30%	12	16%	-	-	-	-
PESTEL	75	24	10(4)	13%	18(5)	24%	9(3)	12%	23(6)	31%	12(3)	16%	3(3)	4%
PILATE	100	30	11	11%	30(22)	30%	13(4)	13%	38(4)	38%	5	5%	3	3%
PORTAIL LEOGANE														
AVERAGE				18		23		13		37		7		1.5

N.B. This table includes all those children whose admission dates are known, with dropouts, deceased, etc; it omits only those whose admission dates are unclear or unknown.

We have preferred to include children not yet exited because the figures affect significantly the global durations of Center stay.

TABLE VII

MOTHER GRADUATES OF SELECTED CERNS AND EDUCATION INTENSITY, OCTOBER 1977 - SEPTEMBER 1978

Center	Theoretical Mothers-No. of Child Attendees Over The Period Studied.	Mothers Who Spent Less than One Month at either Extreme of Time Frame	50% of Aforementioned No Mother/Subst. Attendees	Minus Sib/Repeats - Same Mothers	Minus Dropouts (less than 2 months' stay)	Total "Educated Mothers"	Intensity of Education			
							% Who Attended 10 Sessions* or Less	% Who Attended 11-20 Sessions*	% Who Attended 21-30 Sessions*	% Who Attended More Than 30 Sessions*
BAINET	78	(16)	8	0	12	58	60%	38%	2%	-
BLOCKHAUSS	69	(9)	4.5	5	0	59.5	0%	5%	40%	55%
BONYOTTE	62	(14)	7	5	6	44	32%	38%	22%	8%
CARICE	85	(8)	4	2	7	72	15%	23%	25%	37%
FOND JEAN NOEL	87	(16)	8	12	0	67	2%	50%	5%	43%
LA COLLINE	91	(5)	2.5	5	33 (1 is a sib)	51.5	43%	25%	18%	14%
LA FAUSSETTE	74	(1)	.5	4	7	62.5	18%	37%	14%	31%
MAISSADE	66	(5)	2.5	0	5	58.5	4%	36%	32%	28%
MARC ERIC	90	(3)	1.5	1	7	80.5	13%	5%	1%	13%
PESTEL	75	(7)	3.5	14	8	49.5	2%	17%	33%	48%
PILATE	100	(5)	2.5	15	20 (2 are sibs)	62.5	36%	15%	15%	14%
PORTAIL LEOGANE										
AVERAGE	80	(8)	4.	.5	6	9	60.5	20%	26%	18%	26%

*"Sessions" include both the days of helping in the CERN and the special weekly educational meetings. They are combined because some center Responsables did not note them separately.

TABLE VIII- A . DATA FROM VISITS TO RANDOMLY-SELECTED CERNS

SUPERVISION INTENSITY - STANDARD OF RECORD-KEEPING

Center	Opening of Center	Date 1/ Of Last Supervision	Comprehension of Nutrition Data and Accuracy of Data Gathering/Keeping 2/			
			Good	Adequate	Inadequate	Incorrect
BAINET	Jan 77	Dec 77			x	
BLOCKHAUSS	Jan 77	Sept 77		x		
BONYOTTE	Apr 78	None made.	x			
CARICE	Feb 77	Jan 78		x		
FOND JEAN NOEL	Aug 77	None made.	x			
LA COLLINE	Dec 77	June 78		x		
LA FAUSSETTE	Jan 77	Sept 77		x		
MAISSADE	Nov 76	Nov 77			x	
MARC ERIC	May 77	Nov 78				x
PESTEL	(CERN at Pestel was closed just prior to planned visit.)					
PILATE	Jan 77	Jan 78		x		
PORTAIL LEOGANE	Nov 76	June 78			x for special reasons	

1/ This means that a supervision has not been made at all, or has not been made over an interval, averaging seven months a Center. The CERN at Fond Jean Noel which has not yet had a supervisory visit has been functioning for 17 months. Bainet and Maissade whose reports have shown serious problems for many months have not been subject of a supervision for 13 months and 14 months respectively.

2/ Subjective evaluation made by the Consultant, supported by data reports in the Central office, but based more predominantly observations at the CERN.

TABLE VIII -B. DATA FROM VISITS TO RANDOMLY-SELECTED CERNS

FACILITY, LOCATION, PROXIMITY TO CERN/MEDICAL CENTER, ETC.

Center Visited-	Rented? Per Month?	Water Source? Treated?	Adequacy of CERN	Nearest CERN	Nearest Medical Facility?	How far?
BAINET	Yes. $15.	Pipe. No.	Play area lacking	Block-hauss	Bainet Hospital	10 Minutes
BLOCKHAUSS	Yes. $17.	Spring. Boiled.	Adequate	La Vallée	Jacmel Hospital	3 Hrs-Car 6 Hrs-Foot
BONYOTTE	Yes. $15	River. Filtered	Monotrice Lacks Place.	Mitton	Centre Simone Duvalier	30 Minutes
CARICE	Yes.	River. Boiled.	Crowded. No Paved Crt.	Gens de Nantes	Dispens. de Carice	3 Minutes
FOND JEAN NOEL	Yes. $15.	Boiled. Spring.	No enclosed eating area	Tu-rette	Centre de Santé Peredo	1 1/2 Hrs.
LA COLLINE	Yes. $15	Spring Boiled.	Storage areas Inadequate	Miton	Centre de Santé Gressier	1/2 Hr.
LA FAUSSETTE	Yes. $20.	Pipe. No.	Play area dark, small	Carré-nage	Pédiatrie, Hosp. Cap. H	25 Minutes
MAISSADE	Yes.	River. Filtered.	Adequate	Hinche	Dispens. de Maissade	10 Minutes
MARC ERIC	Yes. $15.	Spring. Filtered.	Lacks in-side eat-ing area	Forment	Centre de Santé Caraillon	2 Hrs-Car 7 Hrs-Foot
PESTEL	(CERN at Pestel was closed just prior to planned visit.)					
PILATE	Yes.	Spring. Boiled.	Adequate	Gros Morne	Hosp. Espérance, Pilate	20 Minutes
PORTAIL LEOGANE	No.	Pipe. Boiled	Adequate	Sans Fil	Hôpital Général	15 Minutes

