EVALUATION OF THE BUSH KIT PROGRAM

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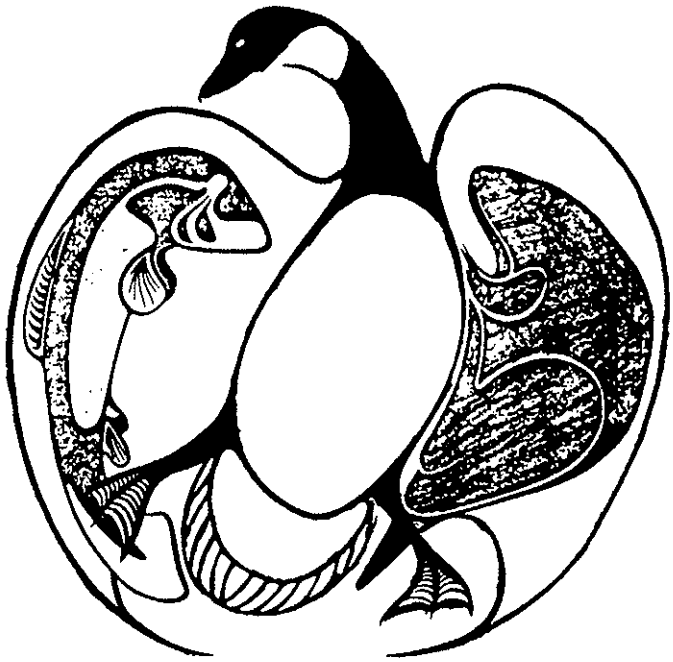
SUMMARY

In 1982 the Cree Board of Health and Social Services, seeking to promote a state of optimum health among the James Bay Cree hunters and trappers, conceived and implemented the bush-kit program. This program innovated in the field of first-aid in the bush in that it relied on the training of natives. Its specific objectives were to :

- Increase Cree hunters' and trappers' autonomy and ability to handle health care in the bush.
- Enhance the native population's recognition of its own primary responsibility for health matters in the bush.
- Facilitate the nurse's or doctor's assessment of the patient during radio contact.

After some years spent getting underway and making adjustments, a systematic evaluation of the program was deemed necessary so as to facilitate its operation and better adapt it to its own day-to-day operational constraints as well as to the needs of the target-population. The structure, process and outcome of the program were evaluated. Various types of approaches, both qualitative and quantitative, were adopted to this end, including a retrospective documentary study of program activities as well as a cross-sectional survey of the program's staff and of its users, the Cree hunters and trappers.

The accumulated data revealed a high degree of general satisfaction. The service seems to reduce the number of medical evacuations from the bush and to enhance native autonomy with respect to health matters. Certain aspects of the program, such as the format of the first-aid kit and the fact that the manual was available in English only, caused dissatisfaction. As well, only about 50% of hunters and trappers participated in the program; recruitment of new candidates willing to be trained to handle bush kits proved particularly difficult. A few recommendations were suggested to remedy less satisfactory aspects of the program and to make it more accessible to the target-population.



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1 - INTRODUCTION

The Cree Board of Health and Social Services (C.B.H.S.S.), after having spent some years getting the bush-kit program underway, and particularly after having extended its services to the entire 10B region and invested important sums in the process, considered it necessary to evaluate the program.

1.1 - STUDY OBJECTIVES

The study's general objective was to gather information to improve, modify or more generally manage the program, so as to make it function better and so as to adjust it more neatly to its own day-to-day operational constraints. Our object is to better adapt the bush-kit to the first-aid requirements of Cree hunters and trappers living in the bush, and thus foster a state of optimum health among them.

The specific objectives relate on the one hand to the evaluation of the program structure and process, and on the other to certain results. They can be defined as follows :

1. Describe program-related operations, i.e. invested resources (input) and activities created (output).
2. Examine how health-care professionals, para-medical personnel, native leaders and the target-population perceive the potential realization of bush-kit objectives.
3. Measure the various participants' level of satisfaction with the program and examine possible improvements.

1.2 - SOCIAL RELEVANCE

No specific structured program presently exists, either in Quebec, in Labrador or in the North-West Territories, which allows for natives to handle first-aid and emergency care during their hunting and fishing stays in the bush. Yet such health problems do affect other native peoples, as well as the Cree who live in isolation for more or less extended periods, far removed from health services.

The bush-kit program innovates in the area and, as such, requires in-depth evaluation so as to confront it to its stated objectives. In view of the program's considerable start-up and on-going costs the Cree Board of Health and Social Services also hopes to improve both its efficiency and efficacy. After its first few tentative years the program has now assumed a more definitive structure and is ready for evaluation. It may eventually become, if it has not done so already a model for native people looking after their own health and safety problems in the bush. Begun as a pilot project, the program will then be ready for adoption by other native communities throughout Québec and Canada.

2 - STUDY BACKGROUND

Before proceeding any further the health and social contexts of both the bush-kit program and this study must be described, so as to better grasp their implications. We will then give a brief history of the program and describe its objectives, before reviewing similar interventions elsewhere in North America.

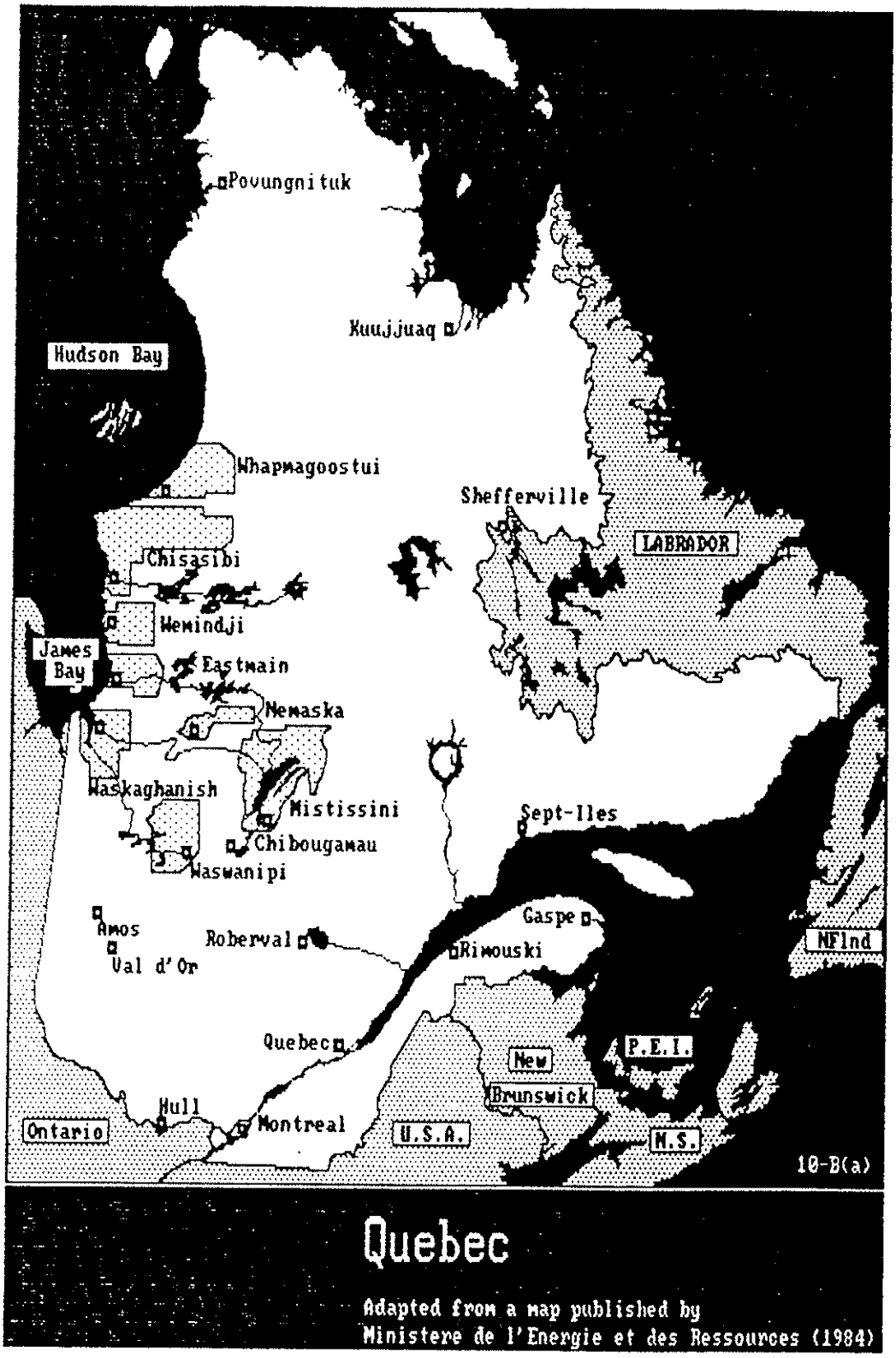
2.1 - HEALTH AND SOCIAL CONTEXT

Nearly 9 000 members strong, the Cree population occupies about 30% of the Province of Québec east of James Bay, a huge 300 000 square-kilometer territory situated between the 49th and 55th parallels and characterized by its subartic boreal forest, its long winters and its rigourous climate. Traditionally, the James Bay Cree lived in small groups scattered in the bush, subsisting on hunting, trapping and fishing. When a health problem arose a member of this extended family, privy to the ancestral art of healing, took charge using natural medicines from the surrounding environment. Contact with the white man led to the more or less rapid abandonment of these practices.

Indeed following this contact the Cree gradually adopted a more sedentary life-style, setting eight well-organised villages (Figure 1) endowed with a health system based on western medicine. Encountering these new techniques, many grew dependent on the community clinics whose medical resources they frequently consult.

FIGURE 1

LOCATION OF THE CREE COMMUNITIES OF JAMES BAY



The Cree however continue to hunt, trap and fish, activities which can occupy up to 55% of a village's population. Table 1 shows the percentage of Cree hunters and trappers in each community. They go live in the bush, most often in groups of related individuals varying in size from two to fifty adults, accompanied by an equally variable number of children. They leave for anywhere from two weeks to ten months each year. These variations are mainly due to part of the population leaving strictly for the two goose-hunting seasons, in the spring and fall, which characteristically entail shorter stays in the bush and larger numbers of hunters per camp.

Other game animals have disappeared aroung the villages, driving hunters and trappers to go increasing distances, between 15 and 300 miles, to establish their camps. They travel by snowmobile in winter and canoe in summer, and very often by plane as well. Severe weather often isolates them for several days.

The Cree Trappers Association was founded in 1978 to counter these difficulties and to help preserve this traditional way of life. Its objectives were and remain to protect the rights of the trappers, to assist them in organizing their stays in the bush, to facilitate radio contact between camps and villages, to promote and organize fur sales and to foster environmental conservation.

Families living in the bush must be capable of immediately handling any health problem or accident that occurs. Before the bush-kit program came into being, all they had at their disposal were a few medications and supplies in a paper bag given them by the nurse when they left. They did as

TABLE 1

DISTRIBUTION OF CREE TRAPPERS ASSOCIATION MEMBERS AND PERCENTAGE OF SAME IN TOTAL POPULATION, BY COMMUNITY

VILLAGE	ASSOCIATION MEMBERS(1)	TOTAL ADULT POPULATION(2) (18 YEARS +)	PERCENTAGE OF TRAPPERS
Whapmagoostui	62	281	22%
Chisasibi	139	1 285	11%
Wemindji	110	452	24%
Eastmain	44	220	20%
Waskaganish	259	684	38%
Nemaska	106	197	54%
Waswanipi	146	473	31%
Mistassini	215	1 106	19%
Total	**1 081**	**4 698**	**23%**

1 Cree Trappers Association, July 1987.

2 Registre des autochtones, MSSS, 28 July 1987.

best they could with this minimum, relying on traditional cures in emergencies and often finding themselves helpless. The know-how accompanying traditional medicine is unfortunately fast eroding on contact with modern medicine; the Cree must relearn to handle emergency situations and train for efficient radio contact with health services in instances requiring professional intervention. It is in response to these problems that the bush-kit program was created.

2.2 - OVERVIEW OF THE PROGRAM, ITS OBJECTIVES AND ACCOMPLISHMENTS

The bush-kit program was set in motion in the fall of 1982, at the request of the Cree people and clinical nurses of the communities. Funded since its inception by the Cree Board of Health and Social Services, it has gradually developed and now extends to the eight villages of the territory. Its general objective reads as follows ;

> "Promote a state of optimum health among the James Bay Cree hunters and trappers as well as their families living in the bush." (Charlebois, 1984).

Its specific objectives are to :

- Increase Cree hunters' and trappers' autonomy and ability to handle health care in the bush.
- Enhance the Cree population's recognition of its own primary responsibility for health matters in the bush.
- Facilitate the nurse's or doctor's assessment of the patient during radio contact.

