

Evaluation of a Program
to prevent
Xerophthalmia in Haiti

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Best Available Document

LIST OF ABBREVIATIONS

BON	Division of Nutrition, Formerly Bureau of Nutrition
DSPP	Departement de Sante Publique et de la Population
HE	Health Establishment
MR	Monthly Report
PAP	Port-au-Prince

INTRODUCTION

HKI and the Bureau of Nutrition (BON) of the Ministry of Health of the Government of Haiti, assisted by a grant from USAID, are currently implementing a nationwide Vitamin A capsule distribution program to aid in the prevention of nutritional blindness. As part of this program, high-dosage Vitamin A capsules (200,000 IU) are prescribed for distribution to children from six months to seven years at four month intervals; and to lactating mothers at two month intervals. In addition, the program includes nutrition education, focussing on increased consumption of Vitamin A foods; and training of medical, health, and nutrition personnel in the detection and treatment of xerophthalmia. The program is operated in all 14 health districts; in both public and private institutions and in all categories of health establishment (HE).

The program was begun March 31, 1976 and, through subsequent extensions, continues up to the present time.

In 1979, HKI evaluated the Vitamin A capsule distribution through both an ocular survey (to determine prevalence rates of xerophthalmia compared to a previous survey done in 1974-75) and a management survey (to determine the success of the program in its distribution of the capsules). The findings of both surveys are presented in detail in the Evaluation Report,¹ but in general the Evaluation found that:

1. The rate of Vitamin A related corneal destruction in the areas studied in Haiti had decreased tenfold;

1. HKI, Evaluation of a Program to Prevent Xerophthalmia in Haiti, 1979

2. The decrease in the prevalence of xerophthalmia may have been influenced by a number of factors, among which was certainly the active and extensive Vitamin A supplementation program.

3. The number of capsules reported distributed each had more than doubled annually (1974-76).

4. Reporting on the distribution of capsules was inadequate, which prevented an accurate assessment of the actual number of capsules distributed and of the numbers of capsules distributed by region, by type of institution, etc.

5. The limited results of the nutrition education efforts illustrated the difficulty in reaching rural populations. The seances d'education (talks during the actual administration of Vitamin A) seemed the most effective technique for getting the message across.

To better assess the functioning of the program, with particular focus on the distribution of capsules, HKI contracted Ronald Parlato and Eugene Sobel¹ to do a management/logistics survey to attempt to determine estimates of:

1. The actual number of capsules distributed;
2. The proportion of health establishments actually distributing capsules;
3. The frequency and regularity of that distribution;
4. The correctness of that distribution - i.e., whether or not the capsules are given according to prescribed norms.

The collection and analysis of these and other related data would, in principle, lead to conclusions concerning:

1. Eugene Sobel, a Biostatistician, is Associate Professor, Temple University School of Medicine. Ronald Parlato, a specialist in Health Planning, Management, and Evaluation, is a private consultant.

- A. The degree to which the program was reaching its stated objectives; and
- B. Possible reasons why such objectives were not being met.

In addition, it was initially proposed that the Evaluation also include an analysis of the Nutrition Education activities of the program, based on audience research. Such an analysis was finally not included in the Evaluation because:

1. The level of awareness and understanding of nutritional blindness, its treatment and prevention on the part of personnel responsible for community education is known to be low;

2. Methodological and procedural difficulties in measuring what were expected to be small incremental changes in an already unaware population were great; and

- 3, the time and expense involved in mounting reliable community surveys was large.

It was decided, however, to do a comprehensive survey of awareness and understanding of health Auxiliaries (the women responsible for nutritional education).

The Evaluation was a joint effort between the Contractors (Mr. Parlato and Dr. Sobel) and the BON: The Contractors were to design the Evaluation, prepare all prototype survey materials (e.g., questionnaires, survey manuals, etc.), and offer mid-term supervision and guidance; the BON was to actually execute the Evaluation - to do the surveys, to collect all prescribed information; the Contractors, based on information collected by the BON, were to do the final analysis and prepare the Final Report.

The Evaluation was designed in May, 1982; field work was begun in July-August, 1982 and completed in May, 1983.

CONCLUSIONS

1. Nearly all Vitamin A capsule distribution is done by 56-71 percent of Health Establishments enrolled in the program.

2. This lack of full participation is thought to be due to:

a) insufficient supervision, due in part to financial and personnel constraints; and due in part to the lack of BON-DSPP integration which would encourage greater DSPP participation in the management and supervision of the program;

b) the ad hoc capsule distribution system, utilized by the BON, which tends to discourage active participation on the part of those HEs that are low in motivation, far from Port-au-Prince (PAP), and/or far from nearby centers.

3. HEs that do distribute do so reasonably regularly and seemingly break their distribution only when they run out of capsules. When these HEs do run out, they probably do so because of the lack of systematized planning at both the BON and HE level.

4. Few children who attend an HE ever attend it more than once, and hence receive little benefit from the Vitamin A program.

5. The number of children who have ever attended a HE, for whatever reason, is low: an estimated 35 percent of the country's total 0-7 population. The Vitamin A capsule distribution program, therefore, is reaching a relatively low proportion of the total need.

6. Of those capsules that are given, a significant percentage are given incorrectly - either to children 0-6 months of age who do not need them; or to older children who should not receive them because of short (less than four-month) intervals between visits; or to mothers. This incorrect administration of capsules is thought to be due to lack of information and knowledge.

7. Many children who should be getting a capsule are not getting one. This is due, it is felt, to:

a) doctors who feel that Vitamin A should only be given to children with signs of malnutrition and/or xerophthalmia; and

b) HEs which seemingly wish to be highly selective in distribution (to children with signs of xerophthalmia and/or malnutrition) in order to conserve capsules (i.e. to give to those perceived as most needy over the longest period of time).

8. A high proportion of children using HEs are under two years old (approximately 80 percent) and a high proportion of these (about 27 percent of the total attendees) are 0-6 months. Older children, in whom the incidence of xerophthalmia is greatest, are not reached.

9. There is no appreciable difference in participation, distribution, or performance between public and private type of HEs, or between regions.

10. Auxiliaries, who administer the program, on the whole have an insufficient grasp of the entire question of xerophthalmia - its causes, prevention, and cure - to provide adequate and appropriate nutrition education.

RECOMMENDATIONS

1. A straightforward manual, systematized, planned management, distribution and inventory control system which will assure regular capsule distribution to all participating HEs should be developed. It is felt that the District should be the regional distribution point for all HEs within its jurisdiction since most HE personnel visit their District HQ far more often than PAP. Capsules should be distributed to HEs on a quarterly basis, since their shelf-life is more than adequate to cover that time period. Such an interval would help to assure a ready and regular supply of capsules.

2. The District DSPP should be fully integrated into all aspects of the Vitamin A program - inventory control, distribution, and supervision. It is understood that at the present time attempts are being made to fully integrate the BON and the DSPP at District level.

3. Training of all auxiliaries and other health personnel associated with the Vitamin A program (such as doctors, nurses, and sagesfemmes) should be expanded and intensified so that: a) all personnel are aware of the norms of distribution; b) that educational personnel be well-equipped to teach effectively; and c) new personnel will automatically be trained.

4. Clear instructions concerning the distribution of Vitamin A capsules should be periodically given to all HEs - particularly concerning: a) 0-6 month old infants; 6-month - 7 year old children; and lactating mothers.

5. A census should be taken of all those HEs which are still on the BON rolls but which have not reported in the past year to: a) determine HEs which need stricter supervision; b) clear the rolls of institutions which are either not functioning or who do not want the program; and c) to provide correct information to those which do want the program concerning program operations.

6. To intensify supervision efforts in order to visit all HEs within short, specific time periods - to make an effort to strengthen the program and to disseminate information concerning norms, procedures, and operational standards.

7. To consider seriously re-orienting a certain portion of the capsule distribution program through the incipient Primary Health Care system in order to expand coverage of children, particularly those most susceptible to xerophthalmia.

METHODOLOGY

There were four major components of the Evaluation:

1. An analysis of all Monthly Reports (MRs) submitted to the BON by each participating HEs for the years 1979 and 1981. Information contained in these forms relates to the number of doses including, to some extent, first and subsequent doses given per day of the month to children and lactating mothers.

2. A sample survey of child patient records from a representative sample of health centers participating in the Vitamin A distribution program. Information collected was retrospective, covering children aged 0-7 whose first visits occurred in the years 1979-81, and covering all visits made during the years 1979, to the time of the study.

This Retrospective Survey was designed to provide accurate, patient-specific information concerning first-dose, subsequent doses, and the length of intervals between doses. The MRs, cited above, provide only collective information and daily totals of doses given.

3. A survey of all children attending a representative sample of health centers. Daily, patient-specific information was to be collected over a four-month period. This Longitudinal study was designed to collect even more accurate information concerning dose intervals. As importantly, it would permit estimates of overall performance of the program by providing information concerning the total number of children attending a health center, number of doses to be given, etc.

The Retrospective and Longitudinal Studies collected information on children only and not on lactating women because:

- a) children, aged six months - seven years, are the primary beneficiaries of the Vitamin A distribution program;
- b) patient records for children of these ages are much more easy to locate than those for lactating women;
- c) an analysis of child-related data would provide information on program performance and efficiency that would also be relevant to lactating women;
- d) budget limitations.

Three additional sources of information were used in the Evaluation relating to capsule distribution/utilization:

- BON capsule receipt (from UNICEF) data;
- BON capsule distribution (to centers) data;
- Health Establishment inventory data, based on interviews with HE staff at the time of the Retrospective Study.

4. A test given to all Auxiliaries on staff at the HEs chosen for the Retrospective and Longitudinal Studies, above. This test was designed to determine levels of awareness and understanding concerning xerophthalmia, its causes, manifestations, treatment, and prevention.

More information on Methodology is given in Appendix 1.

PROGRAM DESCRIPTION

The BON operates a Vitamin A capsule distribution and nutrition education program in all 14 Health Districts in public and private institutions and in all classes of Health Establishments (HE). These HEs can be broken down as follows:

- Public hospital
- Private hospital
- Public hospital-dispensary
- Private hospital-dispensary
- Public dispensary
- Private dispensary
- Mixed public-private dispensary
- Public Health Center (Centre de Sante)
- Private Health Center
- Mixed public-private health center
- CERN (Nutrition Rehabilitation Center), private
- Other (CSA, CSN, Mobile-private, Mobile-public, Agent de Sante)

The BON is the government agency directly responsible for the administration and supervision of the program, although each Health District has named one person to oversee program operations. Because of the semi-autonomous nature of the BON (although it is part of the Ministry of Health, it has enjoyed a certain financial and administrative independence since its inception),¹ and because of a consequent lack of full integration with the Ministry of Health's regional services (DSPP), administration and supervision are done almost exclusively by the BON.

The BON requests capsules periodically from UNICEF (two times per year, on the average), then distributes them to health establishment personnel

1. This situation is not unique in Haiti. The Division of Family Health (Division d'Hygiene Familiale) has had the same independence.

who come to Port-au-Prince - the headquarters of the BON - for other DSPP business. Each health establishment representative has the right to take capsules (packaged in bottles of 500 capsules) for neighboring establishments. Distribution is thus ad hoc, rather than systematic. According to BON records, most capsule distribution was done in this way, rather than by way of Health District personnel.

Health establishments are expected to distribute capsules on every working day of the year to children from six months to seven years old and to lactating mothers. Each child, on his/her first visit to a center is to get a capsule, and once every four months thereafter, subject, of course, to the high degree of variability of center attendance.

Each establishment has named one of its staff - usually an auxiliaire to be in charge of the distribution and education program, and in centers where there is more than one auxiliaire, a rotating system has been established. Most auxiliaires on staff at participating health establishments, then, have, at one time or another, been responsible for both capsule distribution and education.

According to established BON operational norms, each child entering a health facility is to be screened for Vitamin A capsule distribution along with height and weight measurements, vaccination record, etc. If the child is to receive a capsule on the day of his/her visit, he/she either receives it at the time of the screening, or is told to receive it at a different station within the facility. Such screening is usually

done by the auxiliare. In some instances, the prescription of Vitamin A is considered to be the responsibility of the doctor, and in those cases it is the physician who indicates whether or not the child should receive a dose.

Daily records are kept concerning capsule distribution, although there is no official form distributed for keeping such records. At the end of each day, the total number of capsules, by first dose-subsequent dose is recorded on the MR.

Inventory control is done ad hoc: when the auxiliaire sees that she is running out of capsules, she arranges for someone from her establishment - or a nearby establishment - to pick up a supply of capsules while in Port-au-Prince.

Auxiliares responsible for the Vitamin A program should have - in principle - received some kind of training, either in the Auxiliary training school, as part of the formal curriculum, or as part of in-service seminars run by the BON, or, to a lesser extent by other institutions.

Supervision is the responsibility of the BON and is done from Port-au-Prince. Nutrition education is done by auxiliaries, usually in the form of group discussions.

FINDINGS

Participation

It is estimated that 279 HEs were participating in the Vitamin A distribution program in 1981 and 267 in 1979. This calculation is based on Monthly Report (MR) data which indicates the number of establishments that reported distributing capsules at least once during each year and from the Retrospective Study data which gave an indication of the number of centers which distributed, but did not report (Table 1).

As can also be seen from Table 1, the number of hospitals and hospital/dispensaries participating in the program grew by slightly more than 100 percent over the two-year period studied, while all other institutions remained stable.

Table 2 indicates the proportion of public and private HEs in the program in the years 1979 and 1981. As can be seen, there has been a slight drop in public sector participation, and a slight gain in the private sector.

Table 3 indicates the relative increases/decreases in number of participating HEs by Health District. Comparison is difficult because of widely varying bases.