TABLE VIII -C. DATA FROM VISITS TO RANDOMLY-SELECTED CERNS

COMMUNITY INTEGRATION

Center Visited	Center Opened	Personnel Began Work Resp.	Asst.	Respons. lives in Community	Assist from Community	Responsable Attends CouncilMtgs.	Council Interested in CERN?
BAINET	1-77	1-77	1-77	Yes	Yes	No	Yes
BLOCKHAUSS	1-77	1-77	1-77	Yes	No	No	Yes
BONYOTTE	4-78	4-78	5-78	Yes	No	Yes	Yes
CARICE	2-77	2-77	2-77	Yes	Yes	Yes	Yes
FOND JEAN NOEL	8-77	8-77	8-77	Yes	No	Yes	Yes
LA COLLINE	12-77	2-78	12-77	Yes	No	No	No
LA FAUSSETTE	1-77	1-77	1-77	Yes	Yes	No	No
MAISSADE	11-76	11-76	11-76	Yes	Yes	Yes	Yes
MARC ERIC	5-77	5-77	5-77	?	No	Yes	Yes
PESTEL	8-77	(CERN at Pestel was closed just prior to planned visit)					
PILATE	1-77	1-77	1-77	Yes	Yes	No	No
PORTAIL LEOGANE	11-76	11-76	11-77	No	No	N.A.	N.A.

TABLE VIII- D. DATA FROM VISITS TO RANDOMLY-SELECTED CERNS

AGE DISTRIBUTION OF CHILDREN IN ATTENDANCE FROM AVAILABLE RECORDS

Center	Number	In Months and In Percentages					
		Average Age	0-24	25-36	37-48	49-60	61+
BAINET	10	30	50	30	10	-	10
BLOCKHAUSS	26	45	19	23	15	12	31
BONYOTTE	26	27.7	61	15	8	12	4
CARICE	27	28.9	52	22	11	4	11
FOND JEAN NOEL	28	34.6	21	39	29	7	4
LA COLLINE	20	33.4	50	5	25	5	15
LA FAUSSETTE	20	26.5	55	20	5	15	5
MAISSADE	14 1/	38.2	7	36	43	14	-
PESTEL	CERN at Pestel was closed just prior to planned visit.						
PILATE	27	44.7	11	26	18	30	15
MARC ERIC	21	45.4	24	19	14	19	24
PORTAIL LEOGANE	Impossible to utilize this material.						
AVERAGE		35.4 2/	35	23.5	17.8	11.8	11.9

1/ In the absence of the Responsable on the day of our visit, the Assistant was unable to locate all of the current records; therefore, only partial number of children was included.

2/ This average is slightly higher than the average age of children at the time of admission (Table VI), a reasonable expectation.

TABLE VIII- E . DATA FROM VISITS TO RANDOMLY-SELECTED CERNS

PREGNANCY HISTORY OF WOMEN ATTENDING CERNS-AVERAGE & MORTALITY

Center	Number of Women	(IN PERCENTAGE) 3 or Less	4-5	6-8	9+	Average	Reported Mortality
BAINET	10	50	30	10	10	4.	32%
BLOCKHAUSS	21	81	9	4.5	4.5	2.7	18%
BONYOTTE	23	44	26	26	4	4.1	11%
CARICE	24	50	21	21	8	4.2	2%
FOND JEAN NOEL	24	37	21	25	17	5.2	14%
LA COLLINE	18	33	22	28	17	5.4	22%
LA FAUSSETTE	19	58	10	16	16	4.1	19%
MAISSADE	14 1/	64	29	7	-	3.	7%
MARC ERIC	20	60	15	25	-	3.6	4%
PESTEL	(CERN at Pestel was closed just prior to planned visit.)						
PILATE	24	21	50	21	8	4.3	21%
PORTAIL LEOGANE						3.1	22%

1/ In the absence of the Responsable on the day of our visit, the Assistant was unable to locate all of the current records; therefore only a partial number of mothers was included.

TABLE VIII -F. DATA FROM VISITS TO RANDOMLY-SELECTED CERNS

SUPPLEMENTARY FOODS GIVEN CERN CHILDREN AT HOME.

CENTER	INFORMATION FROM RESPONSABLE	INFORMATION FROM MOTHERS		
BAINET	Question omitted.	M-1	banana	milk
		M-2	corn,beans,banana	juice
BLOCKHAUSS	Question omitted.	M-1		tea (herbal)
		M-2		sweetened milk
		M-3		tea
		M-4	banana	tea
BONYOTTE	Question omitted.	M-1		sweetened milk
		M-2	nothing	
		M-3	nothing	
		M-4	corn-beans	
		M-5		tea
CARICE	Tea	M-1	something	juice or tea or milk
		M-2		tea
		M-3	something	tea
		M-4	bread	tea
FOND JEAN NOEL	Question omitted.	M-1	gruel	tea or juice
		M-2		sweetened milk
		M-3	banane,biscuit	tea
		M-4		orange juice
LA COLLINE	Question omitted.	M-1	gruel	sweetened milk
		M-2		tea
LA FAUSSETTE	Sweetened milk or flour gruel.	M-1	flour gruel	milk
		M-2	banane	sweetened milk
		M-3	WSB gruel	sweetened milk
		M-4	flour gruel	tea
MAISSADE	Question omitted.	M-1		sweetened milk
		M-2		tea
MARC ERIC	Question omitted.	M-1		tea
		M-2	nothing	
		M-3		grapefruit juice
		M-4	nothing	
PESTEL	CERN at Pestel was closed just prior to planned visit.			
PILATE	Milk - tea.	M-1		sweetened water
		M-2	rice, beans	tea
		M-3	flour gruel	sweetened milk
		M-4	nothing	
PORTAIL LEOGANE	Question omitted.	M-1	banana, herring	sweetened milk
		M-2	flour gruel	sweetened milk
		M-3	flour gruel	sweetened milk
		M-4		sweetened milk