In order to meet these objectives, the program sought to organize the following activities :

- Recruit and train volunteer natives to take charge of first-aid in each bush camp.
- Teach native instructors to handle the training course.
- Assemble and hand out bush kits containing appropriate medical supplies as well as a bush-kit manual adapted for native use and containing a medication guide.
- Elicit Cree people's interest in the program.
- Sensitize local authorities.
- Prepare and integrate to the communication process between nurse and person in charge of the bush-kit a questionnaire devised to assist in the consultation.

Adjustments deemed necessary have been made to the program on an ad hoc basis since its inception four years ago, and it is now running at cruising speed :

. Volunteers have been recruited in each village to handle bush kits; they follow a one-week training course given by native instructors specifically trained for the task. These volunteers increase in number yearly.

. The bush kit is a large metal box 80 cm long, 22 cm deep and 24 cm high; it contains medications and supplies; its contents are checked and adjusted yearly according to need. It has been approved by the Chisasibi Hospital Board of Physicians and Dentists. The bush kit is always kept locked.

. The bush-kit manual, which describes proper procedure in emergency situations and explains how to identify health problems and use medication, has been vulgarized and illustrated for native users and is now widely used.

. The bush-call questionnaire, designed to facilitate and standardize communications between bush-kit holder and village nurse, has been revised and improved.

. Each participating bush camp is given access to a receiver-transmitter radio allowing rapid communication with the nurse, should the need arise. When no radio is available on the spot trappers can call on a neighbouring camp.

We can conclude that the program is now well run in. We know however that it still does not reach the entire regional hunting and trapping population; we are also unaware of the nature and magnitude of problems encountered using it. With the help of the evaluation instruments already set up we will now determine to what extent the program meets participants' expectations. But before describing our methodology let us first review similar interventions elsewhere which might enrich our approach.

2.3 - OTHER FIRST-AID PROGRAMS ADAPTED TO THE NORTHERN BUSH

During the '50s and '60s, the nurses working for the federal government filled small boxes or pouches with medications the family might require during a hunting or fishing trip. The contents were left up to the nurse, who used her judgment and knowledge of the patients to predict their needs. In some communities no specific measures were taken prior to the natives' departure for the bush.

During the '70s the federal government began relying on volunteer natives as dispensers of emergency care to isolated village populations. These lay dispensers could handle first-aid, contact the nearest nurse and organize medical evacuations. However, no specific first-aid program has been implemented for those who sojourn in isolation, and to this day the village nurse remains in charge of preparing medical supplies for the bush.

A similar service is available to the scattered Labrador populations (Sarsfield, 1982). The health services provide natives leaving for more or

less extended stays in the bush or on the coast with medical emergency kits. Individuals responsible for these kits however still receive no formal training. Such a project is currently under study.

Alaska has set up a system of emergency medical services based on each community's level of care (Johnson, 1982). However it includes nothing similar to the bush-kit program, which innovates in the field of emergency care in isolated areas.

It is thus not surprising that no formal evaluation of similar programs has ever been undertaken, and a review of the literature confirms it. We will therefore also have to innovate with respect to this program's evaluation and evaluation methodology.

3 - METHODOLOGY

We will first present the conceptual framework which structures our evaluation, then describe the data collection process used and finally end the chapter on certain ethical considerations.

3.1 - CONCEPTUAL EVALUATION FRAMEWORK

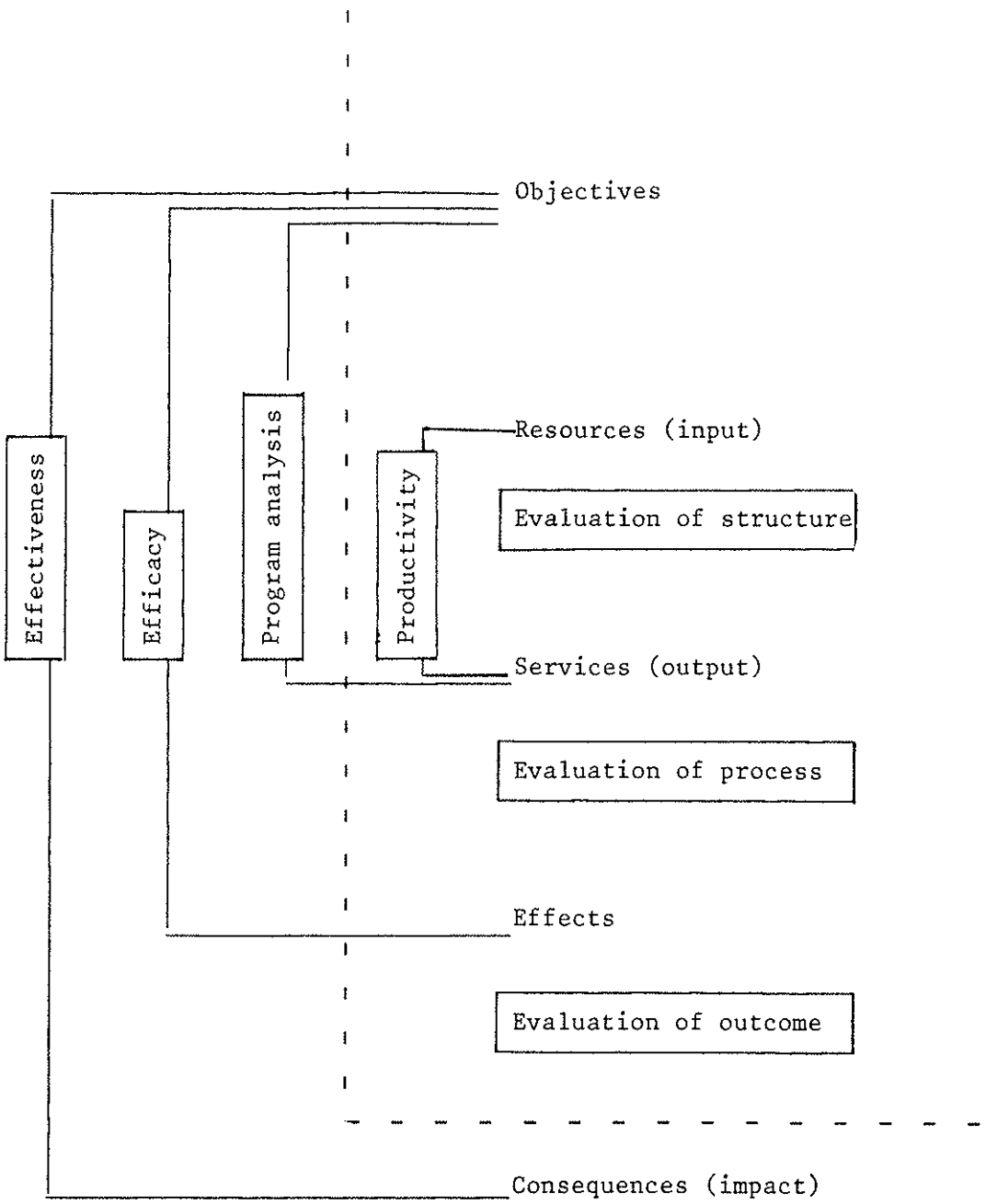
Evaluating a community health program is not a simple task, as there are many elements to a program's concept : its initial objectives on the one hand and the consequences of its use on the other, as well as the resources used, the activities set up and their outcome. So as to better understand the program dynamics and our approach to evaluation, we have schematized their components in Table 2. The dotted lines show the limits of our evaluation research.

As we mentionned in our discussion of project objectives, we have had to describe how the bush-kit program works and hence evaluate program structure, in other words the number, nature and organization of resources implicated, as well as the functioning of activities within the program framework. An evaluation of outcome completes this descriptive or formative approach and allows us to verify to what extent program objectives were met. We will then be in a position to suggest ways of increasing program efficiency and maximizing service output using available resources.

The impact of the bush-kit program however cannot be evaluated. The impact "includes a large number of wanted or unwanted direct and indirect

TABLE 2

PROGRAM COMPONENTS AND CORRESPONDING EVALUATION METHODS*



* Based on Champagne, Contandriopoulos, Pineault, 1985 and Poister, 1978.

changes, linked to or independent of program objectives. The impact can therefore relate to population state of health, general use of health services as well as environmental, economic, social or other phenomena", (translated from Champagne, 1985). The difficulties involved in understanding all the health changes affecting the Cree and in evaluating the extent to which they might result from the program's application are obvious. Indeed major health and socio-economic mutations presently affect native society, and the many competing factors at play make determining the impact of a specific program such as the bush-kit practically impossible. This study nevertheless enabled us to sound out how the various participants perceived program objectives, to qualitatively determine whether these were capable of being met and to evaluate the level of satisfaction with the program.

3.2 - DATA COLLECTION

The study's target-population coincided with that of the program described in the general objective : "to promote a state of optimum health among the James Bay Cree hunters and trappers as well as their families living in the bush". It therefore encompassed the various program participants as well as all 10B region Cree hunters and trappers; these included all individuals for whom hunting, fishing or trapping constituted a major activity. In more operational terms, this population was defined as including all adult members (over 18 years of age) of the Cree Trappers Association whose numbers were given in Table 1.

So as to make our conceptual framework operational, different qualitative and quantitative approaches were used :

- A retrospective documentary study of program activities was carried out using existing measuring instruments : internal C.B.H.S.S. documents allowing us to retrace the program's history, and bush call logs listing all calls received from bush camps. All available data were analysed over a three-year period, from September 1984 to August 1987. These data were however not available for the period preceding program implementation.

- A cross-sectional survey of program staff and of target-population hunters and trappers was undertaken. Additional information was obtained by sitting in on a bush-kit instructor training session held at Chisasibi in the summer of 1987.

Because of the overly large number of households without a phone, interviews were held in person. They were conducted between July 6th and September 3rd 1987 by the researcher and eight Cree interviewers-interpreters chosen for their related experience; the latter were trained so as to standardize, as much as possible, questionnaire administration (see Appendix) between communities.

We first met with C.B.H.S.S. resource personnel at Chisasibi : the program coordinator, the pharmacist, the clinicians in charge of training and the administrators. Seventy-two (72) other informants were interviewed in the field. We met with the Band Council members interested in health

care, the local Trappers Association leaders, the native bush-kit program instructors, each village's radio-communications personnel and finally with the doctors and nurses working in the region.

We then followed the data collection strategy set out in Table 3. Major disparities between communities made it essential to evaluate the program over the entire territory. Furthermore, because of the high cost and limited benefit of meeting with every one of the approximately 1 100 hunters and trappers (see Table 1), we selected a non-proportional stratified random sample. Stratification was based on the hunters' and trappers' home community. Two different sampling frames were used.

On the one hand, so as to include at least five individuals responsible for bush kits from each village, we selected seven names at random from the lists of persons having completed bush-kit training in each community. We reached 43 out of a possible total of 56, a response rate of 77%. On the other, in view of the project budget and of the data collection method (personal interviews), we limited the number of trappers per village to be interviewed at 15. This sample size allowed for adequate representation of each village's hunters and trappers and indirectly also provided a sample of participating and non-participating bush camps. Using a random number table we selected 20 names per village from the local Trappers Association membership lists, for a total of 160 names. In all 125 interviews were completed, corresponding to a response rate of 78%. The total number of trappers we met with (168), irrespective of whether they were in charge of bush kit or not, represented a sample fraction of 15,5%.

TABLE 3

DATA COLLECTION STRATEGY AND COMPLETED INTERVIEWS

KEY INFORMANTS

78

C.B.H.S.S. at Chisasibi

- Coordinator
- Pharmacist
- Clinicians in charge of training
- Administrators

In each community

- Doctors and nurses
- Members of Band Council and health committee
- Trappers Association Leaders
- Cree instructors
- Radio operators

SURVEY OF TRAPPERS AND HUNTERS

FROM EACH COMMUNITY

Sampling frame No. 1

Sample of 7 individuals responsible for bush kits (total of 56 names)

Sampling frame No. 2

Sample of 20 trappers (total of 160 names)

COMPLETED INTERVIEW DISTRIBUTION PER COMMUNITY

168

Whapmagoostui	22	Waskaganish	20
Chisasibi	19	Nemaska	20
Wemindji	20	Mistassini	20
Eastmain	24	Waswanipi	23

TOTAL : 246 COMPLETED INTERVIEWS

Figures obtained for each community were adjusted according to population size (see Table A.1 in Appendix for details).

