The Training and Integration of Village Health Workers[1]

ANITA J. GAGNON[2]

♦♦♦

This article describes the selection, training, activities, and supervision of village health workers (VHWs) in a rural area of Haiti. The aim is to provide an overview of work that may serve as a useful example to others engaged or wishing to engage in VHW programs. The account describes selection and training of the VHWs, relationships established between themselves and with other health team members, operation of the VHW program, and development of community pharmacies by the VHWs in their homes.

BACKGROUND

The public health program of Clinique St. Paul is centered in Montrouis, a western coastal town of over 4,000 inhabitants 75 km north of Haiti's capital, Port-au-Prince, on the highway between Port-au-Prince and Cap-Haïtien, the country's second-largest city. (Port-au-Prince and Cap-Haïtien are on Haiti's west and north coasts, respectively.) The program extends its services east and south of Montrouis to cover a population of over 15,000 people (Figure 1). This program, which began operating in 1983, resulted from a joint effort by Haiti's Ministry of Public Health and Population[3] and private health care organizations in Haiti as a response to the commitment to "Health for All" made at Alma-Ata in 1978.

Fifteen village health workers (VHWs), one for each group of approximately 1,000 people covered, were initially chosen by leaders in the area including Roman Catholic and Episcopal (Anglican) priests, Protestant pastors, the local sheriff, and voodoo priests. The choices were made independently by each leader in an informal manner, without any guidelines. It was felt that these leaders would know best who was capable and would encourage acceptance of the VHWs by the community.[4]

As the program evolved, some VHWs withdrew due to lack of interest or insufficient financial remuneration, while others were asked to leave for reasons of physical inability or complete illiteracy.

Subsequently, a different selection process and guidelines for finding well-suited VHW trainees were established. The guidelines indicated that an ideal candidate would be a literate female 15–45 years of age with extended family ties (a reason

[1]The program reported here received support from the Episcopal Dioceses of Delaware and Haiti and from L'Association des Oeuvres Privées de Santé of Haiti. This article will also be published in Spanish in the *Boletín de la Oficina Sanitaria Panamericana*, vol. 110, no. 4, 1991.

[2]Past Coordinator, Public Health Program, Clinique St. Paul, Montrouis, Haiti. Address: Department of Epidemiology and Biostatistics, McGill University, 1020 Pine Avenue West, Montreal, Canada H3A 1A2.

[3]Formerly the Department of Public Health and Population.

[4]The "community," as that term is used here, refers to the roughly 15,000 people within the area served by the public health program.