TABLE VIII-G. ON-SITE VISITS TO RANDOMLY SELECTED CERNS

INFORMATION ON REPEATERS AND SIBLING OBTAINED FROM MOTHERS AND RECORDS AVAILABLE AT CERN

	FROM THE MOTHERS AVAILABLE							FROM THE RECORDS IN CERN AVERAGE NO. AND SIBLINGS
		First Child	No. of Cycles	Second Child	No. of Cycles	Third Child	No. of Cycles	
BAINET	M-1	x	1					
	M-2	x	1	x	1			0
BLOCKHAUSS	M-1	x	1	x	1			4
	M-2	x	1					
	M-3	x	2					
	M-4	x	1	x	1			
BONYOTTE	M-1	x	1					4
	M-2	x	1	x	1			
	M-3	x	1	x	1			
	M-4	x	2	x	1			
	M-5	x	1	x	1			
CARICE	M-1	x	1	x	1			5
	M-2	x	1					
	M-3	x	1					
	M-4	x	1	x	1			
FOND JEAN NOEL	M-1	x	1	x	1			4
	M-2	x	1					
	M-3	x	1	x	1			
	M-4	x	1	x	1	x	1	
LA COLLINE	M-1	x	1	x	1			2
	M-2	x	1					
LA FAUSSETTE	M-1	x	1					
	M-2	x	1					
	M-3	x	1	x	1			3
	M-4	x	1	x	1			
MAISSADE	M-1	x	1	x	1			0
	M-2	x	2					
	M-3	x	1					
MARC ERIC	M-1	x	2	x	1			
	M-2	x	1					1
	M-3	x	1	x	1			
	M-4	x	1	x	1			
PILATE	M-1	x	1					3
	M-2	x	1					
	M-3	x	1	x	1			
	M-4	x	2					
PORTAIL LEOGANE	M-1	x	1					
	M-2	x	1					No Info
	M-3	x	1	x	1			
	M-4	x	1					
AVERAGE SIBLING ON A CENTER								2.6

TABLE VIII-H. ON-SITE VISITS TO RANDOMLY SELECTED CERNS

1) MOTHERS AND MOTHER-SUBSTITUTES IN CERN 2) PERSON TO TAKE CHARGE AT HOME.[1]

IN PERCENTAGE

	Mother/Parent in Charge at CERN				Mother/Parent to take Charge at Home			
	Mothers	Sisters	Aunts	Other	Mothers	Fathers	Mothers	Brothers
BAINET	58	25	17	-		50		50
BLOCKHAUSS	86	7	-	7	75	25		
BONYOTTE	70	-	9	21	40	60		
CARICE	75	8.3	8.3	8.3	75		25	
FOND JEAN NOEL	100	-	-	-	25	75		
LA COLLINE	85	5	-	10		100		
LA FAUSSETTE	69	19	-	12	75		25	
MAISSADE	76	18	-	6	33	66		
MARC ERIC	88	-	-	12	50	50		
PILATE	64	14	14	8	100			
PORTAIL LEOGANE	-	-	-	-	75	25		
AVERAGE	77	9.6	4.8	8.4	50	41	4.5	4.5

[1] The question in creole was; ki moun ki pral okipe pitit la pou ou le li exeate? We cite it because of the rather unusual responses causing us to question whether its meaning was clear.

TABLE VIII- I. ON-SITE VISITS TO RANDOMLY-SELECTED CERNS ATTITUDES OF THE RESPONSABLES.

INFORMATION FROM THE RESPONSABLE

	Why the Children Get Sick and Have to Come to the CERN?	Do Mothers Understand the Education?	Do Mothers Understand the Chart?
BAINET	Ignorance and lack of money	Yes	No
BLOCKHAUSS	Mothers do not know the appropriate feeding of children.	Yes	Yes
BONYOTTE	Mothers can't give children the food they should have. (mamman yo pas gin kab pou bay yo mange)	Not all of them	No
CARICE	Because of ignorance on the part of most mothers	Question omitted	Question omitted
FOND JEAN NOEL	Becuase mothers didn't know what to feed their children	Yes	No
LA COLLINE	Because they haven't eaten well (yo mal mange)	Yes	No.
LA FAUSSETTE	Economic problems.	Question omitted	Question omitted
MAISSADE	Sometimes economic problem; sometimes, ignorance	Yes	No.
MARC ERIC	All attention given to coffee and none to other agriculture.	Yes with a lot of repetition	No.
PILATE	Because of ignorance	Question omitted	Question omitted
PORTAIL LEOGANE	Because of ignorance or lack of money	Yes	No.

TABLE VIII - J DATA FROM VISITS TO RANDOMLY-SELECTED CERNS

MOTHERS' KNOWLEDGE OF NUTRITION LESSONS

	Vitamin A sources	Akamil Knowledge: a) Food group b) Ingredients & Proportions	Knowledge water a) How to purify b) Why?	Treatment for diarrhea	Why breasfeed? 2 reasons
BAINET	Following the holidays, most mothers had not returned; those present were new.				
BLOCKHAUSS	4/4 correct	a) 4/4 correct b) 2/both I & P 2/Ingredients	a) 2/4 correct b) 2/4 correct	4 correct	1/to feed child 3/to make child grow 1/costs nothing
BONYOTTE	3/correct 2/don't know	a) 4/5 correct b) 4/both I & P 1/Ingredients	a) 3/5 correct b) 3/5 correct	3 correct 2 don't know	2/protects child 2/to feed child 1/better 1/don't know
CARICE	In pretest group; did not ask the specific questions.				
FOND JEAN NOEL	1/correct 1/don't know	a) 4/4 correct b) 3/both I & P 1/Ingredients	a) 3/4 correct b) 3/4 correct	3 correct 1 don't know	2/to feed child 1/to give child force 1/costs nothing 1/to develop child
LA COLLINE	2/2 correct	a) 1/both I & P b) Ingredients	a) 2/2 correct b) 2 correct	2 correct	2/fattens the child 1/develops the child 1/protects the child
LA FAUSSETTE	In pretest group; did not ask the specific questions.				
MAISSADE	3/3 correct	a) 3/3 correct b) 2/both I & P 1/Ingredients	a) 3/3 correct b) 3/3 correct	3 correct	1/to protect child 2/to feed child 3/give child force
MARC ERIC	4/4 correct	a) 2/4 correct b) 2/both I & P 1/Ingredients 1/don't know	a) 3/4 correct b) 3/4 correct	3 correct 1 herbal mix	2/to feed child 2/good for child 1/protects from illness
PESTEL	(CERN at Pestel was closed just prior to planned visit.)				
PILATE	In pretest group; did not ask the specific questions				
PORTAIL LEOGANE	4/4 correct	a) 4/4 correct b) 2/both I & P 2/Ingredients	N.A.	4 correct	1/to feed child 2/to strengthen child 1/costs nothing