Sixty-one per cent of interviews with hunters, trappers and individuals in charge of bush kits were conducted in Cree, 24% in English, and the remainder in both; they lasted on average 17 minutes each. Male and female respondents were practically equal in number, and were divided among age groups as follows :

RESPONDENT AGE GROUP	%
18 - 29 years	22,6
30 - 39 years	20,2
40 - 49 years	20,8
50 - 59 years	21,4
60 years and over	14,3

The majority of hunters and trappers we could not reach had already left for the bush or were absent from the village. A few others refused to be interviewed or did not show up at the appointed meeting. These missing responses could lead to a systematic bias in interpreting results and will have to be carefully taken into account. It might for example be that the individuals we could not reach were among those who sojourn longest in the bush.

3.3 - METHODS USED

So as to ensure the validity of our measuring instruments, a great deal of care was taken in preparing the questionnaires to be administered to the hunters, trappers and individuals in charge of the kits, so that they indeed measured what they were set out to measure. To this end we conducted a pretest taking into account native ways of communication, which permitted us to determine the best way to contact and question interviewees, as well as to ensure that questions were well understood and yielded the desired information.

Interviews with other participants were only partially structured. They were conducted using the questionnaire in some cases or simple interview guidelines in others.

Whenever the information we sought permitted it we used more than one method, so as to corroborate the results obtained and thus increase their reliability. Data quality was also ensured by rigourous and frequent control of the collection process, the completed questionnaires, as well as the codification and recording of data.

Data were processed in different ways because of the variety of collection methods used. The content of the partially structured interviews as well as of the various documents and reports relating to program functioning had to be analysed, program activities and costs compiled and participation rates calculated. Answers to questionnaires, weighted according to the number of trappers in each community, were statistically analysed.

3.4 - ETHICAL CONSIDERATIONS

Before proceeding, the project and its objectives were explained to local and regional Cree leaders who gave their informed consent. They were kept abreast of work in progress. Study objectives and the sample-selection method were explained to the respondent at the time of the interview. The questionnaire was only administered once explicit consent had been obtained.

The confidential nature of the information obtained and the respondents' anonymity were respected throughout. For codification purposes an identification number was assigned to each questionnaire and the name of the respondent erased. Identical rules were applied to data taken from internal documents or statistics.

4 - STUDY RESULTS

Study results will be presented in three parts, according to the type of evaluation carried out (see conceptual framework, page 12). The first part will describe program structure, resources, organization and productivity. In the second part the process will be evaluated according to service use and accessibility. Program outcome will be assessed in the last part by means of a case study of health problems in the bush, a retrospective analysis of calls received from camps, and a discussion of participant perception and population opinion regarding realization of project objectives. This final part will end by considering the target-population's level of satisfaction as well as suggestions received to improve services.

We wish to remind the reader that results presented here reflect the situation as it stood in summer of 1987, when data were collected. Changes which might have occurred since have not been taken into account.

4.1 - STRUCTURE EVALUATION

4.4.1 - Organization of human resources

The bush-kit program lies under the jurisdiction of the C.B.H.S.S. director of health services and under the direct responsibility of the community health program co-ordinator. His tasks include management of program resources, verification and annual review of program content, as well as organization of the training of instructors.

A group of Cree instructors, composed of 15 women from the eight communities, lies at the heart of the program. Most of these women are community health representatives, others are interpreters with additional clinical responsibilities. Their role consists of :

- recruiting hunters and trappers prepared to follow a one-week training course (30 hours) and become responsible for a bush kit which they will take along with them in the bush;
- handling these individuals' training;
- preparing and verifying bush kit contents with a nurse in accordance with a predetermined protocol.

Clinical personnel at Chisasibi handle the initial week-long training course. The professionals in charge are experienced nurses who give theoretical lessons in anatomy, physiology, communications and medication use. More practical training completes this curriculum : video presentations on prevention and first-aid as well as role playing, case histories and simulations to teach observation of the patient as well as symptom and health-problem recognition, bandaging, temperature-taking, artificial respiration, proper understanding of the first-aid manual, and communication skills to relay pertinent information accurately and confidentially to the nurse or other individual receiving the bush call.

Additional three-day training sessions are held yearly. The students interviewed declared that they found these sessions too short in view of the material to be covered. Aside from this comment however they were generally very satisfied with the training.

Calls from the bush are relayed via a radio-communication service operated by the Cree Trappers Association. Each village has one radio operator on duty. When he receives a health-related call he transmits the information by phone to the clinic and acts as go-between for the remainder of the conversation. The radio operator's role is an important one in the bush-kit program : he is however not considered part of the program's resources but of the Trappers' Association.

Also counted as part of the program's human resources is a physician based at Chisasibi who checks and approves changes made each year to the bush-kit contents and first-aid manual in response to problems encountered; these changes are then submitted to the Board of Physicians and Dentists. The Chisasibi hospital pharmacist also participates in this process, plans medication and supply orders and ensures their arrival in good condition. These duties take up two work-days each year.

4.1.2 - Description of material resources

The bush-kit program's material resources are many. They include :

. 200 metal boxes, similar to those used for tools, as first-aid kit containers; these kits are sent from Chisasibi to the communities according to need, entailing considerable transportation costs.

. An equivalent number of locks whose number combinations, for security reasons, are only known to those responsible for the kits. The great

majority of respondents (95%) confirmed that only those in charge of the kits had access to their contents.

. The kit content, reviewed yearly according to users need and demand, include medications most likely to be needed in the bush and a variety of medical supplies (see Appendix 2 for details).

According to the individuals we met with, who were responsible for kits, medications and supplies most used were, in decreasing order : adhesive bandages, atasol, ointment, antibiotics and antiseptic. Two-thirds found that medications and supplies were provided in sufficient quantities, while the others said they particularly ran out of adhesive bandages and atasol.

When a family leaves for the bush, the kit is filled in accordance with the standardized list. If the kit has already served, missing items and/or expired medications are replaced. Note that if no camp member has completed bush-kit training, they cannot take a kit along with them. In such cases the nurse can, on demand, supply a paper bag containing some essential items (atasol, adhesive bandages, syrup and others), in addition to medications eventually prescribed to patient-trappers.

. A manual accompanies each bush kit. It has been corrected and improved twice. Those in charge of the kits are familiar with its contents since it is the principal teaching tool used in their training. It includes a medication guide and first-aid procedure to be used for each problem encountered (see Appendix 2). The bush-call questionnaire is attached, for the person in charge to refer to in the event of a problem (see

example at Annex 3). The object of this questionnaire is to facilitate communication with the clinic should radio contact be considered necessary.

. Each community's Cree instructors receives a course manual; it is used as a pedagogical guide to organize and give courses to those put in charge of the bush kits.

. A number of video films are used for training instructors as well as those responsible for bush kits. These films come from different sources and are available in each community. They include the following titles :

- Winter survival in the bush
- First aid in the wilderness
- Hypothermia, outdoor enemy number one
- Help is ...
- Bush first aids
- Teaching on bush-kit program.

. Two hundred and twenty receiver-transmitter radios are used in the bush camps and eight radio-communication stations serve as bases in the villages; while they belong to the Cree Trappers Association they remain an essential resource of the bush-kit program.

. Bush call logs are used in each community; they keep track of calls received from the bush and contain the following information : date, patient name and age, medication or treatment prescribed and evacuation details, if any. The log also indicates if the caller used the manual and answered the questionnaire (a copy is reproduced at Appendix 3). Log contents are analyzed later in this section.

The medical air evacuation service from the bush to the nearest medical centre ought to be mentioned. The severity of the patient's symptoms may require immediate evacuation to a regional hospital. While this service's costs are not imputed to the bush-kit program, it remains an essential part of it. Indeed it represents one of only two possible outcomes to a health problem arising in the bush; either the trappers remedy the situation themselves, often with the help of village health services, or they must call on evacuation services. We shall later consider these services in administrative terms.

4.1.3 - Estimate of financial resources

While its administrators maintain that the bush-kit program is expensive, they readily conceed its costs are reasonable in view of the services offered. The initial investment made in 1983-84 was considerable. It covered the purchase of 200 metal boxes, combination locks, medication and bandages supplies, as well as the costs of preparing the kits (labelling, placing, verification), their transport to the communities, the preparation and production of the first-aid manual, for a total cost of 46 462 $. The costs incurred in training instructors and individuals entrusted with bush kits (10 497 $) should be added to this total (Charlebois, 1984).

Operating the program also requires an annual budget; training new instructors and continuing education for others cost slightly over 9 000 $ in 1987 while the purchase of didactic material as well as medications and medical supplies for each new kit (225 $ a piece) amounted to approximately

8 000 $. Yearly replacement of medication and supply costs are attributed to each clinic's respective budget.

4.1.4 - Cost-benefit estimate

According to the C.B.H.S.S. financial services, the program budget can be looked upon as a transfer of funds from the medication and medical evacuation budgets. A reduction in number of evacuations is a clear operational objective of the bush-kit program. The underlying reasoning is the following : let the beneficiaries acquire the necessary knowledge and skills to deal with minor health problems likely to occur in the bush and the number of medical evacuations will diminish accordingly. The latter cost averages between 1 000 $ and 2 000 $ each, depending on distance travelled. Obviously if only a few are avoided the bush-kit program's costs will be correspondingly amortized.

We are aware that a clear cause-and-effect link between a hypothetical reduction in medical evacuations from the bush and the implementation of the bush-kit program cannot easily be established. We have nonetheless attempted to estimate the number of evacuations from the bush that were avoided thanks to someone equiped with a bush kit and the knowledge to use its contents. Our hypothesis is that sick patients to whom antibiotics, an emetic or a vasodilator were administered would otherwise have had to be medically evacuated. An evacuation could only be avoided because of the on-the-spot availability of such medication and because of the know-how of a trained individual capable of identifying the prescribed medicine, of

preparing it if necessary (powdered medication) and of correctly administering the prescribed dose.

The bush call logs reveal 52 cases (see Table 4) where an antibiotic was prescribed by a doctor or nurse for infectious conditions, the most common of which were tonsillitis, bronchitis and urinary tract infections. We do not suggest that a medical evacuation was avoided for each of these patients, but we are convinced that this does hold true in the majority of cases. This situation should suffice to show that the bush-kit program's benefits outweigh the costs outlined above. We will come back later to the program's more intangible benefits, as they relate to fulfilment of objectives.

4.2 - PROCESS EVALUATION

4.2.1 - Service-use profile

With the addition of Waskaganish and of the three villages of the interior, Nemaska, Mistassini and Waswanipi in 1984, all of the territory's communities participate in the program.

A total of 210 individuals from the eight Cree communities were trained to handle bush kits between 1983 and 1986. They were chosen according to departures for the bush and according to interest and availability of family members; their knowledge of English was an important asset since the bush-kit manual is only available in that language. Many followed the training course more than once so as to reinforce their acquired knowledge and

TABLE 4

NUMBER OF MEDICAL EVACUATIONS PRESUMABLY AVOIDED BY COMMUNITY ACCORDING TO HEALTH PROBLEM

	PROBLEME MEDICAL						
COMMUNITY	Tonsillitis bronchitis	Dental ulcers	Cystic urinary infection	Otitis	Localized infection	Other undefined	Total
Whapmagoostui	6	4	6	1	-	2	19
Chisasibi	5	-	1	2	2	-	10
Wemindji	4	-	2	-	-	1	7
Eastmain	1	-	-	-	1	1	3
Waskaganish	6	1	-	1	1	1	10
Nemaska	-	-	-	1	-	1	2
Mistassini	-	1	-	-	-	-	1
Waswanipi	-	-	-	-	-	-	-
TOTAL	**22**	**6**	**9**	**5**	**4**	**6**	**52**

Source : Bush call log, September 1, 1986 - August 31, 1987.

practice infrequently used skills. These individuals were encouraged to follow the course in groups of two, often husband and wife or mother and daughter, so as to share responsibility for the kit while in the bush.

The training given to those put in charge of the kits was hard to assess since it took place in Cree. We nevertheless did note a proper use of audio-visual material by the instructors, as well as excellent demonstrations of first-aid skills and a good understanding of course content.

The majority of those responsible for bush kits we interviewed expressed satisfaction with the training they received. Most (60%) last followed the course in 1986, the others having taken it between 1982 and 1985. Eighty-five percent of those responsible for kits stated themselves satisfied with the course; nearly all (96%) found the subject matter easy to understand; most considered the amount of information given adequate while a third would have wanted to learn more. More than nine out of ten respondents found the bush-kit manual easy to read; the others declared that they had trouble reading English. Suggested improvements to training reflect these opinions, since 15% of individuals in charge of bush kits suggest that the manual be translated into Cree or be made more visual, while 12% would appreciate a longer course and continued training on a yearly basis.

In terms of service use, we attempted to determine the proportion of bush camps participating in the program. None of the available indicators is sufficiently reliable to be conclusive; combined however they should provide a reasonable estimate.