TABLE 1:
VITAMIN A CAPSULE
DISTRIBUTION PROGRAM PARTICIPATION RATES

	<u>1979</u>	<u>1981</u>	<u>1982-1983</u>
No. of HEs reporting at least once			
Hosp/Hosp-Disp	16	35	-
Other	222	229	-
Total	238	264	-
Estimated % of HEs not reporting but participating	11%*	5%	-
Estimated No. of HEs participating in Program			
Hosp/Hosp-Disp	18	37	-
Other	249	242	-
Total	267	279	-
Maximum No. HEs ever reported (MRs), 1979, '81	-	-	361
No. HEs on BON rolls 1982-83	-	-	469
Max. Est. No. HEs in Program	-	-	389

(* See Note 1)

Note 1:

Retrospective Study data indicated that 29 percent of sample HEs (5/17) actually distributed Vitamin A but never reported in 1979. Extrapolating this figure to arrive at national figures, one would get 338 total centers participating (238/.71). It is felt, however, that the 29 percent figure is too high - the difference in the two years, 1979 and 1981 (29 percent vs. five percent) is simply too great to be explained by better reporting alone.

If one assumes, therefore, a certain degree of sampling error and adjusts conservatively - i.e., by assuming only 2/17 centers participated but did not report instead of 5/17, one arrives at the (probably) more accurate 11 percent figure, giving an estimated total of 267 participating centers.

TABLE 2:

PUBLIC AND PRIVATE SECTOR PARTICIPATION

I. Reported No. HEs (From MRs)	<u>1979</u>		<u>1981</u>	
	<u>No.</u>	<u>%</u>	<u>No.</u>	<u>%</u>
Public	117	55	132	51
Private	97	45	124	49
Total	214	100	256	100

II. Estimated HEs (MRs & Retro)				
Public	132	55	139	51
Private	109	45	131	49
Total	241	100	270	100

TABLE 3:
PARTICIPATION BY HEALTH DISTRICT

	<u>1979</u>		<u>1981</u>		<u>% Change in Est.</u>
	<u>Reported</u>	<u>Estimated*</u>	<u>Reported</u>	<u>Estimated*</u>	
Belladere	8	9	7	7	-22
Cap Hait.	29	33	56	38	+15
Cayes	74	83	60	63	-24
Fort-Liberte	7	8	10	12	+50
Gonaives	18	20	24	25	+25
Hinche	4	5	3	3	-40
Jacmel	7	8	5	5	-37
Jeremie	10	11	10	11	0
Limbe	10	11	7	7	-36
Miragoane	1	1	8	8	+700
Petit Goave	4	5	8	8	+60
Port-de-Paix	24	27	30	32	+18
Port-au-Prince	25	28	35	37	+32
St. Marc	17	19	21	22	+15
TOTALS	237	267	264	279	

* Total number of participating HEs based on Table 1 and calculations indicated in Note 1 for that table.

Table 4 sites regional participation in a different way - comparing the participation rate of each Health District by relating the number of centers reporting to the total number reported to be in the District by the BON.

TABLE 4:

PARTICIPATION ACTIVITY BY REGION

<u>DISTRICT</u>	<u>*1979</u>			<u>*1981</u>		
	<u>No. HE on BON Rolls</u>	<u>No. Rep't</u>	<u>% Rep't.</u>	<u>No. HE on BON Rolls</u>	<u>No. Rep't.</u>	<u>% Rep't.</u>
Belladere	11	8	73	11	7	64
Cap Haitien	73	29	40	73	36	49
Cayes	113	74	65	113	60	53
Fort Liberte	18	7	39	18	10	56
Gonaives	31	18	58	31	24	77
Hinche	7	4	57	7	3	43
Jacmel	14	7	50	14	5	36
Jeremie	13	10	77	13	10	77
Limbe	13	10	77	13	7	54
Miragoane	12	1	8	12	8	67
Petit Goane	16	4	25	16	8	50
Port-de-Paix	52	24	46	52	30	58
Port-au-Prince	66	25	38	66	35	53
St. Marc	30	17	57	30	21	70
TOTALS	469	238	68	469	264	71

* Based on BON registry

Based on the conclusion that only those institutions which report are distributing Vitamin A (plus a factor of 2/17 for 1979 and 1/18 for 1981 applied equally to all regions), one can compare rates of regional participation by comparing reporting rates (i.e., the number of HEs that reported at least once per year studied (See Table 4)).

From an analysis of data from this table, it is surprising to see that Port-au-Prince, the seat of the BON, has a performance rate of only 53 percent for 1981 - lower than all but four other districts.

Other trends of note:

1. Six districts out of 14 - or 42 percent - registered a loss in participating centers; seven Districts - or 50 percent - registered a gain; and one remained unchanged.

2. There seems to be no discernable or explainable pattern to the figures. Jeremie, for example, a district considered relatively inaccessible, had the highest rate of participation. Districts with major urban centers, expected to perform better because of the opportunity of urban contact and a supposed overall higher degree of socio-economic development, did no better - and in many cases worse - than more rural districts.

The number of HEs currently on the BON rolls is 469, a figure which appears reasonable. It is known from the MRs that a total of 361 HEs ever reported in either 1979 or 1981. If one adds eight percent (11 percent plus five percent/two) to that number to include an estimate of HEs which participate but never report, the estimated number becomes 389.

If one uses these 389 HEs for comparison, the following estimated rates of participation can be calculated:

TABLE 5:
OVERALL CENTER PARTICIPATION RATES

	<u>1979</u>	<u>1981</u>
Estimated Number of Centers Participating	267	279
Estimated Total Ever in Program	389	389
Percent Participation	68	71

If the figure of 469 is used - the number of HEs enrolled in the program - the participation rates drop to 56 percent for 1979 and 59 percent for 1981.

DISTRIBUTION

The total number of Vitamin A capsules reported distributed by the BON is as follows:

TABLE 6:BON DISTRIBUTION OF VITAMIN A (IN BOTTLES)

	<u>1979</u>	<u>1980</u>	<u>1981</u>	<u>1982</u>	<u>TOTAL</u>
Jan.	124	38	33	1	
Feb.	60	25	38	56	
March	130	-	18	46	
April	77	-	107	51	
May	44	79	25	44	
June	55	58	21	69	
July	147	500	76	210	
August	110	35	90		
Sept.	79	4	181		
Oct.	128	111	39		
Nov.	35	89	21		
Dec.	55	82	24		
TOTALS	1044	1021	673	477	3215

As can be seen from this table the BON ran out of capsules twice - once in 1980 and once in 1982. It appears, from an analysis of BON records that the stock depletions were due to late requests of stock from UNICEF by the BON.

The 1982 depletion was particularly important because it delayed the longitudinal study of this evaluation, and in fact caused the capsule distribution figures to be of such questionable value that they were not used.

At the rate of 500 capsules per bottle, the number of capsules can be seen in Table 7. In the same table, one can see the distribution reported by individual health centers according to MRs.

To explain this discrepancy - that is, why fewer capsules were reported distributed than actually were, it was assumed that the reporting rate was actually low.

TABLE 7:

REPORTED CAPSULE DISTRIBUTION

<u>Reported Distribution</u>	<u>1978</u>	<u>1979</u>	<u>1980</u>	<u>1981</u>	<u>1982</u>
From MRs					
0-7 Yrs		147,529		201,830	
Lactating Mothers		35,926		46,162	
TOTAL	20,752 ¹	183,455		247,992	
From BON Records					
TOTAL		522,000	510,500	379,000	199,500 ²

1/ From 1979 HKI Evaluation

2/ Distributed during January - June

An analysis of MRs indicated that the reporting rate - i.e., the percentage of months reporting - was, in fact, only 37 percent in 1979 and 47 percent in 1981 (See Table 8).

TABLE 8:

NUMBER OF REPORTING HES

Est. No. Participating	<u>1979</u>	<u>1981</u>
Hospitals/Hospital-Dispensaries	16	35
Other	222	229
TOTAL	238	264
No. of Months with Reports*	1044	1499
Reporting Rate (%)	37	47

* The 1044 figure is based in part on the 1981 rate because a number of 1979 Monthly Reports had personal names rather than HES on them.

Therefore, if it were assumed that most institutions distributed capsules but did not report regularly, the estimated number of capsules would be much closer to the actual number distributed by the BON.

An analysis of Retrospective Study data indicated further that a certain proportion of HEs which never reported actually distributed (patient records indicated that children received capsules from HEs for which no MR was ever filed). As mentioned above, this proportion was estimated to be 11 percent for 1979 and five percent for 1981.

Combining the two assumptions and making appropriate calculations, one can arrive at the following estimated distribution:

TABLE 9:

ESTIMATED CAPSULE DISTRIBUTION

	<u>1979</u>	<u>1981</u>
Reported Distribution (MRs)	183,455	247,992
Estimated Distribution ¹	568,781	551,093

1/ (MRs ÷ .37) ÷ 15/17 for 1979; (MRs ÷ .47) ÷ 18/19 for 1981

Although the totals differ somewhat from BON distribution figures for 1979 and substantially for 1981, some adjustments have to be made for those BON figures.

Firstly, although it was reported that 1021 bottles were distributed in 1980 (510,000 doses), it was also reported that 821 of those (410,500 doses) were distributed in the second half of the year. It is unlikely that so many capsules could have actually been utilized in a six-month period, and that considerable balances were undoubtedly in hand for many centers for use in 1981.

Secondly, the reports of BON receipts from UNICEF are as follows:

TABLE 10:

BOTTLES OF VITAMIN A RECEIVED BY BON FROM UNICEF

(Bal. 1978)	500
Jan. 1979	500
July 1979	500
April 1980	100
May 1980	700
April 1981	1000
TOTAL	3300

Since the BON reported a distribution of 3125, there is a difference of 85 bottles which should be added to the total consumed (there has been no indication of a Black Market for Vitamin A in Haiti).

Thus, assuming differences in rates of distribution and utilization for all years, one must adjust the BON distribution also for all years.

Therefore, assuming an equal distribution of 943 capsules per year (3300/3.75 - 1979, 1980, 1981, and 3/4 of 1982),¹ one can arrive at an estimate of 440,000 total doses per year. This estimate differs by only approximately 20 percent from the estimates made from the MRS and Retrospective data.

This difference can be partially explained by the fact that many institutions, not reporting for given months, had no supply of stock for those months; whereas it was assumed that all reporting establishments distributed every month.

It can be concluded, therefore, that:

1. Yearly distribution of Vitamin A has averaged between 440,000 and 550,000² doses since 1979, and probably 1978.

2. Two hundred and sixty-seven (267) HEs accounted for nearly all the distribution in 1979; 279 in 1981. This represents between 68-71 percent of those institutions which were active either in 1979 or 1981 (389); and between 56-59 percent of all institutions ever enrolled by the BON and still on their current enrollment list (469).

1. The figure of 3.75 instead of 3.5 years has been used to account for disproportionate distribution in the last month of 1982.

2. 550,000 and not 570,000 because reporting for 1981 was significantly better than 1979.

3. These institutions distribute reasonably regularly.
4. If they have Vitamin A, they distribute it; and
5. The primary reason for not distributing is the lack of Vitamin A capsules.

It is felt that there are two major reasons why a significant proportion of HEs do not participate:

A. BON distribution system: As has been suggested in the Program Distribution, above, Vitamin A capsules are distributed on an ad hoc basis. That is: 1) capsules are only given out when they are requested, and not according to any planned, pre-determined schedule according to rates of distribution, case loads, etc.; 2) capsules are not always given directly to HEs, but often to representatives of neighboring HEs who receive the capsules from the BON in Port-au-Prince, then give them to those HEs who have requested them; 3) individual HEs request a new supply of capsules only when they are about to run out.

Therefore, a certain incentive is required to either: a) arrange to go to PAP to collect capsules themselves; or b) to arrange for another HE representative to pick up a supply for them. Particularly in cases where certain HEs are in remote areas, there could be a potential lag on both ends - between the time an HE runs out and contact with another HE for collection from PAP is made; and between the time of collection at PAP and actual delivery to the HE.

It is felt, therefore, that the HEs that are not participating are likely to be those whose access to capsules is limited.

An HE-specific analysis was not done because exact locations of HEs are often not known by the BON.

B. Lack of supervision: Although supervision is the responsibility of the BON, according to BON figures reported by HKI in their 1979 Evaluation, only 14 supervisory trips were made in 1978. Even if one assumes that during each District visit, 20 HEs were visited, that would only account for slightly more than half the total number of HEs estimated to be in the current program ($20 \times 14 = 280$); $280/469 = 59$ percent). Furthermore, in order to visit 280 centers, at the rate of three per day, it would take almost 100 days to complete this supervision. Gasoline and per diem costs make even this 50 percent supervision prohibitive.

Although data are not available concerning the specific HEs visited, it is assumed that such visits are made more frequently to easily accessible HEs than less accessible ones.

Capsule Distribution

The following analysis of capsule distribution by region, type of HE, and Public-Private is based on the estimated figures of 568,781 for 1979 and 551,093 for 1981.

In all cases the distribution figures have been obtained using the formulae indicated above:

1979: <u>MR data</u>		
.37 (reporting rate)	_____	.89 (based on 11 percent HEs distributing, but not reporting)
1981: <u>MR data</u>		
.47	_____	.95

Distribution by Beneficiary

Table 11 indicates distribution by beneficiary.

TABLE 11:
COMPARISON BY BENEFICIARY

<u>Beneficiaries</u>	<u>1979</u>	<u>1981</u>
6 mos. - 7 years	457,396	448,511
0 - 6 mos.	87,110	84,843
Subtotal: 6 - 7 years	370,286	363,668
Lactating women	111,385	102,582
TOTALS	568,781	551,093

As can be seen from the table declines have been slight in all categories except for lactating women. This can be partially explained by a gradual change in policy in the past of the BON not to distribute to this group due to growing evidence that high doses during lactation can be toxic for fetuses.