TABLE VIII - J.2 CAN AND WILL MOTHERS APPLY WHAT THEY LEARN AT THE CENTER

	RESPONSABLE	MOTHERS
BAINET	Unsure, since she is readmitting children who had left the CERN. Hopes that mothers will apply what they learned	M-1 No, because of lack of money. Pa gen moyen M-2 Yes, by following advice of responsable.
BLOCKHAUSS	Yes, because they will have learned how to feed children. (konne ga yo konne ki jan pou yo prepare mange pou pitit yo.)	M-1 Yes, will feed as resp. is doing (moins ap suivre conseil miss la.) M-2 Yes, will feed as resp. is doing M-3 Yes, will feed as resp. is doing M-4 Non, do not have the means.
BONYOTTE	No, they do not have the means to get the food and they aren't capable. (pas gen moyen pou li bay ti moun nan mange yo pa gin kab)	M-1 Yes, will do as learned in Center M-2 Yes, by giving remedies and giving food three times a day M-3 Yes, by doing as resp. teaches M-4 Yes, by continuing to feed my child. M-5 No, because I have no money.
CARICE	Yes, since the problem is ignorance, an educated mother will take proper care.	M-1 No, because of not enough food at home. M-2 Yes, by giving what I learned in the CERN. M-3 Yes, by going as I learned. M-4 Yes, by putting into pratice the advice I got at the CERN.
FOND JEAN NOEL	Yes, because mothers now know what they should give their children to eat; they are no longer in ignorance.	M-1 Yes, by doing what the resp. taught me. M-2 Yes, by following the advice of the resp. M-3 Yes, I'll feed as the R. did M-4 Yes, I'll do as the R. does in CERN.
LA COLLINE	No, because they don't have money to do as we feed in CERN. (Yo pas ginyin kab pou ya nourri ti moun jan que fait nan Cent la)	M-1 Yes, I'll give the same food as in CERN. M-2 Yes, I'll give the child the same care (Map bali même occupation)
LA FAUSSETTE	No, the mothers don't have enough money to apply the information learned	M-1 Yes, I'll apply the advice of the CERN. M-2 Yes, following the advice of the CERN M-3 No. M-4 No.
MAISSADE	Yes, once mothers have learned how to feed children, they won't easily become sick again; I weigh children who have left the Center and they are progressing.	M-1 Yes, I'll give the child what he had in the CERN M-2 Yes, I'll follow the advice of R. M-3 Yes, I'm going to give food from the three food groups every day.

MARC, ERIC	No, because the mothers don't have the money to buy food for their children.	M-1 No, I don't have the means. M-2 Non. M-3 Yes, I'll do as the Resp has shown me. M-4 No, I don't have adequate means.
PILATE	Yes, most of the exited children maintain their health; those that are readmitted often didn't attend many sessions.	M-1 Yes, by giving the same food as CERN. M-2 Yes, by feeding the same way as CERN. M-3 Yes, by following CERN advice. M-4 No.
PORTAIL LEOGANE	Yes, because the ones that I see who have left the Center are doing well	M-1 Yes, I'll do as I learned at CERN. M-2 Yes, I'll practice what I learned. M-3 Yes, I'll give him the same to eat. M-4 Yes, I'll give him the three food groups every day.

TABLE VIII- K DATA FROM VISITS TO RANDOMLY-SELECTED CERNS

FOOD BUYING AND EATING BEHAVIOR - ACCORDING TO MOTHERS

	Who Buys Food for Family?	Who Distributes Food Portions in the Home?	Who Eats First?	How is the Food then distributed?
BAINET	2/mothers	2/mothers	1/husband 1/brother	2/adults eat first, children after
BLOCKHAUSS	4/mothers	4/mothers	1/husband 2/children 1/mother	4/adults first, children after
BONYOTTE	5/mothers	5/mothers	3/children 1/husband 1/mother	1/children, the husband, mother 4/father, then children
CARICE	2/mothers 2/grandmothers	3/mothers 1/grandmother		(In pretest group; did not ask these two questions)
FOND JEAN NOEL	4/mothers	4/mothers	3/husband 1/children	1/husband, big children; small children 2/father, then children 1/adults, then children
LA COLLINE	2/mothers	1/mother 1/no answer	1/husband 1/children	1/father eats most 2/little ones get most
LA FAUSSETTE	3/mothers 1/grandmother	3/mothers 1/grandmother		(In pretest group; did not ask these two questions)
MAISSADE	3/mothers	3/mothers	2/husband 1/father-in-law	2/husband, mother, children 1/mother-in-law, cousin, mother, children
MARC ERIC	4/mothers	4/mothers	2/husband 1/grandmother 1/child	2/fathers, then children 1/child gets most 1/adults, then children
PESTEL	(CERN at	Pestel	was closed	just prior to planned visit)
PILATE	4/mothers	4/mothers		(In pretest group; did not ask these two questions)
PORTAIL LEOGANE	4/mothers	4/mothers	1/mother 2/children 1/husband	1/mother, then neighbors 1/children get most 1/husband gets most 1/adults first, children last

TABLE VIII - L DATA FROM VISITS TO RANDOMLY-SELECTED CERNS

SOME COMPARATIVE PRICES OF STAPLES
(expressed in Gourdes: 1G. = $.20)

	CORN	MILLET	RICE	RICE	BEANS	POTATOES	SUGAR	SUGAR	OIL
Unit	Marmite (M)	M	M	Sack	M	M	M	Sack	Gal.
BAINET		3.5			9		6.5		23
BLOCKHAUSS		6		130	10			135/140	25
BONYOTTE	3	4			10				22
CARICE	2.5				6-7		6-7		25
FOND JN NOEL									
LA COLLINE	3	4	7		7		6		22.5
LA FAUSSETTE					7.5				22
MAISSADE									22.5
MARC ERIC	2			125	7.5			139.50	22
PILATE									
PORTAIL LEOGANE	3	4	7.5		8.9		6.5		22

N.B. À la Faussette 30 gobelets of CSM cost 18 Gourdes, and 20 gobelets of WSB, 10 Gourdes.