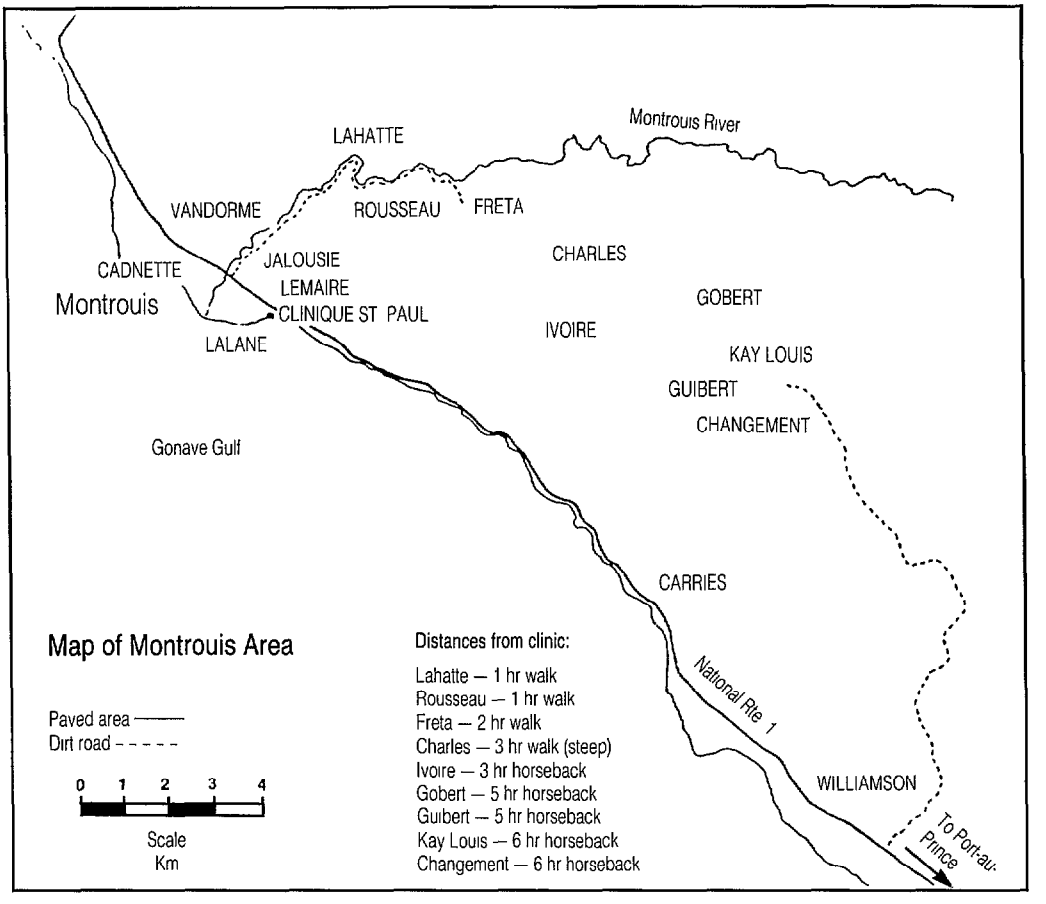


Figure 1. A map of the Montrouis area where the VHWs worked. As of the mid-1980s, all the individual areas listed had populations on the order of 1,000–1,350 inhabitants except Kay Louis and Changement, which together had about 1,000.

for remaining in the community) and a good record of community activity. Using this new procedure, community councils (political bodies set up during the Duvalier period) chose three candidates for each vacant position. Each of these three then met with the assistant coordinator of the public health program (who was himself a member of the community and a VHW) to discuss the work, remuneration, and the role of a VHW. At this time each candidate was asked to write down certain information—name, age, education, work experience, community activities, and reasons for wanting to do this particular type of work—in order to determine the candidates' degree of literacy as well as to find out more about them. The final selection was made by the assistant coordinator.

It was expected that this selection process would eliminate those interested solely in political or economic gain and would encourage women to be active in improving their own health and that of their children. Literacy was a reasonable

expectation for much of the area covered by the health program. The established guidelines, however, were only guidelines, and a few of the best VHWs were those initially chosen by community leaders, primarily because of their dedication. The final number of VHWs involved was 10, with each covering a sector of at least 1,000 inhabitants and a few being responsible for more than one sector.

INITIAL TRAINING

The initial month-long training session, conducted by a nurse-physician training team, dealt with the subjects of anatomy and physiology, physical assessment, diarrhea, malaria, tuberculosis, first aid, family planning, maternal and child health, nutrition, community organization, environmental hygiene, and use of surveys for community diagnosis (*1*). In addition to the main nurse-physician team, other visiting educators included tuberculosis specialists, a malaria specialist, a laboratory technician, and other nurses and physicians.

All classes were held at the clinic compound from 8:00 a.m. until 3:30 p.m. daily with a two-hour break. The trainees had weekends off. Although not centrally located, the clinic was the easiest available meeting place to get to, and meals and lodging could be provided conveniently.

The subjects taught were arranged over the four-week period to include time for practical experience, review of the previous week's activities, and examinations. Late afternoons and weekends were used by the nurse-physician team for visiting outlying sectors to stimulate community interest in health issues and explain what a public health program could offer. One hundred and fifty Haitian gourdes (US$30) were given to the VHW trainees to help compensate for the time spent away from their farms.

The teaching methods used included lectures, discussions, role-playing, student presentations, and "hands-on" practical experience. For example, a no-cook weaning porridge was developed in class from foods available at the local market. This consisted of roasted millet combined with ground peanuts, milk, oil, sugar, and banana (developed by A. Steiner, 1983). This porridge was easy to prepare, and community members could easily and willingly learn to make it.