Based on this information, it is estimated that the number of children six months-7 years receiving at least one capsule per year was 354,482 in 1979 and 347,596 in 1981. Although this figure by no means indicates coverage, since a child should receive three doses per year, nevertheless it gives some indication of the number of children "enrolled" in the program. By way of comparison, it is estimated, based on projections made from the 1971 census¹ that approximately 900,000 children are aged six months - seven years in Haiti, giving a coverage of only approximately 35 percent.

1. Total population estimated 4,956,000 for 1980; 24.7 percent aged 5-14; 15.2 percent, 0-4; adjusted for 6 months-7 years = 17.8 percent.

Distribution by Region

Table 12 indicates the total capsule distribution by Health District by year; the estimated population per Health District; and the estimated per capita distribution rate.

As can be seen from this table, only St. Marc and PAP have 1981 rates significantly higher than other districts, a fact that can only be explained by speculating that these districts make up in frequency of distribution what they lack in participation (number of HEs distributing). They are able to do this because of a presumed high case load per center in urban areas.

TABLE 12:

DISTRIBUTION BY HEALTH DISTRICT POPULATION

<u>Region</u>	<u>1979</u>			<u>1981</u>		
	<u>Population</u>	<u>Distrib</u>	<u>Ratio Dist:Pop</u>	<u>Population</u>	<u>Distrib</u>	<u>Ratio Dist:Pop</u>
Nord	843,115	76,949	.09	886,351	110,105	.12
Cayes	759,257	101,107	.13	798,193	82,969	.10
Jeremie	185,949	19,161	.10	195,485	17,415	.08
Miragoane	366,185	2,742	.00	384,963	6,567	.01
Port-de-Paix	262,505	38,331	.14	275,967	28,358	.10
Gonaives	349,960	25,624	.07	367,906	26,563	.07
St. Marc	422,361	142,734	.33	444,021	113,625	.25
Hinche	194,549	7,342	.03	204,525	830	.00
Belladere	211,582	6,691	.03	222,432	5,267	.02
PAP	530,030	108,473	.20	557,211	107,033	.19
Petit Goave	358,648	19,258	.05	377,040	9,561	.02
Jacmel	399,148	9,290	.02	419,618	12,491	.02
TOTAL	4,883,288	557,703	.11	5,133,713	518,925	.10

Source: For population - Haitian Statistical Institute figures for 1980 adjusted by + 2.5 % for 1981; - 2.5% for 1979

For distribution - estimated distribution adjusted as per previous given formula

Distribution by type of Institution

Table 1 has shown that hospitals and hospital-dispensaries are growing as a proportion of the total number of health establishments in the Program. In 1979 they represented six percent of the total, and in 1981 13 percent - over 100 percent increase.

Table 13 indicates the estimated number of capsules given out by hospitals and hospital-dispensaries compared to other institutions. From this table, it can be seen that this distribution, as represented as a percentage of the total capsules given out per year, only increased by three percent.

The discrepancy between these two figures suggests either:

- a) that hospitals and hospital-dispensaries are far more selective than other institutions in their criteria for giving out capsules;
- b) they run out at a far faster rate.

Considering a), it is quite possible that doctors, present at most hospitals and many hospital-dispensaries, are authorizing the distribution of capsules to only those children who are malnourished or show signs of xerophthalmia. This hypothesis has been suggested earlier. Considering b), although most hospitals and hospital-dispensaries are accessible to PAP (because they are usually in the District HQ) they may still have difficulties getting capsules because of the ad hoc distribution system described above.

Furthermore, in the busy clinics of such institutions, inventory control may not be as efficient as could be hoped.

TABLE 13:
ESTIMATED VITAMIN A CAPSULES DISTRIBUTED
BY TYPE OF HEALTH ESTABLISHMENT

<u>Type</u>	<u>YEAR</u>			
	<u>1979</u>	<u>Percent of total</u>	<u>1981</u>	<u>Percent of total</u>
Hospital				
Hospital Dispensary	125,362	22	142,446	25
All Others	443,419	78	408,647	75
TOTAL	568,781	100	551,093	100

Calculated by: $\frac{\# \text{ Capsules reported distributed}}{\# \text{MR}} \div \frac{18}{19} \times 12 \times \# \text{ Establishments}$

Then adjust for slight rounding error to get 551,093, for example

Distribution by Public-Private HE

Table 14 gives information concerning public-private distribution of capsules, indicating that in both 1979 and 1981 distribution was close to 50-50, although public institutions have appeared to gain in proportion to private.

TABLE 14:
DISTRIBUTION BY PUBLIC-PRIVATE HE¹

<u>Type of HE</u>	<u>1979</u>		<u>1981</u>	
	<u>No.</u>	<u>%</u>	<u>No.</u>	<u>%</u>
Public	222,827	46	283,055	53
Private	259,976	54	246,941	47
TOTAL	482,803 ²	100	529,996 ²	100

1. Calculated by taking (MR $\frac{\cdot}{\cdot}$.37) $\frac{\cdot}{\cdot}$.89 for 1979
(MR $\frac{\cdot}{\cdot}$.47) $\frac{\cdot}{\cdot}$.95 for 1981
2. Totals less than Tables 9 and 11 (i.e. 568,781 (1979), 551,093 (1981)) because many HES were of unknown classification.

Distribution/Participation within HEs

Table 15 indicates that a high proportion of children who visit HEs come only once, based on information for the years 1979-1982.

Furthermore, of those relatively few children who come back to an HE for subsequent visits, in only 35 percent of those visits are children eligible to receive a capsule (i.e., four months after the previous visit). This proportion is considered low because, from the data it appears that when children did return to the HE, they did so two - three times within a short space of time, suggesting repeated treatment for continuing illness.

The total proportion of children attending an HE getting Vitamin A capsules is estimated to be no more than 20 percent. As can be seen, little variation occurs by type of HE.

TABLE 15:

1. Proportion of Children with only one visit

Hospital	}	- Pub	=	0.67	} 0.71
Disp-Hosp)					
Other	- Pub	=	0.64		
Other	- Pri	=	0.72		
Other	?	=	0.67		
Other	- All	=	0.67		
Combined	.	=	0.67		

2. Proportion of Subsequent Visits Calling for Vitamin A

Hospital Disp-Hosp	} - Pub	=	0.37	
Other	- Pub	=	0.35	
Other	- Pri	=	0.29	} 0.31
Other	?	=	0.50	
Other	- All	=	0.34	
Combined		=	0.35	

3. Maximum Proportion of Children getting one Vitamin A Capsule

Hospital Disp-Hosp	} - Pub	=	0.21	
Other	- Pub	=	0.21	
Other	- Pri	=	0.17	} 0.17
Other	- ?	=	0.20	
Other	- All	=	0.19	
Combined		=	0.20	

Table 16 indicates the age distribution of children coming to HEs, based on Longitudinal Study data.

As can be seen, nearly 80 percent of children who attend HEs are under three years of age, with the highest percentage 0-6 months.

TABLE 16:

PROPORTION OF CHILDREN ATTENDING HEALTH ESTABLISHMENTS
BASED ON LONGITUDINAL STUDY DATA (IN PERCENT)

<u>Type</u> <u>(Number)</u>	<u>AGE</u>								<u>TOTAL</u>
	<u>6 mos</u>	<u>6-12 mos</u>	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	
Hospital Disp/Hosp Pub	0.31	0.17	0.23	0.14	0.06	0.04	0.03	0.02	1.00
Hospital Disp/Hosp Pri	0.12	0.28	0.29	0.13	0.08	0.05	0.03	0.02	1.00
Other-Pub	0.32	0.16	0.21	0.13	0.07	0.06	0.03	0.02	1.00
Other-Pri	0.23	0.14	0.19	0.14	0.10	0.07	0.06	0.07	1.00
Other	0.26	0.18	0.21	0.13	0.09	0.06	0.02	0.05	1.00
Hospital Disp/Hosp All	0.28	0.19	0.24	0.14	0.06	0.04	0.03	0.02	1.00
Other-All	0.25	0.15	0.20	0.13	0.09	0.07	0.05	0.06	1.00
Combined	0.27	0.17	0.22	0.13	0.08	0.05	0.04	0.04	1.00

Performance at the HE level

Table 17 indicates the degree to which HEs are correctly distributing Vitamin A capsules. From the data it can be seen that:

1. Procedures concerning 0-6 month-old children - that is, not to give a capsule - have considerable error: 28 percent of all children 0-6 months entering a center for the first time get a capsule when they should not. The rate is considerably better for subsequent visits: eight percent. This latter rate is expected to be better because a majority of infants 0-6 months would not be eligible for a second dose, according to the four-month interval criterion as well as for the under-six month criterion.

2. Procedures concerning six-month - seven year olds, particularly concerning subsequent doses are followed very poorly: only 26 percent of children supposed to get a capsule actually received one. There are certain possible reasons for this low rate:

a. Lack of information: Auxiliary test figures indicate that approximately 70 percent of all those tested responded correctly on the question concerning distribution procedures for children six months - seven years. It is therefore possible, but unlikely, that low subsequent dose rates are due to lack of information on the part of the auxiliaries.

However, it is possible that doctors, located primarily in hospitals and hospital-dispensaries are only giving the capsules out on the basis of clinical signs of either xerophthalmia or malnutrition, thus restricting distribution. This hypothesis is based on preliminary field observations by the Contractors and on the fact that doctors have never been systematically trained or informed concerning criteria for distribution of Vitamin A.

b. Selectivity: It is possible, given the ad hoc distribution system in operation by the BON, that many HEs, wishing to make each shipment of Vitamin A last, are more selective in their distribution than the norms indicate, giving a relatively high proportion of first-visit children a capsule (41 percent) and then giving only to the most needy (i.e. malnourished) on subsequent visits.

TABLE 17:

PROPORTION OF VITAMIN A DOSES GIVEN CORRECTLY

1. Proportion of 0-6 month children treated correctly, i.e. not given Vitamin A.

i. <u>On First Visit</u>	Hospital } Pub	=	.67
	Dis/Hosp }		
	Other - Pub	=	.85
	Other - Pri }	=	.66
	Other - ? }		
	Other - All	=	.80
	Combined	=	.72

ii. <u>On Subsequent Visit</u>	Hospital } Pub	=	.89
	Dis/Hosp }		
	Other - Pub	=	.98
	Other - Pri }	=	.89
	Other - ? }		
	Other - All	=	.97
	Combined	=	.92

2. Proportion of 6 mos - 7 year olds given Vitamin A.

i. <u>On First Visit</u>	Hospital } Pub	=	.34
(Correctly)	Dis/Hosp }		
	Other - Pub	=	.42
	Other - Pri	=	.66
	Other - ?	=	.17
	Other - All	=	.47
	Combined	=	.41
			.58

ii. When Called for on Subsequent Visit

(Correctly)

Hospital Dis/Hosp	Pub	=	.27	
Other - Pub		=	.18	
Other - Pri		=	.52	} .50
Other - ?		=	.13	
Other - All		=	.25	
Combined		=	.26	

iii. When Not Called for on Subsequent Visit

(Incorrectly)

Hospital Dis/Hosp	Pub	=	.05	
Other - Pub		=	.03	
Other - Pri		=	.13	} .14
Other - ?		=	.67	
Other - All		=	.10	
Combined		=	.08	

3. There is little difference in performance by either type of institution or by public-private classification.

4. Table 17 also indicates that approximately ten percent (eight percent) of children six months - seven years who should not get a capsule, do, in fact get one. Table 18 corroborates this by showing that more capsules are given out for children six months - seven years than should have been, given prescribed norms. Although the difference (370,286 - 271,524) is larger than ten percent, it is approximately ten percent when the larger number is adjusted by 20 percent to correct for inflated estimates (See above discussion on national distribution estimates).

It is felt that this incorrect distribution is due largely to ignorance about proper distribution procedure, and improper record-keeping procedure (i.e., not being aware that the child should not get a capsule).

It is felt that if: a) capsules presently given to 0-6 month old children; and b) capsules given incorrectly to children six months - seven years not be given, there would be an additional 94,000¹ capsules available for distribution to other HEs, presently not active in the program and to six month - seven year old children presently not getting capsules at participating HEs.

1. Calculation:

- a. $370,286 - 20 \text{ percent to adjust for possible inflated estimated due to assumption that HEs distribute 12 months of the year} = \underline{296,228}$, conservative estimate of actual distribution,
- b. $296,228 - 271,524 = 24,704$, estimated "extra" capsules given, six months - seven years;
- c. $87,110 - 20 \text{ percent} = 69,688$, doses that should never have been given;
- d. $\text{total } 24,704 + 69,688 = 94,392$ "extra" capsules available for six months - seven years.

TABLE 18:
COMPARISON OF PRESCRIBED AND ESTIMATED
CAPSULE DISTRIBUTION BY AGE

	<u>1979</u>	<u>1981</u>
<u>No. Capsules actually</u> <u>given to children</u>		
0-7 years (est.)	457,396	448,511
6 mo-7 years	370,286	363,668
0-6 mos	87,110	84,843
<u>Maximum No. Capsules</u> <u>which should have been</u> <u>distributed</u>		
0-7 ¹	271,524	289,913

1. Based on calculations from Longitudinal Study data.

Therefore, not only are a relatively few children being reached by the Vitamin A program; and not only are there a high proportion of children who receive the capsule only once; but of those who do receive the capsule more than once, they often receive it when they should not.

Furthermore, a high proportion of children do not get a capsule when they should. Although this proportion is high, the absolute numbers are relatively low because they refer to children in the upper age groups (i.e., above two years). The implications, however, are serious, since it is older children (three - seven years) who have the highest incidence of xerophthalmia.