ANNEX I

History of CERN Evaluations in Haiti and Methodology of Present Evaluation of the Past

The first evaluation of a Haitian mothercraft center was published in 1965, one year after the first unit (Centre d'Education et de Rehabilitation Nutritionnelle-CERN) was put into operation at Fond Parisien[1/]. Since that time, data have been collected on the effectiveness of CERNs, which vary in ingredients but follow the mothercraft prototype created by Bengoa[2/], including such considerations as: the change in children's weight for age from the time of admission to a CERN to the time of discharge; the continued improvement in CERN children "graduates" after discharge as measured by percent of standard weight; the preventive benefits as measured by siblings' weight for age; the improved nutritional status of a preschool population before opening a CERN and at its closing; changes in food consumption during and after operation of a CERN; average daily per capita nutrient consumption before, during and after operation of a CERN, etc. A recent (April 1978) article summarizes the benefits in relation to cost as viewed over the ten-year period ending with 1975[3/].

1/ Beghin, I.D., King, K.W., Fougère, W., Foucauld, J. and Dominique, G. "Le Centre de Récupération pour Enfants malnourris de Fond Parisien (Haiti): rapport préliminaire sur le Fonctionnement du Centre et Résultats des Quatre Premiers Mois d'Activités. Ann. Soc. Belge Med. Trop. 45, 5:557, 1965.

2/ Bengoa, J.M. Nutritional Rehabilitation Programs. J. Trop Pediat. 10: 63, 1964.

3/ King, Kendall W., Fougère, W., Webb, Ryland E., Berggren, Gretchen, Berggren, Warren L. and Hilaire Adrien, "Preventive and therapeutic benefits in relation to cost: performance over 10 years of Mothercraft Centers in Haiti." The American Journal of Clinical Nutrition 31: 67 9-690. 1978.

Most of the evaluations referred to above have been estimates of program achievement in the larger terms of protected siblings, community benefits, etc. No recent evaluation has looked into the actual operating performance of a rehabilitation center.

Present Evaluation

The present evaluation had as purposes: 1) to develop a profile of performance in terms of children beneficiaries and mothers educated and the degrees to which improvements had been made; and 2) causal factors of greater or diminished performance. The first purpose was to be achieved through compilation and analysis of data on CERNs available centrally and the second, through visits to the Centers themselves.

Selection of Sample for study

At the beginning of December 1978, 28 AID-assisted mothercraft centers were in operation; they are shown in Table I. Because four of the 28 had been functioning six month or less (Meyer opened in June 78, Segur in July 1978, and Formont and Brechet in September 1978), they were omitted from those considered for site visiting. From the remaining 24 centers, 12 were selected at random. They are listed below by geographic groupings:

In and Near Port-au-Prince:	Portail Leogane Bonyotte La Colline
North:	La Faussette Carice Pilate

West, Jacmel area:	Fond Jean Noel Blockhauss Bainet
Hinche:	Maissade
South, Cayes:	Marc Eric
Jérémie:	Pestel

At the last moment the CERN at Pestel was closed so it was omitted from site study but included in the analysis of central data.

Two important decisions in the methodology concerned using weight for age or weight for height. As mentioned in the text, we were guided by the definite preference of the Bureau of Nutrition Director to use the weight for age--this made the task easier because many of the percentage calculations had been made for this parameter while many weight-for-height calculations had not been made. It was impossible to do both due to time constraints. Brief remarks about the two parameters are made here for the purpose of clarification .

Many insist that weight for age is a parameter of past history while the weight for height is the sensitive indicator of progress. Major disadvantages of each are: weight for age cannot be calculated when a g e is unknown, and when it is guessed, the calculations may be misleading; weight for height is often inaccurately assessed because of the difficulty of taking height measurement accurately, particularly with small children on a board where it is important to straighten bended knees and flatten the soles. Considering that at times a child's normal progress in height might be around a centimeter a month, precision

in taking these measurements is required if small differences are to be perceptible.

Another decision concerned the feasibility of making a dietary adequacy assessment during the limited time. An attempt to count nutrients per child was made in three Centers without conclusive results for our purposes because of its subjective base. The methodology and results are included at the end of this Annex.

The year-long period selected for data analysis on CERN children (the 12 selected for intensive study) extended from October 1977-September 1978. This period was chosen as the most recent for which complete data would be available and long enough to show average durations of stay, patterns of admissions, exits, dropouts, mortality, etc.

First assessed was the extent of utilization of the total capability the CERN offered, then the efficiency of that utilization---i.e., numbers turned out and the benefits derived. A composition profile was then established.

Questionnaires were developed for the on-site visits, one for the CERN director, and one for the mothers (normally four were there helping for the day, but the range questioned was from two to five), and another for the evaluator's observations. These are included in French and Creole following the present Annex. These data were then compiled and

analyzed.

Data limitations or compromises

There were many obvious errors in notations and computations. The computations (of percentage weight for age) were corrected, but the notations could only be rather haphazardly cross-checked (comparing central data with CERN cards). Errors of measurement were evident--i.e. vast impossible weight gains were sometimes recorded as having occured during a month period--a child "lost" three centimeters in height over a month, etc.

Obviously inaccurate data were simply omitted. In other cases unusual but possible data were included, judgmental decisions of the evaluator.

Arbitrary definitions had to be adopted such as: two months in a CERN will constitute a CERN beneficiary; one month or less attendance will constitute a dropout; children and mothers in the year time frame who were at the beginning or end were statistically treated in a 50-50 here and not here fashion. Because of poor notations, it is not 100% certain that edematous children were always omitted nor that we included all of the non-edematous children thinking they might still be losing water when in fact they were failing.

METHODOLOGY FOR DIETARY STUDY

MADE DURING ON-SITE EVALUATION OF JOYCE KING

PREPARED BY MARIE CHRISTINE BERTRAND

Méthode d'Inventaire ou de registre journalier des aliments-consiste à faire un inventaire de tous les aliments qui ont été utilisés durant la période de l'investigation pour l'élaboration du menu.