The yearly number of camps endowed with bush kits, as well as the number of trap lines per community can be determined from administrative documents (see Table 5). These results however should only be interpreted with caution since their denominator is unstable over time; trappers do not necessarily go every year and more than one bush camp can be set up. We are therefore unable to determine the actual number of active camps for these years. These data however indicate a service-use ratio of about 50% over the territory, with considerable variance between communities. We can certainly conclude that the gross number of camps participating in the program increases annually.

The second indicator clearly reveals participation in the bush-kit program. It consists of the proportion of radio calls received from the bush during which the bush-kit manual was used. Valid data are only available for the year 1986-87 since the proportion of missing information is too high in preceding years. The average rate of manual use during bush calls is of 61% over the territory; as Table 6 shows, it varies considerably between communities. A clarification is necessary here with respect to the disproportionately low number of calls in certain large communities, Mistassini for example. We can hypothesize that non-participating camps will be less likely to call upon health services when a problem arises, influencing the denominator. It seems more likely however that radio-communication problems between this village and its camps affect the number of health-related calls received from the bush. Also, radio operators from other communities, experienced in such matters or having followed bush-kit training, use the manual on their own initiative even if the caller doesn't

TABLE 5

NUMBER OF CAMPS WITH A BUSH KIT* PER YEAR, NUMBER OF TRAP LINES AND ESTIMATED SERVICE USE, BY COMMUNITY

COMMUNITY	YEAR 1983	1984	1985	1986	TRAP LINES**	ESTIMATED USE FOR 1986
Whapmagoostui	11	15	18	22	17	100%
Chisasibi	6	8	12	17	38	45%
Wemindji	9	13	13	13	20	65%
Eastmain	14	15	15	15	15	100%
Waskaganish	0	7	9	15	16	94%
Nemaska	0	1	10	12	18	67%
Mistassini	0	5	16	26	98	27%
Waswanipi	0	8	14	14	51	27%
TOTAL	**40**	**72**	**107**	**134**	**273**	**49%**

Notes : * According to administrative data.

** For indication purposes only, since trappers do not necessarily go every year.

TABLE 6

NUMBER OF RADIO CALLS FROM THE BUSH AND PROPORTION OF CALLS USING BUSH-KIT MANUAL, BY COMMUNITY, SEPTEMBER 1986 TO AUGUST 1987

COMMUNITY	TOTAL NUMBER	MISSING INFORMATION	MANUAL USED	PERCENTAGE MANUAL USED
Whapmagoostui	106	2	54	52
Chisasibi	69	10	39	66
Wemindji	41	8	30	91
Eastmain	15	4	11	100
Waskaganish	34	3	15	48
Nemaska	30	4	9	35
Mistassini	17	3	12	86
Waswanipi	9	5	1	25
TOTAL	**321**	**40**	**171**	**61**

Source : Bush call log, September 1, 1986 - August 31, 1987.

have a kit. This phenomenon represents an unexpected use of services which is certainly of interest to the administrators.

So as to give more credance to the preceding indicators, we attempted to obtain participation rates from our interviews with hunters and trappers. We asked them whether they had a bush kit with them at their last camp; Table 7 shows that 43% of trappers said they did. This proportion varies considerably between villages. We note as well that these participation rates are on average below those mentioned earlier.

A summary comparison of results obtained using the three available indicators shows clear differences between them, hinting at their lack of reliability. They nonetheless do point to general tendencies. Thus only approximately half the hunting and trapping camps seem covered by the program, although the service is meant to be generally available. Communities where the service is less prevalent generally tend to be those where the program was most recently implemented (Waskaganish, Nemaska, Mistassini and Waswanipi). The annual increase in the number of individuals trained to handle bush kits leaves us optimistic, yet it remains clear that the bush-kit program does not reach its target-population as a whole and that service-accessibility problems probably subsist.

4.2.2 - service-accessibility problems

If the bush-kit program is available to all Cree hunters and trappers, why do only half use its services? While, on the positive side, the number

TABLE 7

PROGRAM PARTICIPATION RATE ACCORDING TO THE THREE AVAILABLE INDICATORS, BY COMMUNITY, IN PERCENTAGES

COMMUNITY	CAMPS WITH BUSH KIT*	MANUAL USE**	POSITIVE RESPONDENT ANSWER***
Whapmagoostui	100	52	46
Chisasibi	45	66	61
Wemindji	65	91	85
Eastmain	100	100	75
Waskaganish	94	48	45
Nemaska	67	35	35
Mistassini	27	86	15
Waswanipi	27	25	26
TOTAL	**49**	**61**	**43**

Source : * Administrative data.
** Bush call log, September 1, 1986 - August 31, 1987.
*** Data from survey of Cree hunters and trappers.

Note : Totals were weighted according to each community's respective population.

of participating camps is growing yearly, we do note signs of saturation in certain communities where the rate of increase is slower, as Table 5 showed.

So as to clarify this point, we asked trappers why they did not have a bush kit with them at their last camp (n=86); by far the most common response (75%) was that no camp member had followed the training course. The principal explanation given was that the manual was in English while many only spoke Cree; we note that only trappers over 40 gave this reason. A few did not want to follow the course because they lacked self-confidence or didn't know how to read. Other trained trappers did not want to take the kit with them in the bush because they found it too bulky, because they were afraid the medications would freeze or because they thought they wouldn't need it; others didn't have one because none were available at the clinic when they left for the bush.

The bush-kit program's major accessibility problem therefore seems to lie in the recruitment of new candidates for the training course. Asked about this, most instructors (6/7) stated that, despite their best efforts, they found it hard to recruit students. They placed messages on the radio, posted announcements in public places, consulted the Trappers Association and sometimes even visited trappers at home to convince them. Despite this, nearly half (6/14) of the Association representatives we met with were convinced that the program was insufficiently promoted in their community, or at the very least that whatever publicity there was, it was not visible enough; they pointed out that it was often in English only, that the ads were too small (8 1/2" x 11") and placed in low-trafic areas, finally that the radio ads were scarce or non-existent.

Language seems to have been another major obstacle to service use. One indication is that 60% of the trappers we met with asked the interviewer to translate questions into Cree. While it may be true that native instructors gave the course in Cree, it still remains that unilingual students needed much courage and confidence in their memory to read the English-only manual. It would hardly be surprising to find that these individuals, often the older ones away longest in the bush, felt that the bush-kit program was not for them. Seventeen percent of interviewees who did not have a bush kit at their camp had never heard of it; almost all were interested in obtaining more information.

Of those interviewed many felt the course was offered too late in summer (early August) in certain communities, when preparations were often underway for the trapping season. Many registered students dropped out because they had to leave for the bush, and thus deprived themselves of access to a kit.

In some communities participants deplored the fact that the course was unavailable to members of camps without receiver-transmitter radios (the Association, lacking sufficient radios, favours those camps farthest away from the villages). While availability of a transmitter radio is not a C.B.H.S.S. selection criteria for following bush-kit training, the local Trappers Associations probably do take it into consideration when preparing their lists of likely students for the course.

In any event it remains that, although services offered have grown regularly since their inception, the program clearly does not reach much

more than half the target-population. A major effort remains to be done for the bush-kit program to become more readily accessible to the entire Cree hunting and trapping population.

4.2 - OUTCOME EVALUATION

The question we must now ask is whether the services described above have yielded the expected outcome, in other words "changes related to the program's goals" (Champagne, 1985). For such changes to be attributable to the program process rather than to a concomitant factor, the most appropriate type of study is the experimental design (Friedman, 1987), wherein a randomly selected group is subjected to the program and compared to a control group before and after the intervention. We could not set up such a design since we lacked sufficient information on the period preceding program implementation. Nevertheless we could compare camps with bush kits to others without. To this end, we will analyse the series of events which occur when a health problem arises in the bush.

4.3.1 - Case histories

When a trapper or a member of his family faces a health problem in the bush, the group member considered the most competent takes charge.

So as to allow us to reconstitute case histories we asked the hunters and trappers we interviewed (n=168) when they (themselves or a member of their camp) last encountered a health problem in the bush. To avoid errors due to lapses in memory, we excluded all cases more than a year old at the time of

the interview. We thus obtained a total of 98 cases of individuals who had been ill in the bush during this one-year reference period. Table 8 shows the types of problems encountered as well as the sex and age of the patient.

A look at this table reveals that half the health problems experienced in the bush were of a digestive or respiratory nature; musculoskeletal problems were also frequent, accounting for 12%; other categories were less well represented. Fifty-five percent of those taken ill were female. The age distribution cannot easily be interpreted since we lack information on the age structure of the hunter and trapper population.

We shall now attempt to bring out the differences in hunters' and trappers' behaviour as a function of whether or not their camp had a bush kit. Figures 2, 3 and 4 illustrate these differences which are all significant.

When asked the question, "Which camp member took care of the patient?" (Figure 2), only 44% of those with access to a kit answered "the person responsible for the bush kit." The others either took care of the problem themselves, or parents or spouses did. Since the question was open-ended, many respondents might have forgotten to mention that the care-taker happened to be in charge of the bush kit. We also note an internal contradiction, in that 4,5% of the respondents who elsewhere stated they lacked access to a bush kit here replied that the person in charge of the kit took care of the patient. The data might also suggest that certain individuals responsible for a kit left for the bush without it. There is a clear transfer of assumption of responsibility underway, from the individual

TABLE 8

CASE CHARACTERISTICS OF HEALTH PROBLEMS ENCOUNTERED IN THE BUSH DURING THE YEAR 1986-87, IN PERCENTAGES*

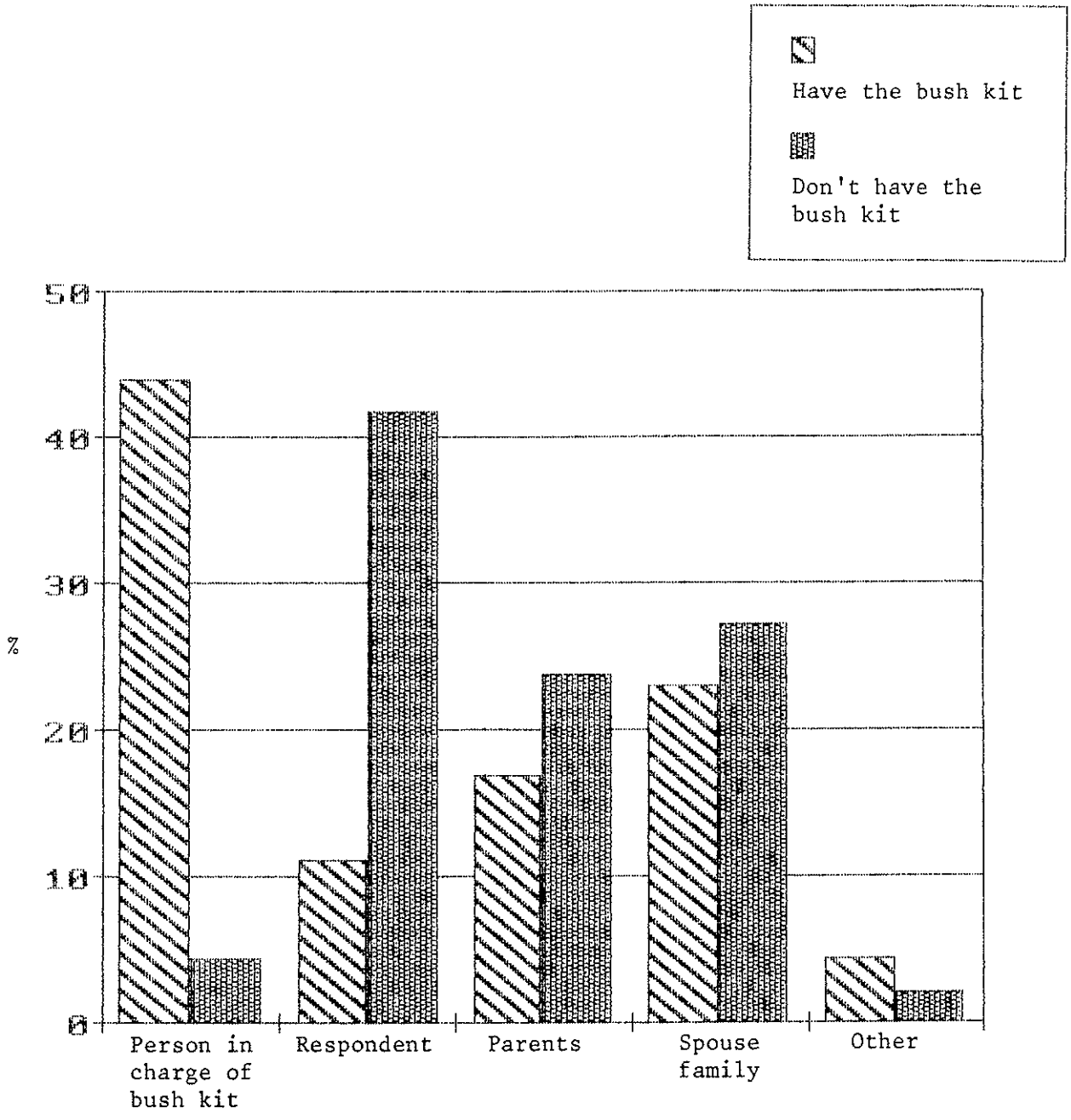
Type of health problem**	Frequency	
Digestive system	27,0	
Genito-urinary system	7,6	
Heart and circulatory system	2,3	
Nervous system and sense organs	7,3	
Skin diseases	2,3	
Musculoskeletal diseases	12,3	
Respiratory system	26,4	
Traumas and injuries	7,5	
General signs and symptoms	7,3	100%
Patient sex		
Male	44,6	
Female	55,4	100%
Patient age group		
Under 15	26,7	
15 - 24	24,8	
25 - 44	20,1	
45 - 64	25,0	
65 and over	3,5	100%

* Data weighted according to community size, taken from our survey of a representative sample of Cree hunters and trappers.