Auxiliary Test findings

A test of knowledge concerning awareness and understanding of xerophthalmia, Vitamin A capsule supplementation, and Vitamin A content of foods was given to 167 auxiliaries from all HEs participating in the Evaluation. The purpose of the test was to determine: a) to what degree such auxiliaries were fully versed in program elements; and b) to what degree they could be expected, based on their awareness, to educate mothers.

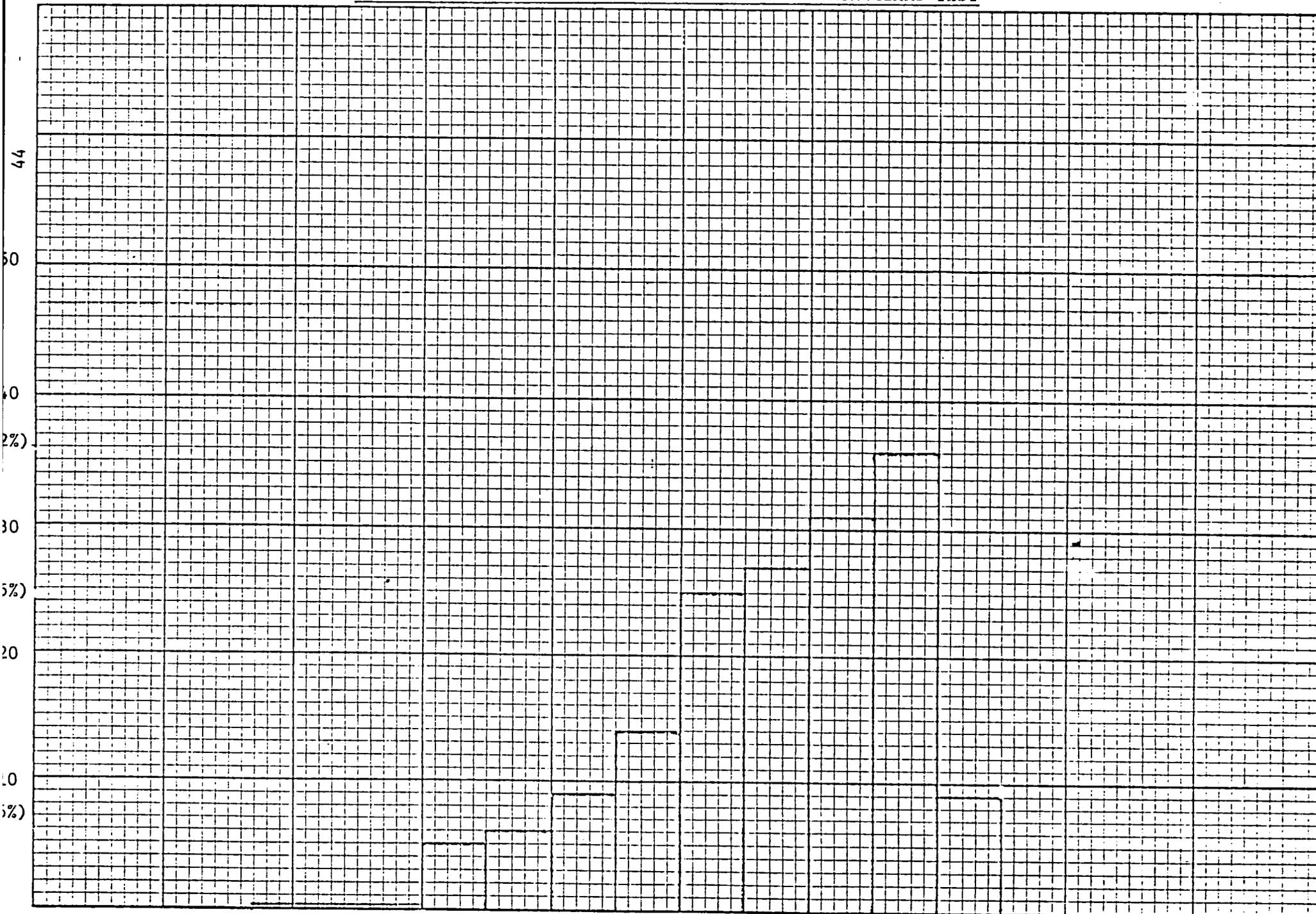
Of those 167 auxiliaries who took the test, nearly 60 percent came from public hospitals, thus skewing the results towards those institutions. The average length of service was six years, with a range of less than one year to 32 years.

The average score on the test was 62 percent - that is, an average of 12 (11.84) questions were answered correctly out of 19 per test. Table 19 indicates the distribution of correct answers.

In principle, most auxiliaries should have received some kind of training in preparation for their work in the Vitamin A program - either as a part of their formal training at the Auxiliary Training School, in in-service seminars given by the BON, or less frequently in seminars given by other Health agencies. Table 20 indicates test scores by type of training received.

Table 21 shows a comparison of scores by training courses.

TABLE 19: DISTRIBUTION OF CORRECT ANSWERS - AUXILIARY TEST



CITADEL NO 642 - CROSS SECTION - 10 SQUARES TO INCH

HISTOGRAM OF TEST SCORES N = 163

19 = 100% correct

TABLE 20:AUXILIARY TEST SCORES BY TYPE OF TRAINING

<u>Type of Training</u>	<u>SCORE</u>			
	<u>1-10</u>	<u>10-12</u>	<u>12-14</u>	<u>14-19</u>
Nothing	40.6	24.6	14.5	20.3
Only Seminar	12.0	16.0	48.0	24.0
Formal Course	10.1	27.5	20.3	42.0

TABLE 21:COMPARISON OF MEAN TEST SCORES
BY TYPE OF TRAINING

<u>Type of Training</u>	<u>Mean Score</u>
Nothing	10.46
Seminar Only	12.77
Course	12.89
Entire Pop.	11.84

Table 22 indicates the distribution of scores according to categories of HE represented.

TABLE 22:
CORRECT SCORES BY TYPE OF HE (IN PERCENT)

<u>Correct Score</u>	<u>Private</u>	<u>Public</u>	<u>Unknown</u>
<10	26.1	24.2	0
10-12	26.1	23.5	37.5
12-14	21.7	20.5	50.0
14-19	26.1	31.8	12.5
	100	100	100

Table 23 indicates the distribution of test scores by Health District.

TABLE 23:
DISTRIBUTION OF TEST SCORES BY HEALTH DISTRICT

<u>Health District</u>	<u>Mean Score</u>	<u>No. Aux.</u>
Cap. Haitien	14.37	20
Cayes	11.66	12
Fort-Liberte	13.52	9
Gonaives	12.54	—
Hinche	9.12	15
Jacmel	13.06	8
Jeremie	14.02	16
Limbe	11.44	1
Miragoane	11.75	10
Petit Goave	14.09	11
Port-de-Paix	12.02	6
Port-au-Prince	8.99	21
St. Marc	8.84	15
Combined	11.84	163

Discussion

As has been mentioned above, auxiliaries scored low, on the average (62 percent right answers) on a test which was designed to test only basic or fundamental knowledge. It is significant to note that a sizeable proportion of respondents (38 percent) scored over 70 percent; and 22 percent scored between 74-82 percent. Table 19 clearly shows the range.

Table 20 indicates that there is a significant difference between those auxiliaries who had a formal training in Vitamin A at the Auxiliaries Training School and those who said they had received no training at all. There is a similar statistical difference between those auxiliaries who had received a BON in-service training course and those who had received nothing.

Table 21 confirms this correlation, showing that those auxiliaries with training answered a greater proportion of questions correctly than did those with no training.

There was no statistical difference, however, between those auxiliaries who had had a formal course and those who had an in-service course, largely, it is supposed, because the BON personnel were responsible for giving both courses and their contents are thought to be similar.

Table 22 indicates little difference in scores between public and private auxiliaries. This can be explained by the fact that auxiliaries of both categories participated in BON courses.

Table 23 presents information by region, and as can be seen, there is a considerable difference between the highest scoring region - Cap Haitien - and the lowest - Port-au-Prince. This difference may be due only to chance, however. (See Appendix 1 for discussion of Methodology.)

As has been noted above in this Report, PAP has a very low participation rate (53 percent compared to a district high of 77 percent of HEs participating out of the total enrolled). It may be that PAP District officials, putting a low priority on Vitamin A distribution, have put an equally low priority on assuring adequate training for HE personnel in the overall Vitamin A program.

Question-by-Question data

Q.1: What are most frequent symptoms of xerophthalmia?

<u>Response</u>	<u>Percent Responding</u>
A. Night Blindness	85
B. Unable to see distance	47
C. Eye pain when looking at sun	74
D. Bloody Eyes	16
<u>Percent Correct Response (A Only)</u>	= 13

Q.2: A child with xerophthalmia should:

A. Receive Vitamin A immediately and be referred to an HE	83.2
B. Treated surgically	4.8
C. Get a Vitamin A capsule each month	53.3
<u>Percent Correct Response (A Only)</u>	= 39.0

Q.3: How do you prevent xerophthalmia? (True/False)

<u>Response</u>	<u>Percent Responding</u>	
	<u>True</u>	<u>False</u>
A. Wash eyes frequently	19	81
B. Keep flies away from eyes	17	83
<u>Percent correct response (A)</u>	=	81.0
<u>(B)</u>	=	83.0

Q.4: Vitamin A is important for the eyes. What are other functions of this Vitamin?

<u>Response</u>	<u>Percent Responding</u>
A. Helps respiration	5
B. Fortifies blood	26
C. Keeps the skin healthy	74
D. No other function	28
<u>Percent correct response (C)</u>	44.0

Q.5: How often should you give Vitamin A capsules to the following groups?

<u>Response</u>	<u>Percent Responding</u>			
	<u>0-6 mos.</u>	<u>6-18 mos.</u>	<u>3-4 yrs.</u>	<u>4-6 yrs.</u>
A. Every six months	12	18	77	10
B. Every 16 weeks	41	74	75	71
C. Every year	0	2	5	5
D. Not necessary to give	32	1	3	3
<u>Percent correct response</u>				
0-6 mos	=	32	(D)	
6-18 mos	=	74	(B)	
3-4 years	=	75	(B)	
4-6 years	=	71	(B)	

Q.6: Indicate those foods which contain Vitamin A.

<u>Food</u>	<u>Percent Indicating Correctly</u>
Carrots	98
Spinach	58
Lettuce	42
Liver	52
Bread	98
Potatoes	90
Meat	73
Beets	84
Wheat	89
Cow's Milk	44
Eggs	89
Papaya	95
Peanuts	80

Q.7: In order for Vitamin A to be absorbed by the body, which of the following are necessary?

<u>Response</u>	<u>Percent Responding</u>
A. Vitamin B	17
B. Proteins	78
C. Bacteria	1
D. Fat	31
<u>Percent correct response (B & D)</u>	
one correct, none wrong =	58
both correct =	14
wrong =	28

Q.8: What diseases hinder the absorption of Vitamin A?

<u>Response .</u>	<u>Percent Responding</u>
A. Diarrhea	87
B. Skin infection	22
C. Malaria	10
D. Vomiting	88
<u>Percent correct response (A & D)</u>	
one correct; none wrong	= 11
both correct	= 59
wrong	= 30

Q.9: How many capsules in a bottle of Vitamin A?

<u>Response</u>	<u>Percent Responding</u>
A. 50	4
B. 150	1
C. 250	1
D. 500	92
<u>Percent correct response</u>	92

Q.10: Suppose it is July 1 and you have 2 bottles of Vitamin A remaining. During the six previous months, you have distributed capsules as follows:

January	482	April	320
February	241	May	400
March	290	June	450

According to the above, you should have capsules available for approximately how many months.

<u>Response</u>	<u>Percent Responding</u>
A. One month	8
B. Three months	68
C. Five months	8
<u>Percent correct response (B)</u>	= 68.0

Q.11: If a mother who comes only infrequently to the clinic arrives one day with her child, two months before the due-date of his next Vitamin A capsule, what would you do?

<u>Response</u>	<u>Percent Responding</u>
A. Tell mother to return in two months	84
B. Give the child a capsule	7
C. Give the capsule to the mother, telling her to give it to the child in two months	5
<u>Percent correct response (A)</u>	= 84.0

Q.12: How should Vitamin A capsules be kept to preserve them for the longest time?

<u>Response</u>	<u>Percent Responding</u>
A. Put in refrigerator	4
B. Put in a special vial	1
C. Expose them to sun twice a week	5
D. Keep the bottle closed and in a protected place	90
<u>Percent correct response (D)</u>	90

Q.13: Give three reasons why a mother who has attended group education sessions might not put into practice what she has learned?

<u>Percent correct response</u>	17.0
(social, cultural, economic constraints)	

Q.14: Give three foods, rich in Vitamin A which can be found during the summer vacation season:

<u>Percent correct response</u>	63.0
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Q.15: Give three foods, rich in Vitamin A which can be found throughout the year:

<u>Percent correct response</u>	68.0
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Discussion

The above data indicate the following areas of particular weakness:

1. Poor understanding of symptoms of xerophthalmia. Although a high proportion of respondents indicated night blindness as a symptom of xerophthalmia, 74 percent indicated "eye pain when looking at sun;" and a surprising 16 percent indicated "bloody eyes."

2. Poor in-depth understanding of education in the change process. Only 17 percent of auxiliaries were able to provide correct reasons why mothers might not be able to put nutrition education into practice. This is considered significant, for if auxiliaries do not appreciate the social, economic, and cultural constraints inhibiting behavioral change, they will be unable to teach in a meaningful and appropriate way.

In addition, there was weakness shown on understanding of the role of fat and protein in Vitamin A absorption and on other aspects of the physiology of Vitamin A utilization.