Important à savoir:

1. Aliments Bruts utilisés pendant la période de l'étude.
2. Aliments Nets utilisés pendant la période de l'étude.
3. Nombre de portions servies exprimées en portion par enfant.

Méthodologie

1. Aliments Nets utilisés: Aliments Bruts utilisés - 0/0 de déchets.
2. Nombre de portions servies: Nombre de portions pour enfants + Nombre de portions pour les mères et responsables des CERNS exprimées en fractions de portion pour enfants.
3. Aliments Nets consommés par enfant: Aliments Nets utilisés : Nombre de portions servies.
4. On peut évaluer la quantité de calories, protéines et autres nutriments apportée par les aliments Nets consommés par enfant..

N.B. Le Volume d'Aliments consommés par les mères et responsables est évalué en fonction du volume d'aliments consommés par les enfants et dépend de l'estimation faite par la responsable.
Seule la quantité de Calories et protéines apportée par les aliments constructeurs et énergétiques est évaluée. L'apport en Vitamine est estimé à partir de la fréquence avec laquelle on introduit les aliments protecteurs dans le menu journalier.

RESULTS OF DIETARY STUDY

MADE DURING ON-SITE EVALUATION OF JOYCE KING

PREPARED BY MARIE CHRISTINE BERTRAND

INCONVENIENTS

Méthode très inexacte pour les raisons suivantes:

1. Le nombre de portions servies n'est pas exact parcequ'on ne mentionne par toujours le nombre de personne en visite ayant partagé les repas.
2. On ne peut jamais évaluer les restes.
3. Les poids inscrits dans les cahiers ne peuvent être vérifiés.
4. Le volume d'aliments consommés par les mères et les visiteurs ne peut être évalué avec précision.
5. Méthode très subjective dépendant uniquement des observations des responsables des CERNs.

SUGGESTIONS

1. Cette méthode peut servir pour une évaluation qualitative de la diète mais non quantitative en ce qui concerne l'apport en calories et nutriments.
2. Il faudrait exiger des responsables qu'elles utilisent toujours des mesures standardisées afin d'avoir des donnés plus exactes sur le volume d'aliments préparés pour la journée, le volume d'aliments servis aux enfants, aux mères de services, aux visiteurs, enfin à toute personne ayant partagé chacun des repas.
3. Le nombre de personnes ayant partagé chacun des repas devrait être enregistré.

4. La méthode de pesée des aliments servis à chaque repas, tout en tenant compte des pertes causées par les déchets et les restes serait la façon idéale de procéder afin d'arriver à une évaluation plus exacte tant du point de vue qualitatif que quantitatif de la diète des CERNs.

QUESTIONNAIRE USED FOR MOTHERS ATTENDING CERNS

AT TIME OF RANDOMLY-SELECTED SITE VISIT

EVALUATION JOYCE KING

TECHNICAL ASSISTANCE, EDUCATION BRANCH, BUREAU OF NUTRITION

FICHE_____ MAMAN

CENTRE VISITE

1. Dépi ki lè ouap vin'n nan centre?_____

2. Combyin ti moun nan fanmi ou ki té vin'n nan centre déja, ou kap vin'n nan centre counié-a?_____

Kombyin foi chak vini? 1er_____

2eme _____

3eme_____

Plis_____

3. Pou ki ca ou té minnin pititt ou vin'n nan centre?_____

_____

4. Eské ou ka rakonté nan ki éta pititt ou a yé?_____

5. Eské li fè mié dépi li nan centre?_____

Pou ki ca?_____

6. Eské lè pititt la gin exéate ou ap ka okipé li pouli pa réchité, pou li ka toujou rété en santé?_____

7. Ki ca ou ouè centre la fè de bon pou pititt -la, ou pititt ou yo?

_____

8. Nan mois qui soti passé-a kombyin fois ou té vin'n nan centre?

_____

9. Pou ki ca ou pa té ka vini?_____

10. Ki ti moun centre lan trété , ti moun gaya?_____

Ti moun pov?_____ Ti moun malade?_____

11. Ki ca centre lan fè pou ou? _____

12. Eské mari-ou , si ou ginyin youn'n, intéressé à sa centre-la ap fè? _____

13. Eské ou bay ti moun-nan lott mangé lè ou rivé la caille lé soi?

Ki mangé konsa? _____

Ki sa ou ba-li bouè? _____

Eské pititt ou toujou grangou lè soi? oui _____ non _____

14. Ki moun ki pral okipé pititt la pou-ou lè li exéaté? _____

15. Eské ou konnin assisté à grand réunion Miss la kon'n fè chak semèn? oui _____ nón _____ ampil _____ raremen _____

a) d'après ou ki sujè qui pi impotant? _____

b) Ki lott ki vin'n aprè? _____

c) Ou konnin youn chanté ké yo fè sou mangé? oui _____ non _____

d) Ban'm 2 avantaj ou konnin ki poussé ou bay pititt ou tété?

1) _____ 2) _____

e) Bam non kèk mangé ké ou konnin ki gin Vitamin A la dan'l?

_____

f) Ki jan yo fè AK 100? _____

Nan ki group mangé ou mété-li? _____

Eské li ka rivé remplacé vian'n? oui _____ non _____

g) Si pititt ou gin vent lib, ca ou fè pou li? _____

_____

h) Ki dlo ou bouè? _____

Ki ca ou fè avan ou bouèl? _____

Pou ki ca? _____

16. Ki lès ki acheté mangé nan maché pou la caille ou?_____

17. Ki mangé ou acheté plis?_____

18. Ki lot mangé ou mangé?_____

Koté yo soti? Nan jadin pa-ou?_____ oui_____ non_____

19. Eské ou bay ti moun yo nan mangé pa tout moun? oui____ non_____

Si oui, ki lès nan yo?_____

Ak piman? oui_____ non_____

20. Ki lès ki séparé mangé-a?_____

Ki lès ki mangé anvan?_____

Ki jan yo séparé mangé-ya?_____

QUESTIONNAIRE USED FOR CERN DIRECTORS, RANDOMLY-SELECTED SITES
JKING STUDY, TECH ASSIST EDUCATION BRANCH, BON

MONITRICE

Qui No. Centre lan? ..... Dépi Ki lè li ouvè? .....