** In accordance with the ICHPPC (International Classification of Health Problems in Primary Care), 1975.

FIGURE 2

PERSON WHO CARED FOR PATIENT ACCORDING TO WHETHER BUSH KIT WAS AVAILABLE AT CAMP, IN PERCENTAGES



Source : Weighted data from survey of representative sample of Cree hunters and trappers.

himself in camps without a kit to the person responsible for the kit in participating camps.

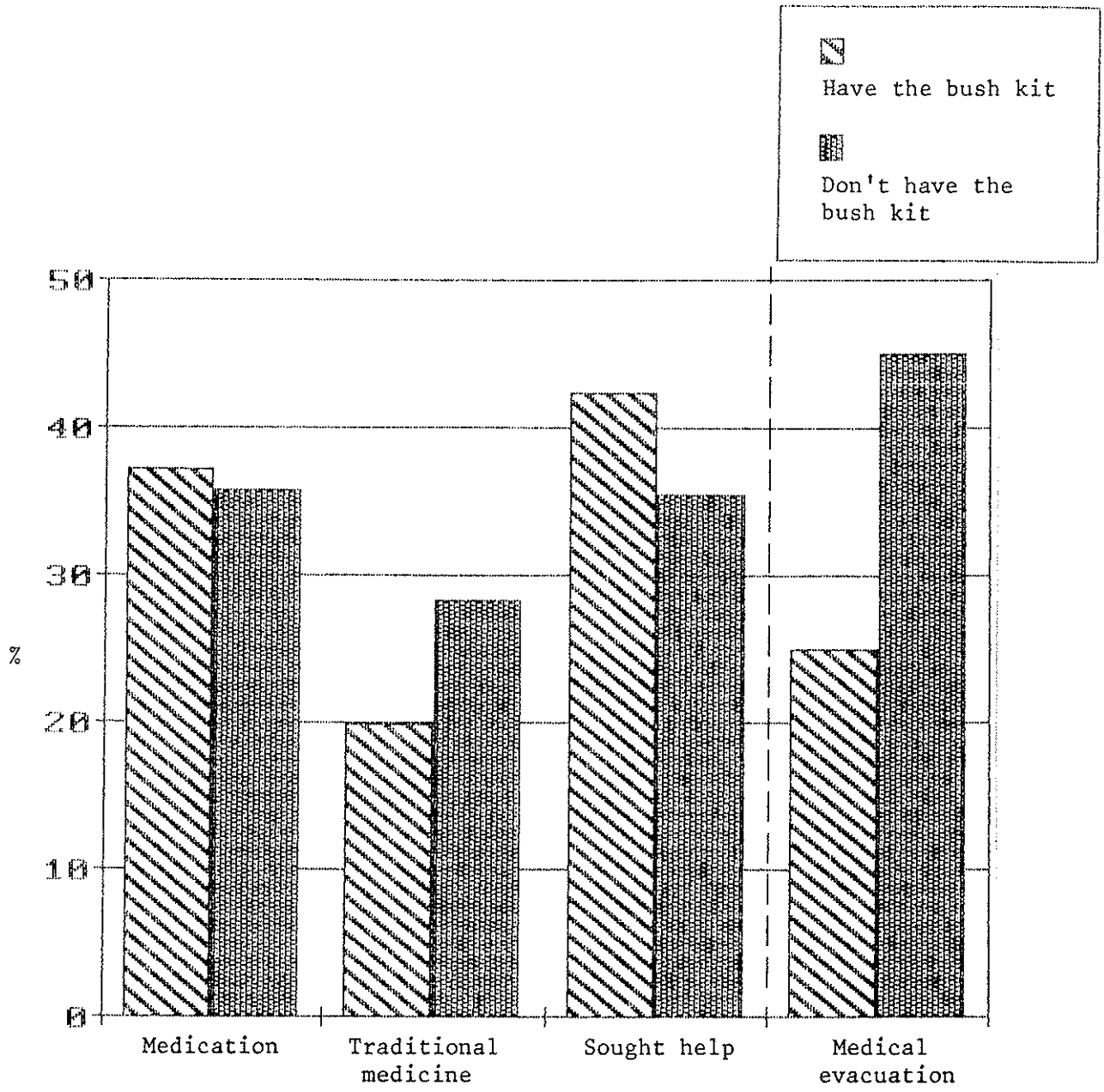
The next question asked was what the care-taker actually did for the patient (Figure 3). Slightly over 35%, whether equipped with a bush kit or not, declared that they gave the patient medication. Twenty percent of those in camps with bush kits declared that they used traditional medicine and 43% sought outside help (calling the nurse in most cases). On the other hand, 29% of respondents from camps without bush kits relied on traditional medicine and only 36% called for help. This last result, to the effect that camps with kits sought help more frequently, probably relates to the bush-kit manual's suggested procedure for a large number of health problems, that the village nurse be called.

Another more direct question confirmed the tendency of individuals with access to a kit to rely less on traditional medicine. Indeed our investigation revealed that hunters and trappers living in the bush still recoursed to traditional medicine. Thirty-two percent overall used it, often in conjunction with western medicine. Figure 4 shows that 81% of Whapmagoostui trappers rely on traditional cures, the highest proportion; Chisasibi comes next with 67% and Waswanipi with 46%; Waskaganish uses them least, with only 5% stating that they do.

The most common traditional practices flow directly from nature, involving plants, particularly Labrador tea, bark, sap, tree leaves or various animal parts; they are used to treat colds, coughs or sore throats, ulcers, painful joints or infections.

FIGURE 3

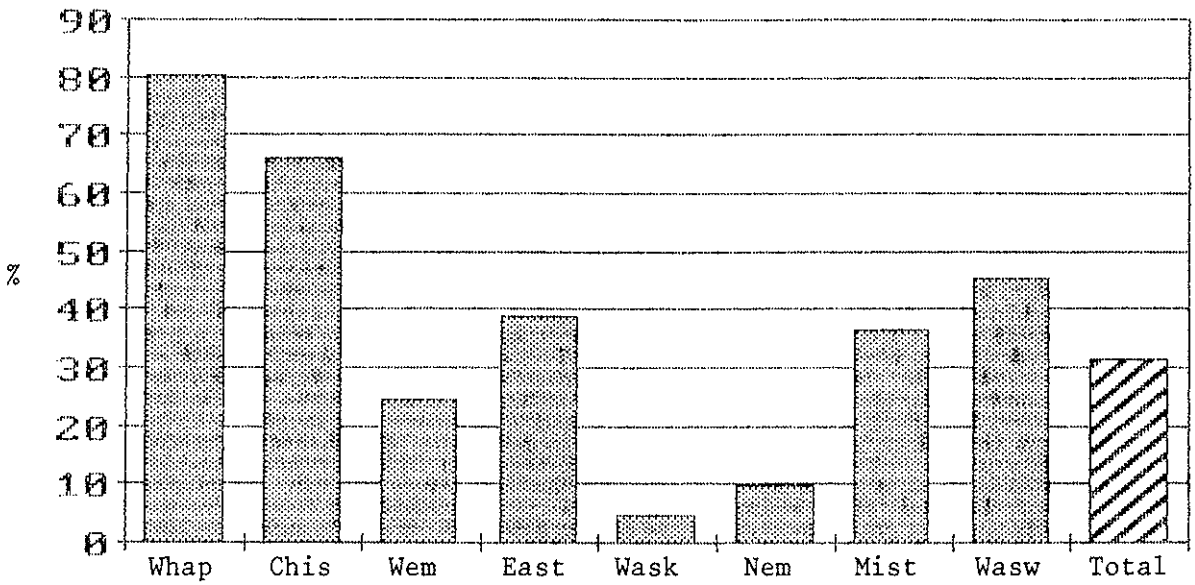
RESPONSE TO QUESTION, "WHAT DID THE CARE-TAKER DO FOR THE PATIENT?" AND OCCURENCE OF EMERGENCY EVACUATIONS, ACCORDING TO WHETHER BUSH KIT WAS AVAILABLE AT CAMP, IN PERCENTAGES



Source : Weighted data from survey of representative sample of Cree hunters and trappers.

FIGURE 4

PROPORTION OF HUNTERS AND TRAPPERS USING TRADITIONAL MEDICINE BY COMMUNITY, IN PERCENTAGES



Source : Raw data from survey of representative sample of Cree hunters and trappers. The total however has been weighted.

As Susan Marshall (1979) noted, many different strategies can be applied to the same health problems. The interested reader is referred to Table A.2 in Appendix.

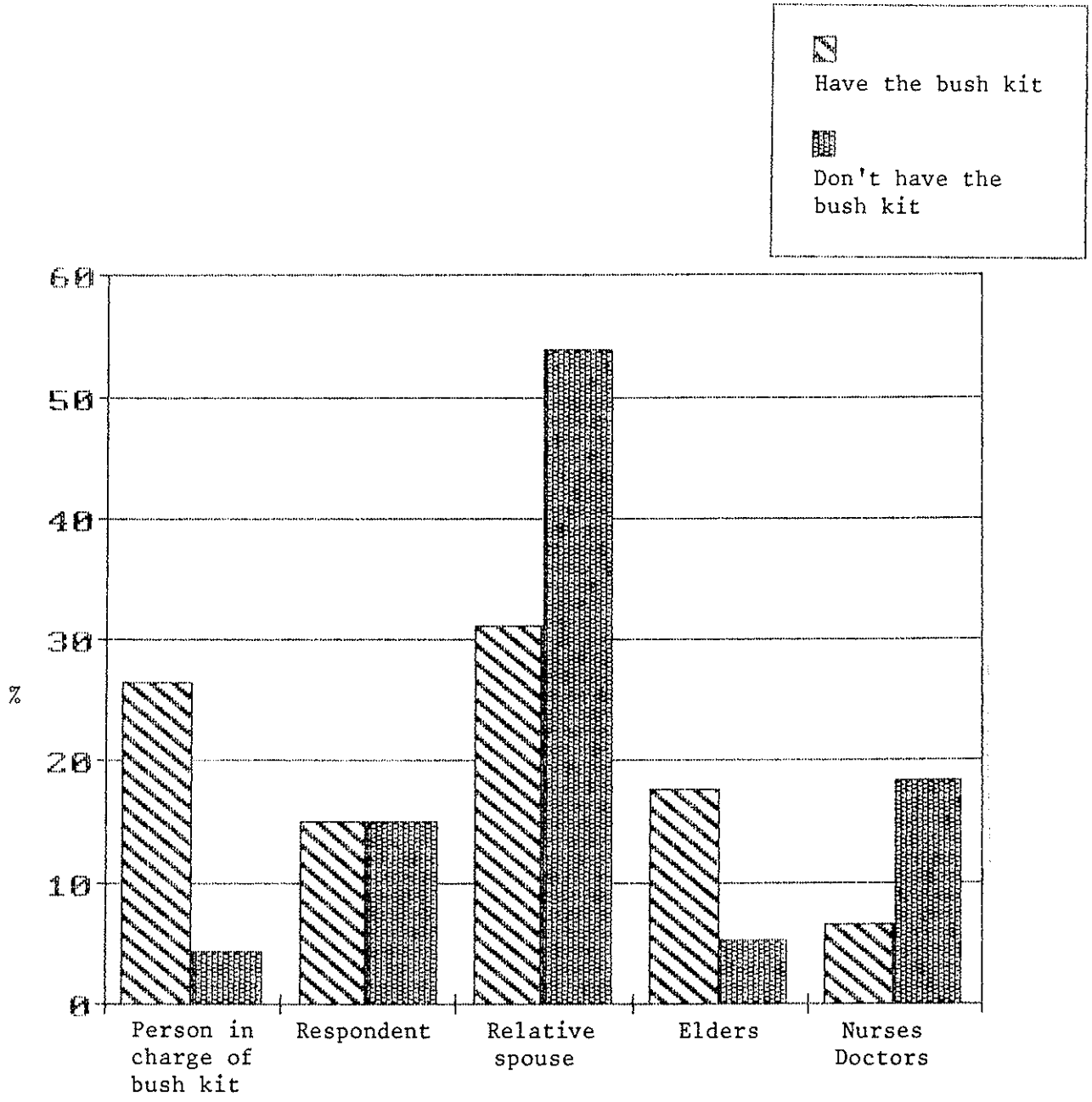
Figure 3 also reveals how health problems occurring in non-participating camps resulted in much more frequent (45% v. 25%) medical evacuations. This observation confirms our analysis of the bush call log at page 28. We believe this phenomenon to be at least partially attributable to the presence of antibiotics in the bush kit. It may also be a clue to the greater autonomy of trappers who dispose of the kits. This hypothesis will be considered in greater depth in the following section.