In considering any subject, the group began by evaluating existing practices. For example, existing methods for the prevention and treatment of malaria were discussed. This discussion showed that some of the preventive activities being employed were as follows: removing mosquitos from the walls of each room with a cloth before closing all windows and doors to retire; burning green leaves or peanut shells, the smoke from which would annoy mosquitos; and covering up completely with a sheet during sleep. Several types of leaves were mentioned that were used to make tea for the treatment of fever, among them "*assorossi*" and "*mombin-bata.*" None of these practices were judged harmful, and so the "cosmopolitan" practices being taught to the VHWs became another option for treatment but not necessarily a replacement for these other measures.

Teaching materials included local newspapers and radio programs (to instill an awareness of the country's political-economic situation and that situation's effects on health); games and puzzles (to show cause and effect relationships between a variety of factors affecting health); anatomical models, felt boards, and homemade dolls (to illustrate specific matters); and supplies used in the provision of preventive health care (see Table 1).

It being impossible to touch adequately on all the subjects covered in one month,

Table 1. List of supplies used by three-member teams of VHWs to provide preventive health care.

Borrowed materials:[a]	Supplies kept in the community[b]	Supplies kept at the clinic[c]
Benches	*Education materials:*	*Vaccination Supplies:*
Basin of water	Picture book (durable, covering various health topics)	Small thermos (for transport)
Soap	Oral rehydration salts	Ice packs (four per thermos)
Towel	Flyers explaining oral rehydration solution	Refrigerator thermometers (one per thermos)
Four chairs	Model uterus	Refrigerator
Two small tables		DPT (diphtheria, pertussis, tetanus) vaccine
Straw mat	*Measuring instruments:*	Tetanus vaccine
Room (made available in a home)	Hanging scale (for child)	Polio vaccine
Latrine (made available)	Adult scale	Measles vaccine
	Blood-pressure cuff	Measles diluent
	Stethoscope	BCG vaccine
	Vaccination supplies:	BCG diluent
	Syringes (sterilizable by the VHW at his/her home)	Small plastic boxes (to prevent vaccines from freezing)
	Needles (sterilizable by the VHW at his/her home)	
	Cotton	
	Alcohol	
	Droppers	
	Small ampoule cutter	
	Adrenalin (syringe, needle, and alcohol pad taped to the side)	
	Vitamin A capsules	
	Vaccination cards	
	Register for follow-up of children 0–5 years	
	Family planning supplies:	
	Condoms	
	21-day packets of oral contraceptives	
	28-day packets of oral contraceptives	
	Contraceptive cream	
	Applicators	
	Register for follow-up of women 15–45 years old	
	Prenatal supplies:	
	Folic acid and iron tablets	
	Individual prenatal health forms	
	Prenatal cards	
	Register for follow-up of women 15–45 years old	
	Accessories:	
	Valise	
	Pens and pencils	
	Scissors and stapler	
	Rain poncho	

[a]Borrowed from community members for the day.
[b]Stored by each three-member team.
[c]For lack of refrigeration at outlying posts.

follow-up reinforcement classes were planned. In July 1984 each VHW was given the title *"Collaborateur Volontaire"* by the Clinique St. Paul in recognition of the training received up to that time.

CONTINUING EDUCATION

Following the initial month of training, three to four hour reinforcement classes were provided monthly over the ensuing 20 months. These encouraged strong development of preventive health care activities, a good working relationship between the VHWs, and development by the VHWs of problem-solving abilities in health and community activities.

In order to develop curative care skills, weekly classes were begun when the preventive care reinforcement classes were completed, and they continued for nine months. This portion of the training program was a continuation of the previous training described; the same VHWs attended this portion of the training as had attended the other portions, and many of the same teaching materials were used. Each VHW was given US$3 per day as remuneration for leaving the fields and a large noon meal or $2 to purchase such a meal nearby. Ministry of Public Health and Population guides (*2–4*) continued to be used and were supplemented with other literature as well (*5–10*). The VHWs were divided into groups of three and became responsible for learning from and helping those within their group. During the last two months, each team spent one day per week rotating through the clinic: One VHW visited the pharmacy to learn more about the medicines of use in the community, one went to the laboratory to learn how to collect and mount sputum and blood specimens, and one helped to monitor vital signs and assisted with physical examinations. During this training the VHWs were supervised by the coordinators, the clinic physician, and the laboratory and pharmacy personnel.