1- Qui classe ou fè .....
Lè ou té sot l'école, qui lot bagay ou té appran'n .....
Esqué ou rété icitt là ? .....

2- Assistante lan oé mounn icit, li yé min'm? . .....

3- Dépi ki lè nap, travail nan centre là? .....
Monitrice ..... Assistante .....

4- Esqué nou pé gin yun agent agricole kap kap édé nou nan travail là oui...non...

5- Combien ti moun qui là jodia ..... Combien ti moun qui inscrit nan centre là.....

6- Esqué gin ti moun nan centre là et.qui pa malade (92% PT) oui .....non.....
combien yo yé ..... pou qui ça ou inscrit yo .....

7- Esqué ti moun yo qui nan centre la gin lott bagay kap fè yo mal .....
qui ça yo yé ....

8- Lè ou gin ou ti moun nan centre malade anpil nan ki lopital ou voyé'l .....
combien tan ou pran pou rivé nan lopital ça lè ou sot nan centre.....

9- Qui moun'n qui choisi ti moun qui pou vin'n nan centre là .....
Sèu... qui ... ça ou basé ou pou bay ti moun nan exét.....
Lè pou bayo exét qui moun qui pran décision ça ..... si responsable di oui.....

10- Esqué chak ti moun ki nan Centre là gin gnou grafic, chemin santé-a .....
oui ..... non .....

11- D'après ou min, ti moun ki nan centre yo pou ki ça yo malade .....

12- D'après ou esqué lè ti moun yo réfè, yal la caille yap rété en santé, sans soufri min'm maladie..ça. encor oui ..... non .....
Pou qui ça? .....

13- Combin mamman ki la jodiaz ..... combin ki inscrits nan centre là.....

14- Nan tèma qui inscrit nan centre combin nan yo ki gain pitit icitt là.mamman.....
combin nan yo oé ti moun qui nan centre là .....
" " " tonte ti moun qui nan centre là .....
" " # lot bagay pou ti moun qui nan centre là .....

15- Toute moun ça yi kap travay icit là caké tout gin ti moun nan centre là....
oui ..... non ..... kombin .....

16- Apa de mamman ki nan centre ki lott moun enkor ki cuivre réunion qué ou fé chak sémène .....

17- D'après ou qui ça ou ouè qué ou palé yo qui intéressé yo pi plis.....
Dé ki 2e bagay ou té kab palé yo enkor .....

18- Gin mamman ki pa vin'n nan centre souvent, pou ki ça, ça yo ginyin.....
Yap travay nan caille yo pa gin tan .....
Yo travail nan jadin déjor ;.....
yo gin lot tà moun nan kay la pou yo okipé .....
yo malade ..... yo enceinte ..... yo rété tro loin .....
Yo gin lot réson.....

19- Ki centre ki pi pré centre ou an? .....

20- Eské manman yo ka compren'n réunion pré ou fè avec yo
oui ..... non .....
et grafik lì .....

21- Eské gin manman ki gin ti moun ki fè malnitrition et ki pa vin'n nan centre oui ..... non .....
pou ki ça .....

22- Eké d'après ou, lè ti moun nan soti nan centre manman ka okipé la caille min'n jin avek lì li té nan centre ; oui ..... non .....
pou ki ça .....

23- Eské ou participé comme membre nan réunion konseil kombite
oui .... non .....
D'après où eské conseil-lì interessé à centre lì qui nan kombite yo
oui ..... non .....

24- Eské centre lì bay matériel pou planing oui..... non .....
sou nombre manman ki inscrit kombin manman ki suivre méthod ça yo .....

25- Ki moun ou bay mangé nan centre yo ..tout. ti moun .....
manman ki ne service ..... manman ki nourrice .....
manman ki enceinte ..... tout lot moun .....

26- Ki mangé ou té cuit pou ti moun yo pendant jounin yè ya .....
....

27- Caille ou fè centre lì, çé louer yo loué? .....
kombin kob yo payé pa mois .....

28- Eské ou rivé acheté tout kalité mangé ki nécéssè, avec l'agent ké yo ba nou - a .....
Si ou ta gin 35 ti moun eské min'n l'agent ça tap konte .....

29- Si ou pa gin kont l'agent pou ou acheté viande, ki sa ou tap bay pou remplacé'l .....

30- Ki dénié lè ou té récevoi visite équipé supervision.....
Eké ou ta bésoin ké yo visité ou pi souvent .....

31- Dlo nou boué yo, koté ou joindre li .....
comment nou fè pou nou tr ité li .....

32.

MONITRICE

Nom du Centre_____ Ouvert depuis_____

1. Education de la Monitrice_____habite-t-elle la communauté? Oui___Non___

2. L'assistante est-elle originaire de la communauté? Oui___Non___

3. Depuis quand sont-elles au centre? Monitrice?_____ Assistante_____

4. Sont-elles aidées par un agent agricole? Oui___Non___

5. Combien d'enfants présents___sur nombre d'enfants inscrits _____

6. Y-a-t-il enfants inscrits qui sont en bonne santé (92% P.T.)? Oui___Non___ Combien_____ Pourquoi?_____

7. Les enfants ont-ils des autres maladies? Lesquelles_____

8. Lorsqu'un enfant du Centre est très malade, à quel établissement de santé le référez-vous?_____Combien de temps prenez-vous pour arriver à cet établissement?_____.