Certain irregularities showed up concerning knowledge of Vitamin A content of food - a relatively low percentage of respondents indicated liver, a food very rich in Vitamin A, while about 100 percent indicated bread and potatoes, foods with low Vitamin A content.

A surprising number of respondents gave wrong answers concerning Vitamin A prevention = noteworthy particularly because the choices given had nothing whatsoever to do with the origins of the disease.

The responses concerning understanding of Vitamin A distribution systems was good.

APPENDIX 1DETAILED METHODOLOGY AND STATISTICAL NOTESIntroduction

As has been indicated in the section entitled Methodology in the main body of the Report, the Evaluation was divided into six components:

1. A review of existing Monthly Reports (MRs) sent to the BON by participating HEs and indicating the number of capsules distributed per day, by dose (first, subsequent), and by beneficiary (children, lactating mothers).

2. A review of capsule distribution data, according to BON records.

3. A Retrospective Study, designed to collect patient-specific information concerning Vitamin A distribution.

4. A Longitudinal Study designed to collect more detailed patient-specific information concerning Vitamin A distribution, but more importantly, to collect data on HE caseload (i.e., the actual number of children using health facilities). These data would permit estimates of actual demand for Vitamin A.

5. A Personnel Study, designed to collect information concerning methods of inventory control, recording, etc., used by Vitamin A program personnel.

6. A test of Auxiliaries, designed to determine the existing levels of their knowledge concerning xerophthalmia, Vitamin A, and the capsule distribution program.

The years 1979 and 1981 were chosen because: a) 1979 was the first year occurring after the year of the first HKI Evaluation; b) 1981 was the last full year of operation before the present evaluation was to start.

Monthly Reports

All Monthly Reports for all HEs reporting were collected and analyzed. All information was used except for data referring to first-dose-subsequent dose which were thought to be highly flawed.

BON Records

The BON keeps records concerning both the receipt of Vitamin A from UNICEF and daily (and monthly) distribution to HEs. The name of the collecting HE or collectors, the date of delivery, and the number of bottles given is recorded.

Retrospective and Longitudinal Study Designs

Because the BON and HKI desired information for each of the 14 health districts in Haiti in addition to national information, the sample of HEs was a stratified random sample with the strata being the districts. Another requirement was that information be obtained about both hospitals and dispensaries, and about both public and private HEs.

Considering these desires and limitations on the amount of time which health personnel could reasonably be expected to devote to the study, approximately five HEs from each district were selected - for a total of 68 HEs. One HE was a hospital, three were public non-hospital HEs, and one was a private non-hospital HE. The 68 HEs were selected from a list of HEs in Haiti as compiled by the BON. Reserve HEs were chosen in case one of the selected ones could not or would not participate in the study.

Retrospective Study

The data collection form for this study is appended.¹ Each HE was asked to complete the form by recording all visits in 1979-1982 by all children whose initial visit occurred in one of three randomly selected months from each of the three years: March, May and November 1979; January, July and October 1980; March, August and November 1981.

Longitudinal Study

The selected HEs were asked to complete the longitudinal form by recording the requested information for all visits by children 0 through six years old for a period of 40 days.

Evaluation Manual

An Evaluation Manual, attached, was prepared for use by the BON.

In it details are given concerning:

1. Sample selection methodology;
2. Survey procedures;
3. Training and supervision requirements;
4. Sample letters to key District officials;
5. Activity chart (PERT)
6. Sample forms

Field Survey Execution/Performance

Twenty-six out of 68 HEs were surveyed for the Retrospective Study; and 22 out of 68 for the Longitudinal. Because of this relatively low participation rate, detailed analysis comparing regional performance

-
1. See Manual for the Evaluation of the HKI Vitamin A Program

could not be done. However, enough information was available concerning type of HE when such district-wide data were analyzed collectively. The same was true for Public-Private categories.

Furthermore, since considerable numbers of patient records were analyzed per HE, it was felt that the reliability of individual HE information was high.

Finally, since from analysis of performance (i.e. number of capsules given out correctly) there was no indication that those HEs actually chosen to participate in the Evaluation were of particularly high quality, it can be assumed that little bias occurred in the selection process. Therefore, data from these centers can be considered reliable.

Although most participating HEs did not record for the scheduled 40 days of the Longitudinal Study - largely due to an interruption of Vitamin A supply from the BON - data collected could still be used satisfactorily. As has been suggested above, one of the primary uses of Longitudinal Study data was to enable an estimate of case load. This was successfully done by calculating the number of days recorded within the period, extrapolated to get a yearly figure.

As can be seen from Tables 24 and 25, many of the HEs indicated to be used as a basis of sample selection were not selected by the BON. Thus the random nature of the sample was not assured, although as has been stated above, it appears from performance data that no significant bias was introduced.

Because of the reduced sample size and the chance of bias due to the BON's choice of non HEs, it was decided not to include standard statistical information concerning degrees of confidence, standard deviations, etc. Although these can certainly be calculated, it was concluded that their inclusion might give a false sense of confidence in specific data.

It must be emphasized, however, that taken as a whole, the data very clearly reflect what the Contractors feel to be the probably actual situation in Haiti.

TABLE 24:

LIST OF HES FROM WHICH FINAL SAMPLE TO BE CHOSEN

<u>District</u>	<u>PUBLIC</u>			<u>PRIVATE</u>
	<u>Hospital</u>	<u>Hospital</u> <u>Dispensaire</u>	<u>Dispensaire</u>	
Belladere	Belladere		Baptiste Ville Bonheur Lascahobas Mirebalais Savanette	Savanette Lascahobas
Cap Haitien	Cap Haitien	Grand Riv du Nord Menonite-Mixte	Bahon Quart Morin Pignon Dondon Perches	Pignon Valieres La Jeune
Cayes	Cayes	Port a Piment Cayes Aquin	Ile a Vaches Rendel Dory Ferme Leblanc Vieux Bourg d'Aquin- Mixte	Laborde Charpentier Chantal

<u>District</u>	<u>PUBLIC</u>			<u>PRIVATE</u>
	<u>Hospital</u>	<u>Hospital</u> <u>Dispensaire</u>	<u>Dispensaire</u>	
Fort Liberte	Quahaminme	Fort Liberte	Gens de Nantes Acul Sameri Derac Mont Organise Caprice	Caprice Dumas Caporille
Gonaives	Gonaives		Coridon Gras Morne Ennary Plassac Riv. Bayonnais	Gras Morne III Terre Neuve Passe Reine
Hinche	Hinche		Thomonde Maissade Cerca La Source Mme. Joa	Maissade Thomassique Cerca Carvajal
Jacmel	Jacmel	Bairret	Anse A Pitres Marbial Barreau Ternien Cayes Jacmel	La Vallee Marbial La Fond
Jeremie	Jeremie		Chambellan Les Irors Dame Marie II Abricat Marfranc	Preville Tiburon Bonbon
Limbe	Limbe	Pilat-Mixte Pilat-I.'Etat	Camp Coq Pilate Limbe Borgme Port Margot	Borgme Limbe I Fauche
Miragoane	Miragoane	Anse A Veau	Pt Troue de Nippes Pte Riv de Nippes Madian Miragoane L'Asile	Fd. des Negres (La) Paillant Fd. des Negres (Armee du Salut)
Petit Goave	Petit Goave	Defuisseau St. Croix	La Madeleine Olivier Palmes Grand Goave Trouin	Petit Goave Palmes La Madeleine

<u>District</u>	<u>PUBLIC</u>			<u>PRIVATE</u>
	<u>Hospital</u>	<u>Hospital</u> <u>Dispensaire</u>	<u>Dispensaire</u>	
Port-au-Prince	Port-au-Prince	#5 #8 #6	Cite Simone Gressier Fond Verettes Fond Parisien Marche Letellier	#1 St. Michel (Fort National) #6 Kenscoff (Pere Sicot)
Port de Paix	Port de Paix	Bonneau LaPointe Jean Rabel	Bassin Bleu Chansolme Duthy I Duthy II Gaspard	Port de Paix I Port de Paix Palmiste
Saint Marc	Saint Marc	Pte. Riv. Artibonite Verrettes Dessalines	Grde. Saline Bocozelle Dessalines Bastien Derlandes	Deschappelles Montrouis Pie. re

TABLE 25:

ACTUAL HES SELECTED FOR EVALUATION

<u>Longitudinal</u>	<u>Retrospective</u>
1. Belladere None	None
2. Cap Haitien Disp Quartier Morin Hop Justinieu-Pediatrie . Disp Dondon	Cde S Ambroise Holly (Trou du Nord) Hop Justinieu-Pediatrie Disp Dondon Quartier Morin
3. Cayes Ferme-Leblanc Aquin Hop St. Josph Charpentier	St. Joseph La Vallee Charpentier Dory Aquin Hop Cayes
4. Fort Liberte ? Hop J. Claude Duvalier	Hop J. Claude Duvalier
5. Gonaives Hop La Providence Hop Alma Mater G Morne Disp Hop Terre Neuve	Corridon Terre Neuve Hop La Providence
6. Hinche Disp de Thomonde	Thomonde (No Records on Vit A)
7. Jacmel Disp de Marigot Hop St. Michel Disp Hop Baint Disp La Fond	Baint Hop St. Michel
8. Jeremie Disp Dame Marie	Marfran
9. Miragoane St. Michel du Sud Armee du Salut Hop St. Joseph	Hop Ste. Therese
10. Limbe None	None

Longitudinal

Retrospective

11. Port-au-Prince
St. Martin de Porres

Cde S Portail Leogane

12. St. Marc
Project Help
Hop Albert Schweitzer
Hop St. Nicolas
Disp Sacre Coeur de Pt Sponde
C de S Mange

Hop St. Nicolas
Project Help
Mange

In general, it is felt that given the comprehensive nature of the Evaluation, the difficulties of logistics and communication in Haiti, the administrative changes within the BON (the Director of the HKI program was promoted to Director of the BON during a critical phase of the Evaluation), the Evaluation was well-executed. Despite a relatively low participation rate, data were recorded accurately and thoroughly.

Personnel Study

The Personnel Study, designed to collect information concerning the recording of Vitamin A distribution data and the number and type of supervisory visits made to HEs, was used primarily as a secondary source of data - to verify, wherever possible, data collected from the Retrospective Study. Little definitive information was provided by this Personnel study, largely due to the difficulty of precise recall in an ad hoc system of distribution and concerning supervisory visits which were infrequent.

Auxiliary Test

The Auxiliary Test, given to all auxiliaries of the HEs participating in the Evaluation, was considered a valid and reliable test of auxiliaries in Haiti, when all respondents' answers were analyzed collectively. The number of respondents (167) was considered high enough to make conclusions about knowledge and awareness with a relatively high degree of certainty.

Responsibilities of Contractors and BON

As has been indicated in Methodology in the main body of the Report, the following is a list of activities done by the Contractors according to provisions of the contract signed between R. Parlato and HKI.

Contractors

- Design of Evaluation
- Design of all forms and questionnaire
- Preparation of Evaluation Manual
- Provision mid-term TA
- Analysis of all data
- Preparation of Final Report

BON

- Execution of Evaluation including:
 - a. Printing all forms
 - b. Pre-testing
 - c. Training interviewers
 - d. Official contacts
 - e. Supervision
 - f. Collection of all forms and forwarding to Contractors.

A complete list of activities performed by both Contractors and BON can be found in the Evaluation Manual, attached (PERT Chart and list of activities).

Needless to say, the BON participated actively in the design phase of the Evaluation and formally approved all elements of it. Furthermore, the BON provided essential administrative support to the Contractors in the early data collection (MRs, BON records, etc.) phase, in preliminary Contractor field visits, etc.

Time allotted Contractors

Fifty-three days were allotted to the Contractors to do all the work indicated above.

MANUAL

For the Evaluation of the HKI Vitamin A Program¹

(For BON Vitamin A Program Staff)

Introduction

This Manual has been prepared for the staff of the BON and will provide methodological details necessary for the successful execution of the Vitamin A distribution program.

Retrospective Study

Sixty-eight Health Establishments (HE) have been chosen at random in the 14 Health Districts of Haiti to be included in the Retrospective Study (and in the Longitudinal Study - see the following Section of this Manual).

Each of these 68 HE will be visited according to the research norms indicated in the Retrospective Study Guide, to follow. Briefly, this study will include:

1. An analysis of a sample of individual patient records of children who have visited the sample HEs between 1975-81. Such an analysis will permit a determination, with a certain precision, of the proportion of children attending a center who receive Vitamin A.

2. An analysis of the distribution and recording systems of the Vitamin A program.

One person, selected by the Administrator of each Health District, will be responsible for the execution of this study. In principle, there is already one Vitamin A Program Supervisor in each District, and it is

1. This is an English translation of a French Guide pour l'Evaluation du Programme de Vitamine A, prepared by the Contractors.

suggested that he/she be the District in-charge for this Evaluation. In cases where there is no Supervisor, it is recommended that an infirmier-hygieniste be selected. Although an auxiliaire can be expected to do competent work, the selection of someone with higher-level training is considered preferable.

The BON will be expected to provide training to all Evaluation personnel, using the Retrospective Study Guide, mentioned above, as an instruction manual. Such training should emphasize: 1) the importance of visiting all HEs selected; 2) the importance of complete and correct recording of all information.

It is suggested that this training have three components:

1. A work-session involving the District Evaluator and a representative of the BON. The BON representative should have ample opportunity to explain thoroughly all aspects of the Evaluation, and the District Evaluator should be encouraged to ask for as many clarifications as necessary.

2. A field visit to a nearby HE, during which the Evaluator will be able to put into practice what she has learned in the work-session and from her reading of the Guide. While the BON representative should be present during the field visit, he/she should not intervene until the end of the practice data collection, at which time a complete review of procedures, errors, etc. should be made.