The VHWs also acted as teachers themselves—through example, and to some extent discussion—for a visiting class of nursing students from the University of Connecticut. The visiting group in turn provided the VHWs with a class (B. Gebrian, unpublished notes, 1987). In addition, visits from the district office of the Ministry of Health and Population provided the VHWs with health expertise in various areas.

At the completion of this clinical *practicum*, each VHW was considered ready to begin practice in the community. For this purpose each was given an initial stock of medicines, supplies, and activity registers to take back to his or her respective sector, together with his or her own copy of *Gid Travayè Santé* (*5*) to use as a reference. In three more months, all but one of the VHWs were successfully providing preventive and curative care independently, and each of the nine was ready to receive government recognition as an *"Agent de Santé."*

WORK PROFILE

The tasks of the VHWs changed as their skills improved. The initial tasks consisted of health education, collecting and updating demographic data (on births, deaths, and migration), making clinic referrals, conducting follow-up work, generating community interest about the public health program, and locating a home to be designated as a meeting place for health care activities. It had at first been hoped that the VHWs' work would include regular home visits to the entire sector served. However, this would have meant visiting 10 households per day every day of the month, some at great distances. Given that the VHWs were working completely voluntarily,

whole-sector visits were seen as an unreasonable demand and so were eliminated.

Later, following their designation as "*collaborateur volontaire,*" the VHWs were expected to continue their initial tasks and, in addition, to be able to take patients' weight, blood pressure, and temperature, and to provide them with vitamin A and immunizations. The ability to carry out these tasks enabled them to provide a range of preventive care—including growth monitoring of children, family planning services, and prenatal care. (Basic supplies needed to provide these types of care are listed in Table 1.) This preventive care was provided by a three-member team of VHWs (determined by proximity), which visited each health post in all three of their areas once a month, covering an overall population of more than 3,000 people. Each team was provided with a horse for transportation.

Finally, as the VHWs' training was completed and each was recognized as an "*Agent de Santé,*" they were permitted to provide curative care for a wide range of ailments—including bites, burns, conjunctivitis, constipation, cuts, fevers, fractures, headaches, loss of consciousness, pain, poisoning, diarrhea,[5] impetigo, intestinal worms, malaria,[6] respiratory illness, scabies, and follow-up for tuberculosis.[7] The VHWs were encouraged to continue their usual work activities, most often farming, but were available to provide curative care on a daily basis from their homes using the supplies shown in Tables 1 and 2.

Table 2. Stock of pharmaceutical supplies maintained at the home of each VHW.

Medications:
Antiallergy injectable
Antimalarial (tablets and liquid)
Antiscabies lotion (example: Galex)
Antiworm (tablets and liquid)
Aspirin (adult and child)
Folic acid
Iron
Mineral oil
Penicillin (injectable and diluent)
Penicillin (ophthalmic)
Oral rehydration salts
Vitamin A capsules
Wound care:
Band-aids
Gauze bandages
Hydrogen peroxide
Permanganate
Petroleum jelly (burn care)
Laboratory:
Marking pencils
Matches
Slide case (hard plastic)
Slides
Other:
Alcohol
Ammonia
Cotton
Register of activities for sick clients
Thermometer
Weighing scale (adult)

COLLABORATION WITHIN THE HEALTH TEAM

Traditional birth attendants (TBAs) were known by the VHWs and used by them and the families they served for deliveries. The former were men and women, usually over 60 years old, rarely less than 45, who could barely read or were illiterate. They had a broad knowledge of medicinal herbs. The TBAs were responsible for the birth event itself and

[5]This treatment is not "curative" in the sense that it consists only of rehydration and prevention of dehydration using oral rehydration solution.

[6]Blood samples are taken, a slide is made by the VHW, and the slide is sent to the clinic's laboratory for verification of the diagnosis.