9. Qui choisit les enfants qui viennent au Centre?_____Qui décide la date de les exéater?_____Comment décidez-vous?_____

10. Les enfants ont-ils chacun un graphique, "chemin de la santé"? Oui_____Non_____

11. D'après vous, pourquoi ces enfants au Centre sont-ils malades?_____

12. D'après vous, une fois recupérés, les enfants vont-ils garder leur santé à la maison? Oui_____ Non_____ Pourquoi?_____

13. Nombre de mères présentes____sur nombre de mères inscrites?_____

14. Nombre de femmes inscrites?_____nombre de mères____soeurs____tantes____autres____

	Age de l'Enfant(ou des Enfants) qui assistent au Centre actuellement				Nombre d'enfants Nés à cette mère	Nombre de: Vivants	Morts
1.#							
2.#							
3.#							
4.#							
5.#							
6.#							
7.#							
8.#							
9.#							
10.#							
11.#							
12.#							
13.#							
14.#							
15.#							
16.#							
17.#							
18.#							
19.#							
20.#							
21.#							
22.#							
23.#							
24.#							

MONITRICE - 2

15. Toutes les femmes qui travaillent au Centre ont-elles enfants au Centres? Oui___ Non_____ Combien_____

16. En plus des mères des enfants au Centre, qui assiste aux séances éducatives?

17. Quel sujet croyz-vous être le plus important?_____
De deuxxième importance_____

18. En ce qui concerne les mères qui ne viennent pas regulierement, quelles sont les raisons? Travail hors de la maison_____ Travail à la maison, soin des autres enfants___ Maladies___ Grossesse_____ Trop loin_____
Autre_____

19. Quel est le CERN le plus proche de votre CERN?_____

20. Les mères sont-elles capables de comprendre l'education? Oui____ Non_____
Sont-elles capables de comprendre le graphique? Oui_____ Non_____

21. Y-a-til des mères qui ne viennent pas au Centre qui ont des enfants malnourris? Oui___ Non_____ Pourquoi ne viennent-elles?_____

22. D'après vous, les mères peuvent-elles faire de même chez elles après avoir quitté le Centre? Oui____ Non____ Pourquoi?_____

23. Est-ce que vousprenez une part active aux réunions du conseil communautaire? Oui____ Non_____. D'après vous, est-ce que le conseil s'intérresse au Cern? Oui____ Non_____.

24. Le Centre distribué-t-il des moyens contraceptifs? Oui___ Non_____
Quel pourcentage des meres s'y interessent_____ les utilisent?_____
(ou bien combien de mères sur le nombre de mères inscrites _____/____

25. A qui sont donnes les aliments? Enfants - a volonté___ mères de service_____ mères allaitantes_____ mères enceintes_____ autres_____

26. Le menu d'hier_____

27. Le centre est-il loué?_____ Combien de loyer?_____

28. Arrivez-vous à acheter tous les aliments qu'il faut avec l'argent que vous receves?_____

Si vous aviez 35 enfants suffirait-il?_____

29. Si vous n'aviez pas sufficament d'argent pour acheter de la viande, qu'est-ce que vous donneriez à sa place?_____

30. Date de la dernière visite de supervision?_____ Avez-vous besoin de plus de supervision?_____

31. Le Centre, est-il suffisant? Oui Non Pouquoi?_____

32. D'où vient l'eau de boisson?_____ Comment est-elle traitée_____

CENTRE_____ FICHE DE L'OBSERVATEUR VISITE_____

1. Aspect général du Centre: _____
(Jeux d'enfants?) _____

2. L'équipement? proprété, fonctionnement, suffisance _____
_____

3. Proprété et Santé des enfants? _____
des Mères? _____

4. Impressions du personnel (comment soignent-elles les enfants) _____
_____ (comment traitent-elles les mères) _____
_____ autres _____
_____

5. Dossiers des enfants: tenus à jour? _____
Utilise-t-on graphique Chemin de la Santé? _____ pour Mères? _____

6. Les cahiers sont-ils correctement remplis? _____

AUTRES _____

FICHE DE MERE

CENTRE_____ VISITE_____

1. Depuis quand venez-vous au Centre?_____

2. Combien d'enfants de votre famille ont fréquenté, ou fréquentent actuellement le Centre? et combien de fois chacun? 1____Nombre de fois____; 2____ Nombre de fois____3___Nombre de fois____Plus_____ _____.

3. Pourquoi est-ce que vous êtes venue au Centre avec votre enfant?_____
_____

4. Pouvez-vous décrire l'état de votre enfant?_____

5. Est-ce qu'il a progressé au Centre?_____
Pourquoi?_____

6. Est-il possible de le garder en bonne santé à la maison?_____
Comment?_____

7. Qu'est-ce que le Centre fait pour votre enfant (vos enfants)?_____
_____

8. Combien de fois pendant ce dernier mois êtes-vous venue au Centre_____
Pourquoi?_____

9. Quelles raisons vous empêchent de venir?_____

10. Le Centre traite-t-il des enfants en bonne santé?_____pauvres?_____malades?__

11. Qu'est-ce que le Centre fait pour vous-même?_____

12. Si vous avez mari, est-ce qu'il s'intéresse au CERN_____

13. Donnez-vous des aliments supplémentaires à la maison à la rentrée le soir?
Lesquels?_____et boissons?_____
Votre enfant a-t-il toujours faim le soir?_____Oui_____Non_____.

14. Qui va prendre charge de l'enfant après son exéat du Centre?_____

15. Avez-vous assisté à des causeries? Oui___ Non___ Beaucoup___Rarement_____
a. D'après vous, quel sujet est le plus important?_____
b. De deuxième importance_____
c. Connaissez-vous une chanson concernant les aliments à manger Oui___Non_____
d. Pouvez-vous citer deux avantages pour que les mamans allaitent leurs enfants?_____,_____
e. Pouvez-vous citer les noms de quelques aliments contenant la Vitamine A?
_____,_____.
f. Comment prépare-t-on l'AK 1000?_____Dans quel groupe d'aliments est l'AK 1000?_____Peut-il substituer pour la viande? Oui___Non__
g. Que faites-vous si votre enfant a la diarrhée?_____
h. Buvez-vous l'eau de rivière? Oui___Non___. (Si oui), qu'est-ce que vous faites avec l'eau avant de le boire?_____Pourquoi?_____

FICHE DE MERE - 2

16. Qui achète les aliments au marché pour votre maison?_____

17. Quels sont les aliments principaux que vous achetez_____
_____.

18. Quels sont les autres aliments que vous mangez?_____

D'où viennent-ils?_____jardin familial? Oui____Non_____

19. Est-ce que vous donnez aux petits enfants les aliments du pot familial? Oui____Non_____ Si oui, lesquels_____Avec piment? oui___ Non____.

20. Qui fait le partage des aliments aux repas?_____Qui est le premier à manger?_____Comment le partage est-il fait?_____