3. A short session with the Administrator of the Health District, in which he/she is informed about the Evaluation, its goals and objectives, etc. This session should be arranged to include the BON, the District Evaluator, and any other District staff who may participate in the Evaluation.

Supervision

After all the sample HEs in the Evaluation have been visited by District Evaluators, they will be asked to send all completed forms to the BON. In order to expedite these remittances, it is recommended that during the pre-Evaluation visit to the Districts by the BON, self-addressed, stamped envelopes be distributed to all Evaluators. In addition, it should be emphasized that no forms should be sent to Port-au-Prince unless all information has been completed.

The BON will then be responsible for sending all completed forms to Dr. Sobel, who, in turn, will send back his critical comments to the BON concerning survey procedures, rectification of errors. etc. The BON, then, will be responsible for transmitting any new methodological information to the concerned Evaluators in the field.

New self-addressed, stamped envelopes should be left with Evaluators who will have to redo parts of the Evaluation.

Longitudinal Study

Norms for the execution of this study are given in the Longitudinal Study Guide to follow.

A training session should be given to auxiliaires, or to whomever is responsible for the Vitamin A program at the HE level, when they are convened at District HQ to take the Auxiliary Test (see below), to be administered by the BON.

This training session should emphasize:

1. The importance of registering each child 0-10 years old who attends the HE during the four months of the Study;
2. The importance of completing all information requested on the Study forms;
3. The fact that there will be at least one supervisory visit by the District Evaluator during the four-month period.

It is suggested that during the training session, the BON trainer teach the correct method of completing the Study forms, using actual child Patient Record Forms, borrowed from a nearby HE.

During the training session, trainers should not emphasize the collection of Vitamin A-related information over the collection of other information. To the extent possible, care should be taken to avoid any bias which will influence the distribution of Vitamin A during the four-month period.

During the training session, the BON should distribute blank forms to all auxiliares of the HEs selected for the Study. Auxiliaires should be informed that these forms may not suffice, and that they should request more forms from the BON (by indicating so on any completed form sent to the BON).

During the same training session, self-addressed, stamped envelopes should be distributed to all auxiliaries (four per HE), and instructions should be given that completed forms should be sent to the BON every two weeks.

The District Evaluator should be present during the training session, for it will be she who will supervise auxiliaries in the field, and who will be expected to correct any forms filled in incorrectly.

Auxiliary Test

The BON will be responsible for administering the Auxiliary Test, designed to test the understanding of auxiliaires concerning xerophthalmia and Vitamin A treatment (See questionnaire, to follow).

The test should be given to all auxiliaires of HEs selected in the Evaluation sample. Many HEs will have only one auxiliaire, but others, such as hospitals will have many. Since it is essential that the greatest number of auxiliaires possible be included in the test, it is recommended that the Administrator of the Health District officially contact each HE, indicating that all auxiliaires attached to the HE should come to District HQ for the Auxiliary Test. In the event that a non-auxiliaire (such as an infirmiere) is responsible for the Vitamin A program, she should be requested to come to HQ for the test.

Thus, if there are five HEs chosen in a District for the Evaluation, the Auxiliary Test should be administered to:

1. All auxiliaires in the five HEs, whether they are participating in the Vitamin A program at present or not;
2. All personnel responsible for the Vitamin A program, whether they are auxiliaires or not.

Execution of the Test

Since the majority of auxiliaires to be tested will receive training concerning the Longitudinal Study - a training which would give a strong bias to the results of this Auxiliary Test - it is essential that the test be given before any other Evaluation activity during the pre-Evaluation visits of the BON.

The auxiliaries should be convened in a hall, and should be given one copy of the test (the BON should bring pencils). Instructions given by the BON should be short and should suggest no answers. In general:

-- The auxiliaires can take as much time as they like to complete the test;

-- no conversations among auxiliaires should be permitted;

-- auxiliaires should answer all questions, even if they are not sure of the answer;

-- all additional information (name of auxiliaire, name of HE, etc.) should be duly completed by all auxiliaires.

Any auxiliaire who does not show up for the test, should be dropped from the Evaluation register. No attempt should be made to give a later test to those who do not attend the first test session. However, in the letter sent by the BON to all District Administrators (and signed by the Director General of Health), the importance of full participation in the test should be emphasized.

List of Activities/PERT Chart

The PERT chart (to follow) gives all major Evaluation activities which must be completed in order for the Evaluation to be well executed. An accompanying text offers details.

Sampling

Methodological notes concerning sampling are to follow.

Pre-Testing

All forms/questionnaires should be pre-tested before final printing.

Departement de la Sante Publique et de la Population
Division de Nutrition
Retrospective Study Guide
for
The Evaluation of the Vitamin A Distribution Program¹

Madam,

You have been chosen to participate in a national nutrition study with specific regard to the Vitamin A distribution program designed to combat xerophthalmia.

As you know, the problem of xerophthalmia is widespread in Haiti. Many people, the great majority of whom are children, suffer from this disease and often become blind.

However, the Government of Haiti and the DSPP have begun a program of Vitamin A capsule distribution with the goal of resolving this national health problem. Thanks to the regular and continuous distribution of Vitamin A capsules to children 0-seven and to lactating mothers, one can hope to eliminate this malady from the country. Moreover, through attentive surveillance, one can identify those children exhibiting signs of xerophthalmia and can give them doses of Vitamin A sufficient to stop the course of the disease.

Therefore, a successful distribution of Vitamin A capsules is essential for the success of this fight against xerophthalmia. In fact, if Haitian children do not receive their regular dose of Vitamin A, they risk losing their sight. Each Haitian child should, then, benefit from the program.

1. English translation

Unfortunately, certain problems of distribution, administration, and education often hinder the progress of the program. This Evaluation has then, as a primary goal, the identification of those problems which affect the program - an identification which will, it is hoped, lead to prompt solutions.

Your role is therefore very important, for you are to be responsible for the collection of information which will be used to evaluate the program.

Your responsibilities

You will have to:

- 1) Visit a number of Health Establishments in the District (see sample selection to follow);
- 2) Ask certain questions of the staff member responsible for the distribution of Vitamin A;
- 3) Consult child Patient Records and record certain data contained therein;
- 4) Distribute forms to be filled out by selected Health Establishments over a four-month period;
- 5) Visit each of these Health Establishment at least once during this four-month period;
- 6) Send by mail all forms completed by you in the course of your work for this Evaluation.

Time required for this Evaluation

It is expected that you will have to spend one day per HE visit. Therefore, if you have to visit five HEs, you should count on five days of work at the beginning of the Evaluation, and five days two months later, for an approximate total of ten working days.

But the time you will have to spend on the Evaluation could be less. For example, if two of the HEs chosen for you to visit are relatively close to each other, you could easily visit both in one day.

On the other hand, the time needed may be more than the expected ten days if: a) the work that you do has not been done properly, and you have to repeat the visit; b) the person responsible for Vitamin A distribution, whom you will have to interview, is not present when you visit.

Given the fact that you will receive a fixed amount of money for each HE visited, it will be to your advantage to complete the work as specified and to collect all information during your first visit.

Your remuneration

You will receive a fixed sum of \$46.00 per HE visited. This amount should be used to cover the cost of two visits to each HE included in the Evaluation sample.

You may use the \$46.00 in any way that you choose - as long as you complete the work required of you. You may wish, for example, to make all HE visits in an official vehicle, in which case you should pay for gas with your travel money. You may, on the other hand, wish to go by public conveyance in order to save money. It is up to you to make the most efficient use of your time and your resources. As has been mentioned above, travel funds will be allocated on the basis of two visits per center. If mistakes are made in recording and you are obliged to return for a third visit, you will be responsible for any additional travel costs.

What you must do

1. You go to one of the HEs indicated below for your District and ask to see the person responsible for Vitamin A distribution - that is, the person who actually does the distribution to children and lactating mothers.

2. You explain the purpose of your visit, the authority under which you are operating, and what will be required during the course of your visit.

3. You ask all questions contained in the Questionnaire a l'Intention du Personnel Faisant la Distribution de la Vitamine A (to follow), and record all answers.

If the answer given to any question is identical or equivalent to the multiple-choice answers suggested in the questionnaires, circle the response given. If the answer given is different from any suggested in the questionnaire, write the given answer in the space indicated as "Other."

Signed,

Administrator
DSPP

RETROSPECTIVE STUDY:DETAILED INFORMATION

Following is essential information concerning the Evaluation you will execute:

1. A list of HEs that you must visit, and an explanation of how to use the list.

2. The questionnaire to be used for the interview of Vitamin A distribution personnel at each HE.

3. Instructions concerning the information to be collected from child Patient Records at each HE.

I List of Health Establishments to be visited,
by District, for the Evaluation

<u>District</u>	<u>Hopital Publique</u>	<u>Hopital/C.deS.</u>	<u>Dispensaire Publique</u>	<u>Etab. Prive</u>
Belladere	Hopital Dist.	---	Baptiste Ville Bonheur Laschobas (3) Mirebalais Savanette	Savanette Laschahobas (1)
Cap Haitien	Hopital Dist.	Grand Riviere du Nord (1) Mennonnite	Bahon Quart Morin Pignon (2) Don Don Perches	Pignon Vallieres (1) La Jeune
Cayes	Hopital Dist.	Port a Piment Cayes (1) Aquin	Rendel Dory (2) Ferme le Blanc Vibourg d'Aquin	La Borde Charpentier (1) Chantal
Fort Liberte	Quahaminme	Fort Liberte	Gens de nantes Acul Samedi Derac (2) Mont organise Caprice	Carice Dumas (1) Caprorille

<u>District</u>	<u>Hopital Publique</u>	<u>Hopital/C.DeS.*</u>	<u>Dispensaire Publique</u>	<u>Etab. Prive</u>
Gonaives	Hopital Dist.	---	Coridon Gras Morne Ennary (3) Plassac Riviere Bayonnais	Gros Morne* (Episcopal) Terre Neuve (1) Passe Reine
Hinche	Hopital Dist.	---	Thomonde Maissade (1) Cerca la Source Thomassique Mme. Joa	Maissade (1) Thomassique Cerca Carvajal
PAP	Hopital Dist.	5eme Materno- Infantile 8eme S.O.D. (1) Fontamara 6eme Portail Leogane	Cite Simone Gressier Fond Ver- ettes (2) Fond Parisien Marche Letellier	lere hop. priv. St. Michel (Ft. Nat'l) 6eme Methodiste (1) Kenscoff (Sicot)
Port de Paix	Hopital Dist.	Bonneau La Pointe (1) Jean Rabel	Bassin Bleu Chansolme Duthy (2) Duthy Gaspard	Port de Paix (Hop./C.deS.) Port de Paix (Disp) Palmiste (1)
St. Marc	Hopital Dist.	Pte Riviere Artibonite Verrettes (1) Dessalines	Grand Saline Bolozelle Dessalines (2) Bastien Derlandes	Desciappelles Montrouis Pierre (1)
Jacmel	Hopital Dist.	Bairret	Anse a Pitres Marbial Barreau (2) Ternien Cayes Jacmel	La Vallee Marbial (1) La Fond
Jeremie	Hopital Dist.	---	Chambellan Les irois Dame Marie (3) Abricat Marfranc	Preville Tiburon (1) Bon Bon

<u>District</u>	<u>Hopital Publique</u>	<u>Hopital/C.de.S.</u>	<u>Dispensaire Publique</u>	<u>Etab. Prive</u>
Limbe	Hopital Dist.	Pilat (mixte) Pilat (pub.)(1)	Camp Coq Pilate Limbe (2) Borgme Port Margot	Bergme Limbe* (1) St. Jean Limb Fauche
Miragoane	Hopital Dist.	Anse a veau	P. Trou de Nippes Madian Pte. Riviere (2) Nippes Miragoane L'Asile	Fd. de Negres (1) Paillant Fd. de Negres (Armee du Salut)
P. Goave	Hopital Dist.	Defuisseau St. Croix (1)	La Madeleine Olivier Palmes (2) Grand Goave Trovin	Petit Goave Palmes (1) La Madeleine

Special Instructions

You will have to visit five HEs in your district for the Retrospecti Study. The above chart gives those HEs from which the five are to be chosen. Following this chart, you should visit:

1. The District Hospital;
2. The Centre de Sante (if one is indicated for your District).
3. The first one or two public dispensaries indicated. In the event that either one or the other: a) is not functioning; b) does not keep a Patient Record file; or c) are not classified by Registration Number, GO TO THE NEXT DISPENSARY INDICATED ON THE LIST.

For example, of the three public dispensaries listed for Cap Haitie you would have to choose one (the number in parantheses indicates the number of establishments in each category you have to visit)., The first on the list is Bahon, and you would go there. If Bahon, for any one of the three reasons given above, is not acceptable, you would go to Quartier Morin.

You would follow the same procedure for Private Institutions.

If a HE is functioning, but is not currently implementing a Vitamin A distribution program; and if that HE has a numbered Patient Record file, you must collect all information called for so that the history of that HE's involvement in the Vitamin A program may be studied.

ANNEXE IIQUESTIONNAIRE A L'INTENTION DES PERSONNES
QUI FONT LA DISTRIBUTION DE VITAMINE A

- 1) Demandez à voir le rapport mensuel de distribution de Vitamine A pour le mois en cours.
- A) On vous montre une forme de rapport mensuel fournie par le district, et comprenant les informations appropriées.
- B) On vous montre une formule de rapport mensuel fournie par le district ne comprenant aucune information.
- C) On vous montre une forme de rapport autre que celui fourni par le district mais comprenant les informations appropriées.
- D) On ne vous montre rien.
- E) Autre _____

Si la réponse est A ou C, c'est-à-dire qu'il y a des informations disponibles, posez la question 3.