[7]Sputum samples are collected from each suspected case of tuberculosis, a slide is made by the VHW, and the slide is sent to the clinic's laboratory to establish a diagnosis.

for postnatal care given during the three subsequent days.

The VHWs contacted the TBAs to discuss the public health program and arrange meetings between them and the health program coordinators. TBA classes were set up, and both the TBA and the VHW who lived in the area where the TBA worked would attend class together. The VHWs were sometimes called for birth events by TBAs and occasionally provided supplies to the latter. In this way a foundation was laid for a team of health care providers within a given sector to collaborate and eventually work together more formally as a community committee responsible for health, with the VHW serving as coordinator of the effort.

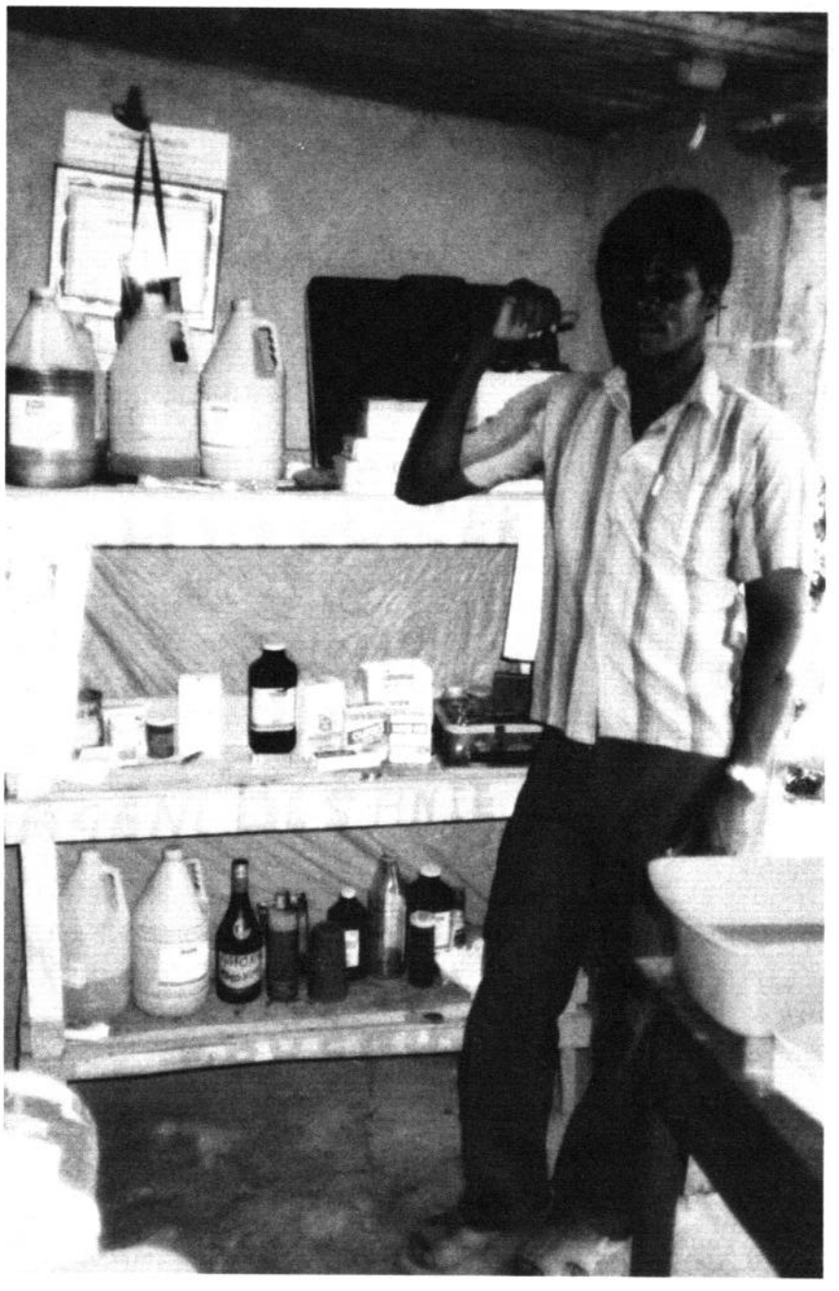
The VHWs came to know the clinic staff well. (The public health program office was in the clinic, and training materials and supplies were obtained there.) It was thus important that the clinic staff (physician, auxiliary nurse, lab assistant, pharmacy assistant, and records clerk) treat the VHWs as equals; yet it was hard for the staff to believe that they were equals—among other things because most of the VHWs were from the more rural areas (which were looked down upon) and because they received no pay.