When a hunter or trapper from a participating camp needs advice on a health matter (Figure 5), he most likely turns to a relative or spouse (31%); his second choice will be the person in charge of the bush kit (27%) and his third a camp elder (18%). On the other hand a hunter or trapper from a camp without a kit will reply more heavily on relatives or spouses (54%), turning next to a nurse or doctor (19%). What should be retained is that only one-quarter of those from camps with bush kits turn to the person in charge of that kit for advice on health matters.

The occasionally contradictory results yielded by these case studies should be interpreted with care. They nevertheless do confirm our hypothesis that medical evacuations from the bush are fewer in camps with bush kits.

FIGURE 5

PERSON FROM WHOM ADVICE IS SOUGHT ON HEALTH MATTERS ACCORDING TO WHETHER CAMP HAS BUSH KIT, IN PERCENTAGES



Source : Weighted data from survey of representative sample of Cree hunters and trappers.

4.3.2 - Retrospective analysis of calls from the bush

We proceeded to compile the characteristics of all radio calls emanating from the bush. Each call received is automatically entered into the bush call log*. This system has permitted us to complete our survey data and to make comparisons through time and between communities. However it yields no information on minor health problems solved in the bush without the assistance of health services. The rather high percentage of inadequately defined reasons points to codification difficulties due to inferior photocopies and to a good proportion of insufficiently defined symptoms or problems.

We will briefly analyse bush call log contents for each of the communities, emphasizing their evolution over the past three years. Table A.3 in Appendix shows a clear drop in total number of calls as well as in medical evacuations from the bush over the years in question. A parallel can be established with what we determined earlier, that health problems arising in camps with bush kits result in less frequent medical evacuations than those occuring in non-participating camps. Without so much as cause-and-effect relationship, we can nevertheless hypothesize that participation in the bush-kit program would be one of the factors contributing to this trend. As Table A.4 shows, the reduction in number of calls is particularly pronounced in small communities : Whapmagoostui, Eastmain, Nemaska and Waswanipi.

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* A copy is reproduced at Appendix 3.

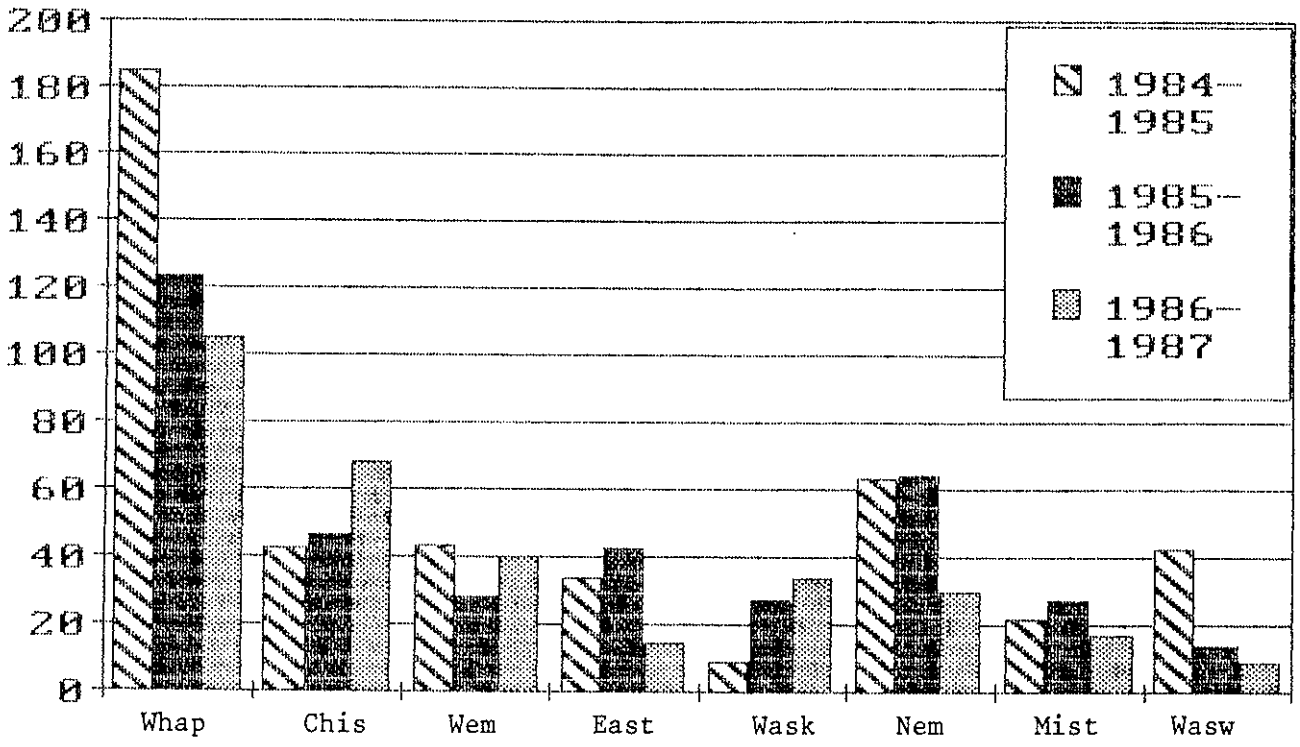
Figure 6 reveals obvious differences between villages in numbers of calls received from the bush. While we might ascribe these variations primarily to the size of the trapper population in each community this is clearly not so, since Whapmagoostui holds the record for greatest number of calls with three times as many as any other community, despite having one of the lowest trapper populations of the territory (6%). The spread of an epidemic through the village could provide a plausible explanation for this phenomenon, were it not for the fact that it recurs each year.

We could also surmise that the number of calls varies with the length of time spent in the bush. This again is not the case since trappers from villages of the interior (Nemaska, Mistassini, Waswanipi) stay by far the longest in the bush (Table A.5 in Appendix). This factor might be at play in the case of Nemaska but the relationship is inconclusive. We also note the small number of calls from the bush received at Mistassini, despite the fact that it accounts for 20% of the territory's total number of hunters and trappers, half of whom stay in the bush longer than six months.

In short, the number of health-related calls from the bush appears unrelated to the number of trappers or camps, or to the length of time spent in the bush. The phenomenon could perhaps be explained by the greater or lesser availability of the village radio operator, not always there to respond to calls. Trappers from some communities informed us that they could not, for example, reach anyone on week-ends. In such cases trappers and hunters are left with no alternative but to make do without outside help, whether or not they dispose of a bush kit. The number of calls could

FIGURE 6

DISTRIBUTION OF NUMBER OF CALLS FROM THE BUSH BY COMMUNITY AND ADMINISTRATIVE YEAR



Source : Bush call log, September 1984 to August 1987.

also be related to the trappers' level of autonomy with respect to their own health care.

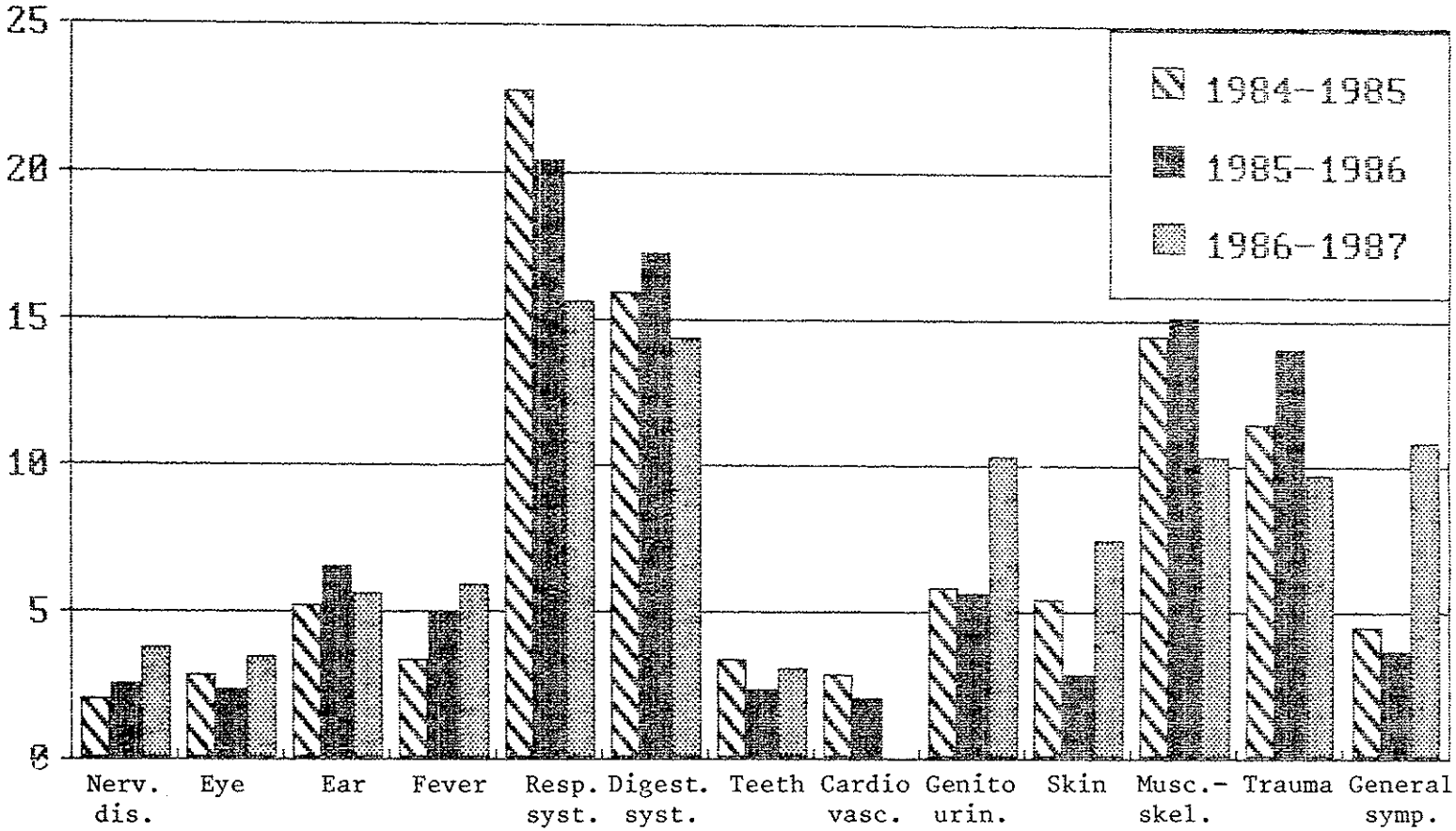
Figures 7 and 8 highlight the reasons given for calls from the bush and for medical evacuations over the territory for the three years studied. Respiratory system problems are the most common, accounting for 20% of calls; they represent the second leading cause of evacuations. Their number is however falling each year. The presence of a bush kit in the camp might be a contributing factor since it contains antibiotics. This type of health problem is particularly prevalent at Wemindji where it gives rise to 30% of calls, at Nemaska (27%), Eastmain (25%) and Waskaganish (21%) (Table 9). It however accounts for a surprisingly low 3% of calls at Mistassini. The predominance of this category of problems is predictable since it is the leading cause of clinical consultations (Allaire and Lavallée, 1984) and of days of hospitalization among the Cree (Pelchat and Wilkins, 1986).

Illnesses of the digestive system come second (16%) and remain quite stable over time. They prevail most at Eastmain (23%) and again represent an important cause of ambulatory and hospital morbidity among the Cree. These illnesses are also the third cause of medical evacuations from the bush.