Si la réponse est B ou D, c'est-à-dire qu'il n'y a pas d'informations disponibles, posez la question 2.

- 2) Pourquoi ne remplissez-vous pas le rapport mensuel sur la distribution de Vitamine A?
- A) On ne distribue pas de Vitamine A.
- B) On remplit habituellement le rapport mensuel mais présentement on n'a plus de formulaires.
- C) On recueille les informations sur d'autres feuilles et on les inscrit sur le rapport mensuel seulement à la fin du mois.
- D) Autre (inscrire la réponse donnée)

QUESTION 2

Si la réponse est A, Demandez:

Pourquoi ne distribuez-vous pas de Vitamine A?

- A) Nous n'avons plus de Vitamine A.
 B) Autre (inscrire la réponse donnée)

3) Comment recueillez-vous les données pour remplir votre rapport mensuel?

- A) A chaque fois que vous donnez une capsule de vitamine A, vous l'indiquez sur le rapport mensuel comme suit: ~~///~~ à la fin de la journée, vous faites l'addition.
 B) Vous comptez le nombre de capsules dans le flacon avant la distribution et après, vous indiquez le nombre distribué sur le rapport mensuel.
 C) Vous utilisez un cahier où vous indiquez le nombre d'enfants et de femmes qui reçoivent la vitamine A chaque jour et à la fin du mois, vous transcrivez les données du cahier sur le rapport mensuel.
 D) A chaque fois que vous donnez une capsule à un enfant ou à une femme, vous l'indiquez sur la fiche de l'enfant et à la fin de la journée vous comptez le nombre de capsules données et vous l'enregistrez sur le rapport mensuel.
 E) Autre (inscrire la réponse donnée)

Regardez soigneusement le rapport mensuel préparé par l'Auxiliaire. (les questions suivantes sont pour vous, et non pour l'AUXILIAIRE.

4) Est-ce que les 2 colonnes pour lère dose et doses subsé-
quentes données à l'enfant sont remplies?

Oui _____
 Non _____

* Toujours encerclez la réponse donnée (A, B, C, D, etc.)

Si ces colonnes sont remplies posez la question:

Comment faites-vous pour enregistrer les doses subséquentes:
c'est-à-dire 2ème, 3ème, 4ème doses etc
(inscrire la réponse donnée)

Si ces colonnes ne sont pas remplies, demandez:

Est- e qu'on note d'une autre façon la distinction entre la
lère dose et les doses subséquentes?

Oui _____

Non _____

Si la réponse est Oui demandez:

Comment?

- A) Dans un cahier où l'on indique:
C'est la lère dose ou une dose subséquente.
- B) Si l'on compte les capsules avant et après la distribu-
tion, les capsules données comme lère dose sont séparées
de celles qui sont données pour les doses subséquentes.

Si la réponse est non demandez:

Pourquoi n'avez-vous pas de données pour les "2ème doses"

- A) Je ne donne pas de 2ème dose.
- B) J'ai utilisé la lère colonne pour toutes les doses, que
ce soit la lère ou une dose subséquente.
- C) Autre (inscrire la réponse donnée)

- 5) Est-ce que la colonne pour les femmes allaitantes a été
remplie?

Oui _____

Non _____

Si la colonne n'est pas remplie, demandez:

Pourquoi?

- A) On ne donne pas de vitamine A aux femmes allaitantes.
- B) On donne de la vitamine A aux femmes allaitantes mais on ne l'inscrit pas.
- C) Autre (Inscrire la réponse donnée)

- 6) Donnez-vous de la vitamine A aux femmes enceintes?

Oui _____

Non _____

Si la réponse est oui, demandez:

où l'inscrivez-vous?

(Inscrire la réponse donnée)

Demandez à voir les flacons de vitamine A.

- 7) Combien y en a-t-il ?

A) 0

B) 1

C) 2

D) Plus que 2

- 8) Quelle est la date de fabrication des capsules indiquées sur le flacon?

(Inscrire la date) _____

- 9) Où et comment sont conservées les capsules de vitamine A?

a) Dans le flacon bien fermé Oui _____ Non _____

b) à l'abri de la lumière du soleil Oui _____ Non _____

c) Dans un endroit sec Oui _____ Non _____

Le flacon contient-il le desséchant Oui _____ Non _____

- 10) Autres commentaires sur les flacons?
Inscrire vos commentaires
- _____
- _____
- _____
- 11) Quand avez-vous reçu de la vitamine A la dernière fois?
- A) Pendant le mois en cours _____
- B) Il y a plus de trois mois _____
- C) Il y a entre 3-6 mois _____
- D) Autre (indiquez) _____
- 12) D'où avez-vous reçu la Vitamine A?
- a) Du District _____
- b) De Port-au-Prince _____
- c) D'un autre dispensaire _____
- d) Autre (Indiquez) _____
- 13) Quand a eu lieu l'avant dernière livraison?
Indiquez la date (mois)approximative)
- _____
- 14) Est-ce que vous avez été supervisée par le personnel du district pendant les derniers six mois?
- a) Oui _____
- b) Non _____
- 15) Si la réponse est Oui: Par qui?
- Nom du superviseur _____
- Titre (ou la fonction) _____
- 16) Au cours de la supervision a t-on discuté des aspects touchant la distribution de la Vitamine A?
- a) Oui _____
- b) Non _____
- 17) Si oui quelles sont les remarques produites par le superviseur pour le programme de distribution de la vitamine A?
- a. Distribution
- b. Education nutritionnelle
- c. Rédaction de rapport mensuel

QUELLES FICHES A CHOISIR¹

- 1- Année 1981
Mois de Mars, Août, Novembre.
Toutes les fiches des enfants nés en 1975, 1976, 1977, 1978, 1979, 1980, 1981.
- 2- Année 1980.
Mois de Janvier, Juillet, Octobre.
Toutes les fiches des enfants nés en 1975, 1976, 1977, 1978, 1979, 1980.
- 3- Année 1979.
Mois de Mars, Mai, Novembre.
Toutes les fiches des enfants nés en 1975, 1976, 1977, 1978, 1979.
- 4- Année 1978.
Mois de Février, Août, Octobre.
Toutes les fiches des enfants nés en 1975, 1976, 1977, 1978.
- 5- Année 1977.
Mois de Juin, Août.
Toutes les fiches des enfants nés en 1975, 1976, 1977.
- 6- Année 1976.
Mois d'Avril, Novembre.
Toutes les fiches des enfants nés en 1975, 1976.
- 7- Année 1975.
Mois de Mars, Octobre.
Toutes les fiches des enfants nés en 1975.

1. This list was revised to include only numbers 1,2,3, above. That is, children whose first visit was in 1979, 1980, and 1981. A maximum of 50 child patient cards per HE was established.

B. COMMENT NOTER LES INFORMATIONS?

Pour chacune des fiches choisies, vous devez noter un certain nombre d'informations sur le formulaire "Visites au Dispensaire". Vous pouvez voir un exemple de ce formulaire, partiellement rempli, à la page suivante. Il est important de noter les informations afin de faciliter la lecture.

En haut du formulaire, vous pouvez inscrire le nom du dispensaire et votre nom.

Dans la colonne "Date de la première visite (jour/mois/année)", vous inscrirez la date correspondant à la 1ère visite au dispensaire. Par exemple, 14/3/81 pour le 14 du 3ème mois (mars) de 1981.

Dans la colonne "Numéro d'immatriculation de l'enfant", vous indiquez le numéro figurant sur la fiche infantile, par exemple 50281.

Dans la colonne "Date de naissance (jour/mois/année)" vous inscrivez la date appropriée. Par exemple; 7/8/80 pour le 7 du 8ème mois (Aout) de 1980.

Dans la colonne "Sexe" vous inscrivez M pour Masculin, s'il s'agit d'un garçon et F pour féminin, s'il s'agit d'une fille.

En suite vous notez les informations concernant les vi-
~~visites au dispensaire en 1979, 1980 et 1981.~~ ¹ Pour chacune des visi-
 tes (1ère, 2ème, 3ème), vous notez la date de la visite, et in-
 diquez par un X si une capsule de vitamine A été donnée pendant
 la visite. S'il n'y a pas eu de capsule de vitamine A donnée à
 l'enfant, vous inscrivez la date de la visite, mais vous n'ins-
 crivez rien dans la colonne vitamine A.

1. Procedure was revised to include years 1979, 1980 and 1981 instead of just 1981.

National Nutrition Survey
Longitudinal Study Guide for
Health Establishments¹

Madam,

You have been chosen to participate in a National Nutrition Survey. This Survey, to be executed in all Health Districts of Haiti, will provide important information concerning the nutritional and overall health status of children.

Your responsibilities

You will be required to collect individual patient data over a four-month period. For the most part, these data are available from existing Patient Records, but have never been collected in one place. In addition, certain information has never been collected.

Your primary responsibility, then, will be the daily recording of information concerning each child who comes to your health establishment.

It is very likely that you already use child Patient Records (Fiches Infantiles) on which you record date of visit, height and weight, reason for visit, etc. We are simply asking you to transcribe certain information from the Fiches Infantiles on to a special form to be used for this Survey (to follow).

Procedure

When a child comes to the clinic, find his/her Fiche Infantile. If he/she is 0-10 years old, he/she must be included in the Survey.

English translation

Therefore:

Date of visit: Put the day, the month, and the year.

Registration number: Each Fiche Infantile will have a Registration number. For each child registered in the Survey, you must record this number. If a child has no Registration number - or has no Fiche Infantile - put his/her name instead of the Registration number.

Date of birth: Put the day, month, and year. If the precise date of birth is not known, put his/her approximate age.

Date of first visit: Put the date when the child first came to the clinic - whether this may have been in 1982, 1980, or any year up to 1972.

Reason for visit: Follow the same procedure used for filling out the Fiche Infantile. That is, if the child came to the center because of diarrhea, put "Diarrhea" as Reason for Visit. Always put, the principal reason for the visit (this column must be filled out for visits during the four-month period of the Survey only).

Height/Weight: Measure and weigh the child and indicate the appropriate numbers. It is important to take both measures even if the child is an infant. Make an effort to take the measurements as carefully as possible.

Vaccinations: If the infant is to receive a vaccination on the day of visit, indicate which one (i.e., BCG, polio, DPTs, etc.). DO NOT PUT ANY OTHER VACCINATION EXCEPT THE ONES GIVEN ON THE DAY OF VISIT.

Vitamin A: If the child is to receive Vitamin A during his visit to the clinic, indicate on the form, and indicate if it is the first or subsequent (second, third, etc.) dose (You will be able to determine this from the Fiches Infantiles).

General instructions

-- All information required for a child should be recorded on one line: one child, one line;

-- You will have to record information for every child who comes to the clinic every working day for four months. That is, if you begin recording on the first of July, you will have to continue recording information for children through the 31st of October.

-- Record all child information consecutively: that is, having completed one full page, continue on to the next. Do not use a new page for a new day;

-- You must send in your completed forms every two weeks. Put the completed pages in the self-addressed, stamped envelopes given to you earlier by the BON, and mail them. Begin a new page on the day following mailing;

-- If you run out of blank forms, indicate that you need more when you mail completed forms to the BON;

-- You will be required to fill out child patient information every day, regardless of your schedule.

RESUME

1. Each child, 0-10 must be included in the Survey;
2. Each and every item on the Form must be completed for each child;
3. The Survey must last a full four months;
4. The Forms must be sent to the BON every two weeks.

Supervision

Each HE included in the Survey will be visited at least once during the four months of the Survey by personnel of the District. The number of supervisory visits will depend on the quality of work done by the HE.

Prizes

Each person participating in the Survey - that is, the one person chosen by the District - who completes the Survey according to established procedures will be given a prize, awarded by the BON.

Signed.

Administrator

DSPP

_____ District

QUESTIONNAIRE POUR LES AUXILIAIRES

- 1- Quels sont les symptômes les plus fréquents de la Xérophtalmie?
(Encerclez la (les) bonne (s) réponse (s).)
- Incapacité de voir la nuit.
 - Incapacité de voir des objets éloignés.
 - Douleur aux yeux en regardant le soleil.
 - Saignement des yeux.
- 2- Un enfant atteint de Xérophtalmie doit:
- Recevoir immédiatement une capsule de Vitamine A et être référé à un centre de santé.
 - Subir une intervention chirurgicale;
 - Recevoir une capsule de vitamine A chaque 4 mois.
- 3- On prévient la Xérophtalmie:
(Indiquez si l'énoncé est vrai ou faux.)
- En se lavant les yeux avec beaucoup d'eau, surtout pendant les saisons sèches ou quand il y a beaucoup de poussière;
Vrai _____ Faux _____
 - En veillant à ce que les mouches ne touchent jamais les yeux.
Vrai _____ Faux _____
- 4- La Vitamine A est importante pour les yeux.
Quelles sont les autres fonctions de cette Vitamine?
(Encerclez la (les) bonne (s) réponse (s).)
- Aider la respiration.
 - Fortifier le sang.
 - Maintenir la peau en bon état.
 - Aucune autre fonction que de protéger les yeux.
- 5- A quel rythme doit-on donner les capsules de vitamine A:
(encerclez la bonne réponse.)
Aux enfants de 0-6 mois?
- Chaque 6 mois;
 - Chaque 16 Semaines;
 - Chaque année;
 - Ce n'est pas nécessaire, car ils sont assez protégés;

Prepared by: _____

-Aux Enfants de 6-18 mois?

- a) Chaque 6 mois;
- b) Chaque 16 semaines;
- c) chaque année;
- d) Ce n'est pas nécessaire, car ils sont assez protégés;

-Aux enfants de 3-4 ans?

- a) Chaque 6 mois;
- b) chaque 16 semaines;
- c) chaque année;
- d) Ce n'est pas nécessaire, car ils sont assez protégés;

-Aux enfants de 4-6 ans?