To help overcome this problem, information was provided to clinic staff members about their role in relation to the VHWs, and about the VHWs' vital work. Over time, some staff members came to accept and respect them. In general, however, physicians and nurses were reluctant to establish close ties with the VHWs. Physicians, in particular, had grave doubts about the ability of VHWs to carry out their tasks. It was thought that they were vulnerable to becoming charlatans, giving poor treatment, charging exorbitant fees, or attempting to do more than they were trained for.

Initially, the relationship between the Ministry of Health and the VHWs was distant, with the ministry exhibiting only superficial interest in the program. However, beginning when the VHWs' training neared completion, the ministry's Crois-des-Bouquets Health District (under the direction of Dr. Julio Desormeaux) made great efforts to evaluate and assist the work being done by the VHWs. "*Agent de Santé*" certificates according Government recognition were given to the VHWs by the health district. This recognition meant a great deal to the VHWs and spurred their ongoing efforts to provide community-based services.

A close relationship between the VHW and the community was sought through community council selection of VHWs, newsletters to community members, meetings with community leaders, and informal discussions within the communities. Even so, little actual community support was provided. Each VHW served a subarea (sector) of the public health program area. These subareas did not correspond to preexisting groups of people who shared a sense of belonging together. Rather, they had been set up for the program's convenience and tended to cover rather large geographic areas, so that some individuals in a sector could conceivably not know their VHW.

It is extremely unlikely that any arbitrarily identified group of 1,000 such as the population of one of these subareas would be able or willing to make a joint decision about their VHW or any other matter. Also, because the VHWs were paid during their initial training, the sector residents tended to feel that it was the VHWs' job, not theirs, to be responsible for all health-related matters in their area. And partly because the idea of developing a health program did not originate within the community being served, the community may have felt that it had no say in the program's development or operation. While all of these factors seem



One of the VHWs (Merius St. Elmy) in his home-based community pharmacy. Medicines and other supplies are in various containers, and health education posters are displayed. Mr. St. Elmy's certificate of government recognition as "*Agent de Santé*" can be seen on the back wall. A basin of water (right front) is available for handwashing.

likely to have contributed, the reasons for a somewhat distant relationship between the VHWs and the community are not yet fully understood.

In contrast, the relationship among the VHWs themselves was highly supportive. They offered each other moral backing, their physical presence, suggestions for improving care, and explanations of concepts that had been misunderstood. Discussion and resolution of community problems, as well as decision-making for the entire public health program, was done jointly.

COMMUNITY PHARMACIES

Pharmacies, like the one shown in the photograph, were developed to ensure access to needed medicines by sector residents. These pharmacies were set up by each VHW in his or her respective home. The medicines were kept in labeled metal or hard plastic containers and stocked on shelves in wooden cabinets. The basic decision regarding which medicines to stock was based on booklets provided by the ministry (2). Additional medicines requested by the VHWs were approved by

the ministry's district office. The complete list of pharmacy medications and supplies is shown in Table 2.

Information about each medication that was kept by the VHW included indications for its use as well as data on its preparation, the dosage to administer, and precautions or contraindications. This information was updated by the assistant coordinator as needed. The VHWs were expected to know this information and to use their information cards or sheets when in doubt.

In order for the pharmacies to become as self-sufficient as possible and avoid development of dependent behavior, a fee-for-medication system was developed. The price list was determined by the VHWs in conjunction with the assistant coordinator. This price list was based on the wholesale cost of the medicine obtained by the clinic, to which was added a transportation fee and a small amount for services rendered. Some items, such as penicillin injections, included the cost of alcohol, epinephrine,[8] and cotton. The charge to the client was the cost of the full dose calculated as being necessary to complete treatment or carry the patient through to the next appointment; the medication was not sold in smaller amounts. For example, folic acid was sold to the clinic at US$6 for 1,000 tablets, to the VHW at $3.08 for 500 tablets, and to the client at $0.12 for 15 tablets. The price list was written in Haitian Creole and posted in a prominent place near the pharmacy entrance.