Musculoskeletal problems rank third (13,5%) among reasons given for calls from the bush and account for 9% of evacuations. These problems are approximately twice as frequent in the bush as in the village; this can probably be explained by the very nature of life in the bush, where cold and humidity compound greater physical exertion. The Whapmagoostui clinic deals

FIGURE 7

REASONS GIVEN FOR CALLS FROM THE BUSH OVER TERRITORY FOR YEARS 1984-85, 1985-86 AND 1986-87, IN PERCENTAGES

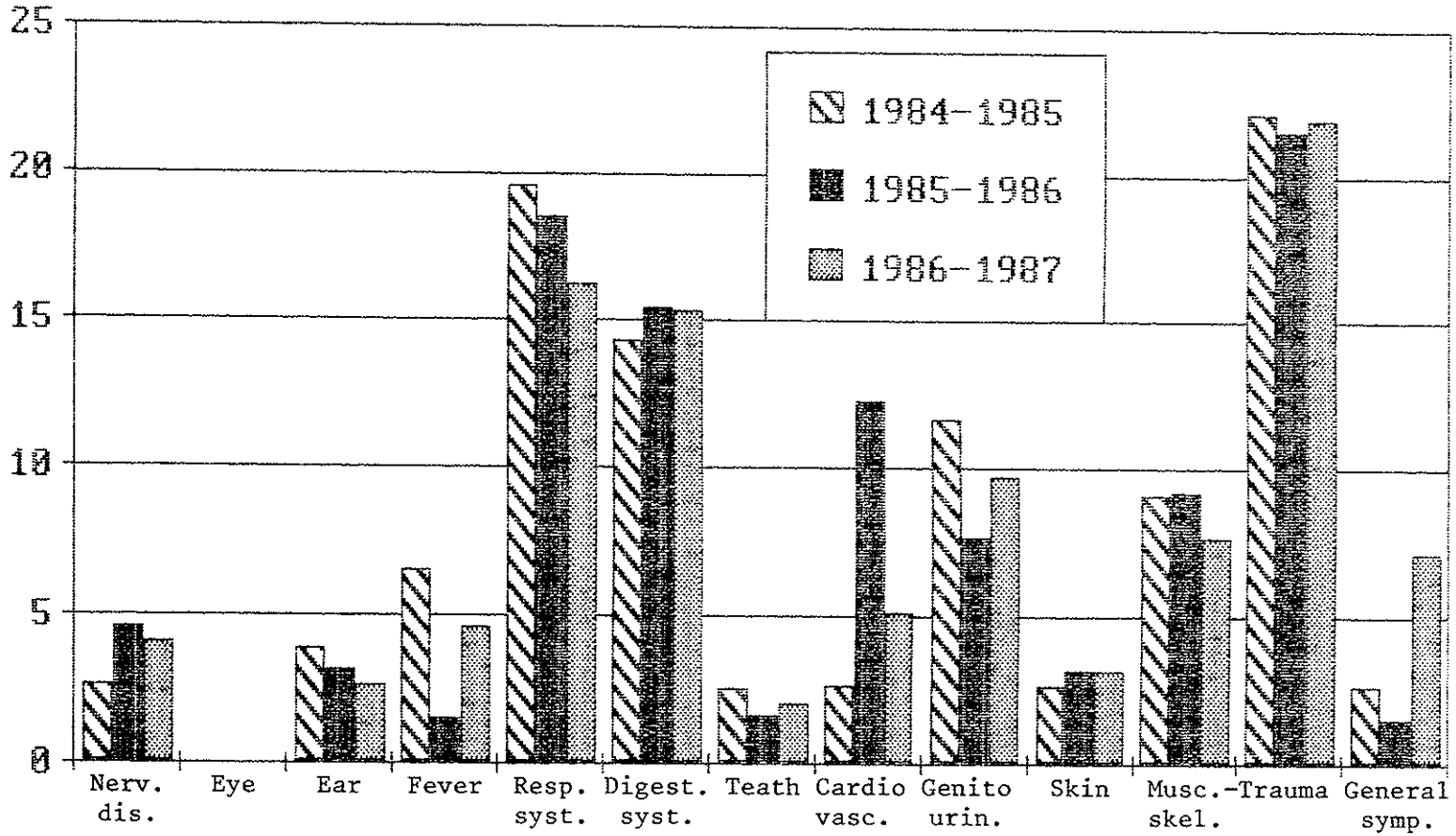


Source : Bush call logs, September 1984 to August 1987.

Note : Reasons classified according to the International Classification of Health Problems in Primary Care (1975).

FIGURE 8

REASONS FOR MEDICAL EVACUATIONS FROM THE BUSH OVER TERRITORY, YEARS 1984-85, 1985-86 AND 1986-87, IN PERCENTAGES



Source : Bush call logs, September 1984 to August 1987.

Note : Reasons classified according to the International Classification of Health Problems in Primary Care (1975).

TABLE 9

REASONS FOR CALLS FROM THE BUSH BY COMMUNITY, IN PERCENTAGES

REASONS FOR CALLS	WHAP.	CHIS.	WEM.	EAST.	WASK.	NEM.	MIST.	WASW.	TOTAL
Nervous and mental disorders	1,9	2,5	0,9	3,3	1,4	5,7	3,0	4,5	2,7
Eye problems	5,7	1,3	0,9	1,1	2,8	1,2	3,0	-	3,0
Ear problems	2,9	6,9	6,1	8,7	12,7	5,7	6,0	9,0	5,8
Fever	2,4	8,8	6,1	6,5	4,2	5,7	1,5	4,5	4,6
Respiratory system	16,8	18,9	29,8	25,0	21,1	27,0	3,0	16,7	19,9
Digestive system	18,5	13,2	14,9	22,8	16,9	10,7	13,4	12,1	15,9
Dental problems	4,1	2,5	2,6	1,1	4,2	0,6	6,0	1,5	3,0
Cardiovascular system	0,7	1,9	1,8	2,2	2,8	3,1	3,0	3,0	1,8
Genito-urinary system and pregnancy	7,0	7,5	5,3	4,3	5,6	5,0	11,9	13,6	7,0
Skin disorders	5,0	6,3	4,4	3,3	9,9	3,8	4,5	6,1	5,2
Musculoskeletar problems	21,4	7,5	14,9	6,5	5,6	7,5	13,4	7,6	13,5
Trauma and injuries	7,5	15,1	8,8	12,0	8,5	16,4	22,4	18,2	11,8
General signs and symptoms	6,0	7,5	3,5	3,3	4,2	7,5	9,0	3,0	5,9
Total %	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**
N	**416**	**159**	**114**	**92**	**71**	**159**	**67**	**66**	**1144**

Sources : Bush call logs, September 1, 1984 - August 31, 1987.
Classification according to ICHPPC (1975).

with such cases most often (21%), though they are also frequent at Wemindji (15%) and Mistassini (13%).

Traumas and injuries follow closely (12%) and constitute the principal cause of evacuations from the bush. They are of about equal importance inside the communities; accidents do not seem therefore to occur more frequently in the bush than in the villages. Communities in the interior (Mistassini 22%, Waswanipi 18% and Nemaska 16%) receive the most calls for this reason.

The genito-urinary system comes next according for about 10% of calls over the last year. Part of the increase over time can be attributed to the inclusion of pregnancy-related problems in this category; these were too rare to justify separate classification. Mistassini and Waswanipi report the largest number of cases related to this system as well. Other causes are less important.

It is interesting to note that relative importance of reasons for bush calls, as diagnosed by the nurses and doctors, roughly corresponds to that of health problems mentioned by the trappers themselves (see preceding section, Table 8).

4.3.3 - Realization of objectives

Any evaluation of program results must set out to determine whether the services created have caused the expected changes (Champagne, 1985). In

other words, have the program objectives been realized, and to what extent? The three specific objectives of the bush-kit program were :

4.3.3.1 - Increase autonomy and ability to handle health care in the bush

One must first accept that the notions of autonomy and ability to handle health care are subjective and have evolved over time. Indeed some decades ago natives who left with their families for long hunting or trapping sojourns in the bush made do on their own and coped to the best of their abilities with whatever health problems arose. Some of them possessed traditional know-how which allowed them to succesfully treat traumas or certain illnesses. While the advent of western medicine has permitted the successful treatment of more severe problems, particularly infections, it has also provoqued an increasing dependence on health services. One aim of the bush-kit program was to make trappers and hunters resume charge of their own health, at least in so far as concerns minor afflictions.

We have attempted to evaluate whether this objective has been met using three different sources of information :

- The data from our cross-sectional survey of hunters and trappers. Many questions were asked from which we derived a general autonomy index (We stress the subjective nature of the decisions taken by the researcher in so doing). The following received one point for autonomy :
  - those who, faced with a health problem at their camp, cared for the patient themselves without calling the village nurse;
  - those who did not resort to evacuating the patient;

- those who relied on one of their own for advice on health matters rather than consult the nurse or doctor.

Each respondent thus received a score of 0 to 3 points. Forty-six percent were categorized as autonomous with scores of 2 or 3 points, and 54% as non-autonomous (0 or 1 point).

Our autonomy index varied significantly depending on whether or not the trappers' camp disposed of a bush kit (Table 10). Sixty percent of those from camps with bush kits were classified as autonomous and 40% as non-autonomous, while 64% of trappers from camps without were classified as non-autonomous and 36% as autonomous. This index seems to show that trappers in participating camps are better able to cope on their own and on the spot with the sick or injured.

Our analysis indicates that age also bears significantly on the greater or lesser autonomy of respondents; older trappers are autonomous in greater proportion (see Table 11). Indeed the rate of autonomy increases from about one third among 18-29 year olds to more than half among those over 50. So as to ensure that respondent's age does not affect the previously established relationship between autonomy and access to a bush kit we have adjusted our data for this variable. The results obtained support the relationship and confirm the hypothesis that trappers from participating camps display greater autonomy.

Autonomy level also varies significantly between communities (Table 12). Chisasibi boasts the largest proportion of autonomous trappers (73%)

TABLE 10

RESPONDENTS' AUTONOMY INDEX AS A FUNCTION OF ACCESS TO A BUSH KIT, IN PERCENTAGES

INDEX	ACCESS TO BUSH KIT	NO ACCESS TO BUSH KIT	TOTAL
Non-autonomous	40,2	64,2	53,9
Autonomous	59,8	35,8	46,1
TOTAL	**100,0**	**100,0**	**100,0**

Source : Weighted data from survey of representative sample of Cree hunters and trappers

Note : p significant to ,000 according to Chi^2.

TABLE 11

RESPONDENTS' AUTONOMY INDEX BY AGE, IN PERCENTAGES

INDEX	18-29 years	30-39 years	40-49 years	50-59 years	60 yrs +	Total
Non-autonomous	66,9	55,0	50,9	44,9	45,9	53,2
Autonomous	33,1	45,0	49,1	55,1	54,1	46,8
TOTAL	**100,0**	**100,0**	**100,0**	**100,0**	**100,0**	**100,0**

Source : Weighted data from survey of representative sample of Cree hunters and trappers

Note : p significant to ,000 according to Chi2.

TABLE 12

RESPONDENTS' AUTONOMY INDEX ACCORDING TO HOME COMMUNITY, IN PERCENTAGES

INDEX	WHAP.	CHIS.	WEM.	EAST.	WASK.	NEM.	MIST.	WASW.	TOTAL
Non-autonomous	42,1	27,3	70,8	55,0	69,6	60,0	45,0	45,0	53,6
Autonomous	57,9	72,7	29,2	45,0	30,4	40,0	55,0	55,0	46,4
TOTAL	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100,0**

Source : Raw data from survey of representative sample of Cree hunters and trappers.

Note : p significant to ,000 according to Chi^2.

while Wemindji and Waskaganish count the smallest, with about 70% classified as non-autonomous.

So as to evaluate how trappers from participating camps perceived their own autonomy in the bush with respect to health matters, we asked them whether the presence of someone equipped with a bush kit at their camp made them feel more secure. They all (100%) responded that it did. We also asked them whether the person in charge of the kit could handle minor health problems on his or her own, without calling the nurse; 92% answered yes.

- The bush call log also revealed a decrease over time in number of calls although hunting camps did not become scarcer over the period studied. As we noted earlier the same held true for medical evacuations from hunting grounds. These two indicators do not on their own prove autonomy but lend support to our previous results.

- Participants' opinion. The more qualitative interview data emphasize the ambivalence of the bush-kit program's results insofar as concerns autonomy. Native leaders are of the overall opinion that trappers are safer and more autonomous as a result of bush-kit training. Most of the nurses and physicians we met with believed the bush kit made trappers a little more secure and allowed them to deal on the spot with minor health problems although, as one stated, reflecting the opinion of many : "It makes no difference when it's an emergency, everyone panics".