- a) Chaque 6 mois;
- b) Chaque 16 semaines;
- c) Chaque année;
- d) Ce n'est pas nécessaire, car ils sont assez protégés;

6- Pour chacun des aliments suivants, indiquez:

- S'ils contiennent de la Vitamine A,
en inscrivant le chiffre (1)
- S'ils ne contiennent pas de Vitamine A,
en inscrivant le chiffre (0)

- | | |
|------------------|-----------------|
| - Carottes | - Viande |
| - Epinard | - Bette rouge |
| - Laitue | - Blé |
| - Foie d'ôr | - Lait de Vache |
| - Pains | - Oeuf |
| - Pomme de Terre | - Papaye |

4

Quelles sont les maladies qui empêchent l'absorption de la vitamine A?

(Encerclez la (les) bonne (s) réponse (s)).

- a) La Diarrhée
 - b) Les infections cutanées
 - c) La malaria
 - d) Les vomissements.
1. La Vitamine A se présente sous forme de capsule.

Combien de capsules y a-t-il dans un flacon?

(Encerclez la bonne réponse)

- 50
- 150
- 250
- 500

2. Supposez que c'est le 1er Juillet et il vous reste 2 flacons de capsules de vitamine A. Pendant les 6 mois précédents, vous avez distribué les capsules au rythme suivant:

Janvier	<u>482</u>	Avril	<u>320</u>
Février	<u>241</u>	Mai	<u>400</u>
Mars	<u>290</u>	Juin	<u>450</u>

À partir de ces données, pendant environ combien de mois pourrez-vous encore en distribuer?

- 1 mois
- 3 mois
- 5 mois

3. Si une mère qui ne vient pas souvent au dispensaire arrive avec un enfant 2 mois avant la date de son rendez-vous pour la 2ème dose de vitamine A, Que faites-vous?

(Encerclez la bonne réponse)

5

4. Quand vous distribuez la vitamine A, comment comptez-vous le nombre de capsules données par jour?

(Encerclez la lettre correspondant à ce que vous faites.)

- a) Vous comptez le nombre de capsules avant et après la distribution et vous indiquez le nombre de capsules distribuées sur la forme de rapport mensuel.
- b) Vous inscrivez à chaque fois sur la forme de la fiche mensuelle quand vous distribuez une capsule, et vous faites le total à la fin de la journée.
- c) A chaque fois que vous distribuez une capsule, vous l'inscrivez sur la fiche de l'enfant et à la fin de la journée vous comptez le nombre de fiches d'enfants ayant reçu la vitamine.
- d) Autre (Précisez) _____

5. Comment peut-on conserver le plus longtemps les capsules de vitamine A?

(Encerclez la bonne réponse.)

- a) Les mettre dans le réfrigérateur.
 - b) Les verser dans un bocal
 - c) Les exposer au soleil 2 fois par semaine.
 - d) Mettre le flacon bien fermé sur une étagère ou dans un buffet.
6. Supposons que vous avez besoin de 5.000 capsules de vitamine A par année. À quel rythme préférez-vous les recevoir?
- (encerclez la bonne réponse.)
- a) 5.000 capsules 1 fois par année.
 - b) 2.500 capsules tous les 6 mois.
 - c) 1.250 capsules tous les 3 mois.
 - d) 417 capsules chaque mois.

1. Donnez 3 raisons qui empêchent une mère souvent présente aux séances éducatives sur la vitamine A de mettre en pratique les conseils donnés.

1. _____

2. _____

3. _____

2. Nommez 3 aliments riches en vitamine A que l'on trouve seulement pendant les vacances d'été.

1. _____

2. _____

3. _____

3. Nommez 3 aliments riches en vitamine A que l'on trouve à n'importe quelle période de l'année.

1. _____

2. _____

3. _____

Avez-vous déjà reçu des cours sur la vitamine A et la Xérophtalmie.

Oui _____ Non _____

Si Oui précisez si c'est:

_____ A l'Ecole des Auxiliaires

_____ Séminaire organisé par le Bureau de Nutrition.

_____ Séminaires organisés par d'autres organismes.

(indiquez lequel) _____

SAMPLING PROCEDURES

The list of HE presented previously in this Manual represents those establishments selected for the Retrospective Study and the Longitudinal Study sample. From this list final HEs are to be chosen from which data are to be collected. This final selection, however, can only be made after a discussion in the field with District Health Administrators and the staff of HS indicated on this list. If, after discussions, it is found that a HE no longer participates in the Vitamin A program or has stopped functioning completely, it will be obviously necessary to drop it from the sample list.

Procedure

Firstly, with regard Public Hospitals, all District hospitals will be chosen, for it is certain that they are functioning and that all are participating in the Vitamin A program.

Secondly, with regards Centres de Sante, certain districts will have none (indicated on the list by a blank); others, however, will have more than one. In the latter case: ALWAYS TAKE THE FIRST CENTRE DE SANTE ON THE LIST. IF IT IS NOT FUNCTIONING OR DOES NOT PARTICIPATE IN THE VITAMIN A PROGRAM. TAKE THE SECOND.

If none of the Centres de Sante listed can be chosen, choose one of the establishments not chosen for the sample of Public Dispensaries.

For each District it will be necessary to choose ONLY ONE CENTRE DE SANTE.

In the case of Port-au-Prince, make a list of all the Centres de Sante in the Port-au-Prince district. Then choose the FIFTH. If this Centre is not available, choose the EIGHTH, etc.

For Public Dispensaries, the number of HEs required is indicated in parentheses.

To make the selection, you should take the first Dispensary on the list. If it is not available, you should take the next one on the list. To select the second Dispensary, you should select the one that appears immediately after the one just chosen. If that one is not available, you should go on to the next one.

Example:

Fort Liberte

- Gens de Nantes
- Acul Samedi
- Derac
- Mont Organize
- Carice

You would have to choose two Dispensaries. You would take Gens de Nantes and Acul Samedi. If Gens de Nantes is operating, but Acul Samedi is not, you would choose Derac in place of Acul Samedi. In the rare case where both Gens de Nantes and Acul Samedi are not functioning, you would choose Derac and Mont Organize as alternatives.

Concerning Private Dispensaries, follow the same procedure as for Public Dispensaires.

In the case of Gonaives, there are three Private Dispensaries at Gras Morne. Make an alphabetical list of the three, then choose the third. If it is not available, choose Terre Neuve.

In the case of Limbe, the situation is similar: there are two Private Dispensaries. Therefore, you would put them in alphabetical order and choose the first. If it is not available, choose Fauche.

In the case of Port-au-Prince, make an alphabetical list of all the private hospitals, and pick the first. If it is not available, choose St. Michel (Fort National).

Important note: YOU SHOULD CHOOSE AN ALTERNATIVE ES ONLY IN THE CASE WHERE THE ESTABLISHMENT FIRST ON THE LIST IS NOT FUNCTIONING OR WHERE IT HAS BEEN DETERMINED THAT THERE IS NOT VITAMIN A PROGRAM. No ES should be chosen simply on the basis of ease of access, proximity to the District HQ, etc. The fact that the sample has been chosen at random must be respected.

In the letter written to each District, all ES which have been selected for the surveys should be indicated. In the event that at that time it is determined that certain ES are not functioning or do not have Vitamin A programs, alternative establishments should be chosen.

MONTHLY AND WEEKLY ACTIVITIES

(To be read with attached PERT Chart)

June (1982)

First Week

1. The BON sends to E. Sobel all forms collected at PAP (Monthly Reports, stock cards, etc.)

2. A letter, signed by the Director General, Ministry of Health, is sent to the Administrators of all 14 Health Districts. This letter will:

a. Explain the Evaluation, its overall objectives, and specific activities to be done;

b. Request the participation of each Administrator, above all, his/her selection of one person of the rank of infirmiere/hygieniste to be in charge of the Evaluation at District level. The Evaluation will require ten days of that person's time, distributed over a four-month period;

c. Indicate that the Evaluation represents a team effort, and that the principal parties are the BON and the individual Health Districts;

d. Explain that the BON will provide funds for District expenses incurred in conjunction with execution of the Evaluation and will provide Technical Assistance and supervision where needed. The Health District will be responsible for providing the personnel requested for the time period suggested.

Attached to this letter to the D.G., there will be a letter from the BON which will:

a. Suggest dates for BON pre-Evaluation district visits;

- b. Give a complete list of all HEs to be included in the sample;
 - c. Explain in brief the three major components of the Evaluation: 1) the Retrospective Study; 2) the Longitudinal Study; and 3) the Auxiliary Test.
 - d. Give the names of current District staff, recommended by the BON to be in charge of the Evaluation;
 - e. Explain the methodology of the Auxiliary Test, indicating that all auxiliaries and all other staff affiliated with the Vitamin A program, should take the test;
 - f. Suggest a date for the Auxiliary Test.
3. During the first week, the BON should:
 - a. Determine the way in which all questionnaires will be reproduced (e.g. mimeo, offset, etc.);
 - b. Choose the printer, if reproduction is to be done by offset;
 - c. Begin printing or mimeo-ing.

Third Week

1. E. Sobel, having received questionnaires from PAP, will begin his preliminary analysis.
2. Printing of all questionnaires and instruction will be completed.

Fourth Week

1. The Administrator of each Health District will advise all auxiliaries from the HEs of the Evaluation that they are to come to District HQ on a given date to take the Auxiliaries' Test. He/she

advises them simply that they have been chosen to participate in a Nutrition Survey, and says nothing about the Test (to avoid bias).

2. The Administrator makes his final choice concerning the selection of the Evaluation In-charge for the District and advises her of his choice, informing her that she should be present on the date of the arrival of the BON for the pre-Evaluation visit.

3. The date of the pre-Evaluation visit, set by the Administrator, is conveyed to the BON by phone.

July

Second Week

1. The BON begins its pre-Evaluation visits. The activities of these visits are as follows:

a. Discussion with all Health Administrators, emphasizing the importance of the Evaluation, the participation of health personnel of the District, and the participation of the personnel attached to the HEs selected for the Evaluation;

b. Training of the In-charge selected by the Administrator in Evaluation methodology:

- 1) Retrospective Study responsibilities;
- 2) Longitudinal Study responsibilities;

c. Execution of the Auxiliaries Test;

d. Distribution of all questionnaires to be used in the Evaluation:

- 1) Retrospective Study forms;
- 2) Longitudinal Study forms;
- 3) Retrospective Study Guide;

- 4) Longitudinal Study Guide;
- 5) Large envelopes (for completed Retrospective Study completed forms) - self-addressed and stamped;
- 6) Smaller envelopes (for the Longitudinal Study forms).

Third Week

1. E. Sobel finishes his initial analysis of the data collected in PAP, and he provides the BON and HKI with any significant findings.

August

Second Week

1. Pre-Evaluation visits are completed.
2. Retrospective Study begins.

In fact, this Study will begin four weeks earlier - at the end of the pre-Evaluation visit made by the BON in the first district. That is, once the In-charge is trained and given both forms and Evaluation Guide, she can begin her work. Nevertheless, since analysis will have to wait until all districts are completed, it was decided to officially put the start of the Study during this week.

3. Similarly, the Longitudinal Study will also start a week earlier.

Fourth Week

1. Retrospective Study finishes and all forms sent to BON.
2. All forms from first two weeks sent to BON and on to E. Sobel.
3. All Auxiliary Tests to E. Sobel.

September

Second Week

1. BON receives all forms from the field.
2. Longitudinal Study forms sent to Sobel.
3. Sobel, having analyzed Auxiliary Test results, informs BON concerning possibility of mounting further Nutrition Education Evaluation.

Third Week

1. Retrospective Study forms to Sobel.
2. Sobel sends comments concerning progress of Longitudinal Study.

Fourth Week

1. Assuming a certain degree of error in both studies, Sobel returns to Haiti to accompany BON on supervisory visits. These visits will include:
 - a. Discussions with District In-charges;
 - b. Visits to HEs which pose certain specific problems.
2. At the same time as Bon supervisory visits, In-charge to visit all HEs in Longitudinal Study for mid-term supervision. BON should accompany In-charges on certain of these visits.
3. If decision is taken to do in-depth Nutrition Education Evaluation, R. Parlato comes to Haiti.

October

Third Week

1. All work on Retrospective Study to be redone because of error is completed by this date. In the event that the BON is unable to visit all districts with Study problems, telephone contact should be made.

November

First Week

1. All re-done forms sent by districts to BON.
2. Nutrition Education Evaluation begins (if it is to be done at all).

Third Week

1. Sobel receives all final forms from Retrospective Study.

December

Second Week

1. End Longitudinal Study.

Third Week

1. Final forms sent to Sobel.

January

First Week

1. Final analysis by Sobel.

Third Week

FINAL REPORT

June				July				August	
1	2	3	4	1	2	3	4	1	2
BON Forms to Sobel		Sobel begins analys				First phase anal. end			
			Dates to aux. HEs						
D.G. letter signed, sent			In-chg dists. select.		Begin pre-Eval visits				Pre-Eval visits end
			Dates pre-Eval. chosen						
Print all forms,		Print. finish.			Aux. test begin				Begin Retro. Study
									Begin Long. Study
									Aux. test end

	4	Sept. 1	2	3	4	Oct. 1	2	3	4	Nov. 1
	Forms to BON		Forms rec'd BON	Forms to Sobel			Super. visits BON/Sobel	Begin correct Retro		New Retro end
	Retro. Study end			Comm to BON						Forms to BON
	Forms to Sobel		Forms to Sobel		Forms held for Sob.		Super. visits Dist. per		Super. visits end	
	Forms to Sobel		Adv. Parl't. resl'ts				Nuted Eval. Plan			Exec. Nuted Eval.
			Adv. BON resl'ts							