A reserve supply of these medications and supplies was kept at the public health program office. Here the VHWs could restock their supplies if their records showed proper use of the medication and if they had the money needed to purchase the requested items. Medications that were about to expire were returned to the clinic for use, since the turnover there was much greater. These medicines were replaced with clinic stock at no charge, since nothing was wasted.

SUPERVISION

VHWs were supervised by the coordinators of the public health program through: (1) discussion of work activities during monthly VHW meetings, (2) site visits to each VHW once or twice a month, depending on his or her needs, and (3) close scrutiny of the VHWs' written records contained in their activity registers.

These activity registers were developed by the coordinators. One, shown in Figure 2, was for sick clients, a second was for healthy women 15–45 years old, and a third was for children 0–5 years old. The first two forms were set up to help the VHWs organize their work into the four phases of (1) history-taking, (2) physical examination, (3) diagnosis, and (4) treatment. The pediatric form was adapted from an existing pediatric activity sheet[9] to better meet the needs of this program. It was used to record (1) vaccinations, (2) administration of vitamin A, and (3) monthly changes in growth patterns. This form was used during the aforementioned day of preventive activities carried out by the three-member teams.

The writing required to complete these forms was minimal, a series of checks or answers consisting of two or three words being expected in each empty box. However, the coordinators could use the registers to determine whether a client's signs and symptoms corresponded with the diagnosis and treatment, whether the

[8]In case of an allergic response.

[9]Association des Oeuvres Privées de Santé, Port-au-Prince, 1983.

Clinique St. Paul Montrouis

V.H W.: REGISTER OF ACTIVITIES OF THE HEALTH WORKER LOCALE:

DATE	House No.	Individ. No.	LAST NAME and FIRST NAME	Sex	Age	If death, date	Follow-up	SYMPTOM				SIGN									DIAGNOSIS																TREATMENT								
								YOUR PROBLEM	Since when	How became sick	Where is the problem	B P	Temp	Skin color, dehydrated	Hair	Eyes color, dehydrated	Ears	Mouth	Swollen glands	Resp	Other	Malnutr.	Diarrhea	T B	Malaria	Cut	Burns	Fever	"Cold"	Pneumonia	Eyes prob	Skin prob.	Worms	Heartburn	Others	Medicine	Total amount	Dose	Counsel	Dressing	Sputum slide	Malaria slide	Referred

Figure 2. Activity sheet used by VHWs when providing sick care. The original, in Haitian Creole, was developed by the author and Jean-Robert Dorsainvil in 1986. Assignment of a house and individual number (at left on form) to each client was designed to permit identification of the particular client treated from the original registration record. Actual sheet size of the original is 43 x 28 cm.

diagnosis was based upon adequate evaluation of the client, whether the treatment provided was appropriate for the diagnosis, whether the dosage of medication given was correct, and whether referrals should have been made.

Verification of the VHWs' ability to use the registers was made during site visits to the VHWs in their homes. The coordinators allotted three days a week to such visits, but the time devoted to different VHWs varied, the weakest VHW being given the greatest amount of time.

The VHWs had a strong incentive to complete their registers. In providing fresh supplies, the amount of supplies requested by the VHW was compared to the amount used—as indicated on these forms. Once a form was returned for supply replacement, it was copied at the public health program office and the statistical data it contained were tabulated.

DISCUSSION AND CONCLUSIONS

The 1978 Declaration of Alma-Ata recommended that primary health care include at least the following: "education concerning prevailing health problems and the methods of preventing and controlling them; promotion of food supply and proper nutrition; an adequate supply of safe water and basic sanitation; maternal and child health care, including family planning; immunization against the major infectious diseases; prevention and control of locally endemic diseases; appropriate treatment of common diseases and injuries; and provision of essential drugs" (*11*).

At least five of the above eight items were provided by VHWs in this program. Education was given individually and to groups of community members. Maternal and child health care and immunizations were provided at least monthly in each sector. Appropriate treatment of common diseases and injuries was administered to an average of 20 clients per month per VHW, the three most common problems seen being fevers, common colds, and parasites. And essential drugs were provided through the community pharmacies.

Another point worth noting: One of the main concerns that must be addressed in health sector development programs of this type is sustainability. In the present case, the program has been in operation for over seven years with limited staff and limited funding. While no one ingredient has been responsible for this development, it seems likely that the most important factor is that the VHWs' capabilities were acknowledged by giving them decision-making power from the outset of the project. At each group meeting the VHWs presented problems encountered in their work and offered options for solutions. After that, how best to resolve the problems was discussed and decided upon jointly. Similarly, when unexpected funds became available, their use was discussed and decided upon jointly. As a result, the VHWs felt a sense of "ownership" of the program and consequently felt that they had some stake in its continuation.

Also, a supportive advisory relationship existed between the VHWs and the assistant coordinator. This permitted the VHWs to openly express their needs and receive feedback. Additional encouragement from some villagers, the clinic staff, the Ministry of Health, and especially each other, helped to develop and maintain a strong framework in which to function. Another reason for program continuance has been the ongoing opportunity for learning provided through visits to VHW homes by the assistant coordinator, VHW meetings, the availability of books, and meetings with health care providers from other programs.

Overall, the VHWs have shown the ability to establish an effective working

group among themselves and to commit themselves to using the knowledge they have gained for the benefit of their community. In this way they have come to exemplify agents of positive change and are in a good position to lay a sound foundation for improvement of the community's health status.

Acknowledgments. The author wishes to thank Dr. Julio Desormeaux, previously of the Croix-des-Bouquets Health District, and Ms. Bette Gebrian, currently with the Haitian Health Foundation, for their encouragement regarding the writing of this manuscript; Mr. Jean-Robert Dorsainvil for technical assistance in operation of the program; the personnel of Clinique St. Paul and the Public Health Program for making this venture possible; and the Episcopal Dioceses of Delaware and Haiti for financial and other support.

REFERENCES

1. Gagnon A. Health for all in Montrouis, Haiti. *Int Nurs Rev.* 1986;33(5):135–139.
2. Département de la Santé Publique et de la Population. *Aide-mémoire de l'agent de santé.* Port-au-Prince: Imprimerie Henri Deschamps; 1981. (11 booklets).
3. Département de la Santé Publique et de la Population. *Gid Edikasyon Pou Travayè Santé.* Port-au-Prince: Imprimerie Henri Deschamps; 1982.
4. Département de la Santé Publique et de la Population. *Modules de formation des agents de santé.* Port-au-Prince: Imprimerie Henri Deschamps; 1981.
5. Beelen S. *Gid Travayè Santé.* Port-au-Prince; 1981.
6. Cameron M, Hofvander Y. *Manual on feeding infants and young children.* Oxford: Oxford University Press; 1983.
7. Hosken FP. *The universal childbirth picture book.* Lexington, Massachusetts: Women's International Network News; 1982.
8. McMahon R, Barton E, Piot M, et al. *On being in charge: a guide for middle-level management in primary health care.* Geneva: World Health Organization; 1980.
9. Werner D, Bower B. *Helping health workers learn.* Palo Alto, California: Hesperian Foundation; 1982.
10. Werner D. *Where there is no doctor: a village health care handbook.* Palo Alto, California: Hesperian Foundation; 1977.
11. World Health Organization. *Primary health care: report of the International Conference on Primary Care, Alma-Ata.* Geneva; 1978. (Health for All Series No. 1).

♦♦♦

Health Management Training

Management Sciences for Health, a nonprofit institution based in Boston, Massachusetts, U.S.A., is sponsoring a number of courses during 1991. Topics for this summer's courses are "Financial Management for Health Programs" (22 July to 16 August) and "Environment and Health: Strengthening Policies and Programs" (26 August to 13 September). For more information, please contact: Management Sciences for Health, Management Training, 165 Allandale Road, Boston, MA 02130, USA; telephone (617) 527-9202; fax (617) 965-2208; telex 4990154 MSH UI; cable MANSHEALTH.