Clinicians who have been working in the territory for a long time show some optimism, supported by our quantitave data, in that they feel the bush kit has brought about considerable progress towards autonomy and ability to handle health care in the bush. One radio operator felt that bush-kit training had helped her personally, in that it gave her more autonomy in caring for her family : she wished everyone could benefit as she had.

4.3.3.2 - Enhance the Cree population's recognition of its own primary responsibility for health matters in the bush

The vague nature of this objective makes it difficult to assess; we have chosen to interpret it as a desire to sensitize the population to its own responsibility for health care in the bush; the bush-kit program being an instrument to achieve this. We do not believe this objective can be reached save in the long term. Certain key steps have nonetheless been cleared; thus our interviews of Cree leaders revealed that practically all were definitely interested in the subject. Out of a total of 31 interviewees 18 were very familiar with the program, 10 knew more or less about it and the others knew little or nothing of it. All of them were interested in discussing the trappers' health situation in the bush. A number deplored the paucity of information on the subject and wished for it to be better publicized.

Among hunters and trappers, 43% had a bush kit at their last camp and were prepared to discuss it, 48% knew of the program and four-fifths of those left were interested in obtaining information, leaving only 2% of the

population uninterested in the bush-kit program, although not necessarily indifferent to health matters in the bush.

In short, most leaders are aware of their responsibilities as they pertain to health matters in the bush, ten or so Cree instructors have been trained as resource people in their communities and 210 individuals have been recruited and trained to handle bush kits and take charge of health problems in the bush. Thus great advances have been made but the toughest task remains ahead : convincing the non-participating half of the trapper population, and there lies the challenge.

4.3.3.3 - Facilitate the nurse's or doctor's assessment of the patient during radio contact

When the clinician receives a call from the bush he must be in a position to assess the gravity of the situation before deciding whether the patient can be treated on the spot or whether an evacuation to the nearest service center is called for. He requires information to identify the problem and decide on a course of action; in short, he needs to obtain a case history. Since radio-telephone contact is made through the village operator or the Band Council office and since the conversation is often in Cree, the information-gathering process is through an intermediary and can be long and difficult, particularly if the trapper is not prepared for question such as : "does the patient have a temperature?". The bush-kit program's third objective was in fact to prepare individuals encharged with kits to efficiently handle this situation. They are taught two approaches : the "W approach" which asks the basic questions who, what, when, where and why, and

the problem approach which consists in relaying the symptoms described by the patient and the signs (temperature, pulse, etc.) observed on him.

All the clinicians interviewed felt that the bush-kit manual facilitated their assessment, but as we have seen it is only actually used for 61% of calls. Furthermore, according to some nurses and doctors certain individuals in charge of bush kits transmit information inaccurately, have difficulty describing the problem and often exaggerate the seriousness of the situation. Nevertheless three-quarters of the clinicians we met with felt that those in charge of the bush kits were quite correct in their assessments of patient condition. About 60% of them believed that information transmitted from participating camps was more accurate. It would also seem that, when calls from non-participating camps were received, some radio operators with bush-kit training took the initiative of using the manual. In such cases the assessment was facilitated by the radio operator's competency. Many clinicians felt that all operators should receive bush-kit training.

4.3.4 - Satisfaction with the program and suggested improvements

The bush-kit program is generally well looked upon. The leaders interviewed expressed unanymous satisfaction; according to most there only remained to make the training course more widely accessible. To this end program promotion in Cree needs to be emphasized and the program demystified so that trappers will turn to those in charge of the kit. The hunters and trappers were asked the same question. Half did not know what to answer and

99% of the remainder found the bush kit useful. Among nurses and doctors only one considered the program useless.

An in-depth survey of opinions revealed some elements of the program were considered more satisfactory than others.

4.3.4.1 - Training

Nine out of ten considered the training course given to handle the kits satisfactory. Many trappers however wished they could read the manual in Cree or, at least, that the bush-call questionnaire be translated. They also suggested the training course be made slightly longer so as to give them a better chance to assimilate the material, practice various skills and participate in bush-call simulations. Many of the nurses supported this suggestion which they believed would foster autonomy. Trappers also asked for an annual review of certain course elements which they rarely practiced in the bush. They would also like segments on prevention and hygiene added to course content. As we have already stated many also suggested that the course be given earlier in the summer so as to avoid conflict with departure for the bush preparations.

4.3.4.2 - The kit

The kit has given rise to many complaints. More than half of those who handled it found it too heavy and 65% also found it too bulky, it took up too much space and was hard to carry. A number of Trappers Association

representatives stated that its weight entails additional transport costs for the trappers who often travel by air.

Many also pointed out (30%) that the medications froze in winter or attracted humidity, that the metal box conducted cold as well as heat and that the bottles often broke. Many, and the most experienced among them, suggested using insulated hand-crafted boxes.

One out of five trappers believed that a single kit per camp was not enough, hardly surprising since nearly 100 people participate in some goose-break camps. One third of the trappers also thought that the kit contained insufficient medications and/or medical supplies. Leaders suggested that kit contents should relate to camp population size, or that the larger camps should dispose of more than one kit. We were also alerted to the fact that the number of different medications included in the kit increased yearly, making their control difficult. This remark could explain many leaders' and instructors' wary attitude with respect to the handling of the kit's medications.

4.3.4.3 - Communications

One of the problem most frequently brought up concerned radio communication, which often entailed excessive delays and garbling. The bad reception, often caused by atmospheric conditions, is beyond the bush-kit program's control. Trappers also complained that village radio operators could be hard to reach. Some were apparently not available except from 9 to 5, the radio being located in the Trappers' Association office. Worse still

was when no one answered all week-end long... what, then, if an accident occurs?

Certain radio operators' competency in relaying health-related calls was also under fire. Bush-kit training could be the answer and become a prerequisite for the job.

Many participants also deplored the lack of confidentiality with which calls were treated; in all camps with an open radio, everyone hears the conversation. How should questions of an intimate nature then be dealt with? The bush-kit questionnaire was designed to address this problem among others, but it was used in less than 40% of cases. Certain doctors also told us they preferred not to use it and to ask the questions they considered pertinent instead. Some participants suggested that a special wave-length be reserved for health-related calls. The suggestion was also made that the caller's answers should be limited to yes or no; the questions of course being known in advance.

CONCLUSION

The data collected for this study and particularly in relation to program evaluation have convinced us that the bush-kit program is monitored on a continuing basis and that its resources are periodically adjusted to user need. Yet some elements, namely the kit's format, its contents and the availability of the manual in English only, remain very unsatisfactory.

Process evaluation revealed that approximately 50% of hunters and trappers do not avail themselves of program services. Administrative documents showed that trapper participation increases each year; we did however note signs of saturation and difficulties in recruiting new candidates for the training course.

Outcome evaluation showed a very high level of general satisfaction among target-population and program staff. The large majority agreed that the program was beneficial and that all trappers should take advantage of it. Program objectives have not yet been met but some progress has been made. We noted for example that bush-kit use seems to result in fewer medical evacuations from the bush as well as in greater autonomy. It also appears to lead to an abandonment of traditional medicine; would this be a sign of greater autonomy, or the opposite? Should we consider integrating some traditional know-how within bush-kit training? Once the training course has been better adapted to the population's expressed needs it will have to be made more readily accessible, so as to increase trappers' autonomy and capacity to handle health care in the bush. The non-participating

population must also be sensitized to the need of taking charge of its own health while at the bush camps.

Radio-communication problems were made apparent in our analysis relative to the third objective, which sought to facilitate the nurse's or doctor's assessment of the patient during radio contact. While some of these inconvenients are not the responsibility of the health services, certain elements of the bush-kit program, and in particular the bush-call questionnaire, could in fact improve communications.

In the hope of improving the program elements which present difficulties and of making the program more accessible to the target-population, a few recommendations follow.

RECOMMENDATIONS

An in-depth analysis of available information as well as of suggestions made by program staff and by hunters and trappers of our survey sample, lead us to recommend :

- That the program be continued.

- That new boxes be custom-made by local craftsmen for use as bush kits. They should be made of non-conducting material, be insulated and be easier to carry.

- That kit contents be made proportional to the number of trappers leaving together and to the lenght of their stay in the bush. Either two or three different kit sizes should be made available, or the person responsible should be allowed to take along more than one kit, should the number of camp participants justify it. The number of different medications in the kit should also be reduced so as to simplify use and control.

- That the manual, or at the very least the bush-call questionnaire, be translated into Cree to the extent that the unilingual population can read this language.

- That the bush-call questionnaire be reviewed so as to simplify and clarify it and so as to preserve the confidentiality of the communication.

- That a promotion campaign be undertaken so as to sensitize the population to program advantages, inform them of the services offered and incite them to follow the training course. Mechanisms should be set up to facilitate recruitment in the communities.

- That the training course schedule be better adapted to candidates' needs.

- That the merits of integrating certain traditional cures to bush-kit training be studied.

- That all community radio operators receive bush-kit training.

- That all individuals who take part in bush calls (Trappers Association leaders, radio operators and health professionals) meet so as to solve the communication problems specific to their community.

The many other interesting suggestions made by program participants and mentioned in this report should be taken into account for future improvements to the program.

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APPENDIX 1

TABLES

TABLE A.1

NUMBER OF RESPONDENTS AND TRAPPERS, SAMPLE FRACTION AND APPLIED WEIGHT, BY COMMUNITY

COMMUNITY	NUMBER OF RESPONDENTS /	NUMBER OF TRAPPERS	SAMPLE FRACTION	APPLIED WEIGHT
Whapmagoostui	22 /	62	0,3548	2,818
Chisasibi	19 /	139	0,1367	7,315
Wemindji	20 /	110	0,1818	5,501
Eastmain	24 /	44	0,5455	1,833
Waskaganish	20 /	259	0,0772	12,953
Nemaska	20 /	106	0,1887	5,299
Mistassini	20 /	215	0,093	10,753
Waswanipi	23 /	146	0,1575	6,349
TOTAL	**168 /**	**1081**	**0,1554**	

TABLE A.2

TRADITIONAL REMEDIES USED IN THE BUSH FOR TREATING CERTAIN HEALTH PROBLEMS

Colds, coughs, sore throats

- Infusion of Labrador tea or tamarack branches or leaves
- Cataplasms of heated sand, crushed and boiled Labrador tea leaves or boiled spruce bark
- Bear or goose fat
- Moss
- Boiled beaver castoreum
- Sweating the patient

Ulcers, boils

- Rubbing with the steam of the tooskee plant, boiled until red.

Infections, cuts

- Spruce gum
- Soaked bread
- Antiseptic made from boiled water-lily
- Beaver castoreum applied with a cloth

Musculoskeletal pain

- Labrador tea
- Tree bark
- Balm made from a mixture of spruce resin and lard

Urinary infection

- Labrador tea

Source : Survey of representative sample (n=168) of Cree hunters and trappers, Summer 1987.

TABLE A.3

REASONS FOR BUSH CALLS AND MEDICAL EVACUATIONS, TERRITORY AS A WHOLE FOR YEARS 1984-85, 1985-86, 1986-87, IN PERCENTAGES

REASONS FOR CALLS AND EVACUATIONS	CALLS			EVACUATIONS		
	1984-85	1985-86	1986-87	1984-85	1985-86	1986-87
Nervous and mental disorders	2,0	2,6	3,8	2,6	4,6	4,1
Eye problems	2,9	2,4	3,5	-	-	-
Ear troubles	5,2	6,6	5,6	3,9	3,1	2,6
Fever	3,4	5,0	5,9	6,5	1,5	4,6
Respiratory system	22,7	20,4	15,6	19,5	18,5	16,3
Digestive system	15,9	17,2	14,3	14,3	15,4	15,3
Dental problems	3,4	2,4	3,1	2,5	1,6	2,0
Cardiovascular system	2,9	2,1	-	2,6	12,3	5,1
Genito-urinary system and pregnancy	5,8	5,6	10,3	11,7	7,7	9,7
Skin diseases	5,4	2,9	7,5	2,6	3,1	3,1
Musculoskeletal problems	14,4	15,1	10,3	9,1	9,2	7,7
Traumas and injuries	11,5	14,0	9,7	22,1	21,5	21,9
General signs and symptoms	4,5	3,7	10,9	2,6	1,5	7,1
TOTAL **%**	**100,0**	**100,0**	**100,0**	**100,0**	**100,0**	**100,0**
N	**445**	**378**	**321**	**77**	**53**	**54**

Source : Bush call log, September 1984 - 31 august 1987.

TABLE A.4

NUMBER AND PROPORTION OF CALLS FROM THE BUSH BY YEAR, ACCORDING TO COMMUNITY

COMMUNITY	1984-1985 N	1984-1985 %	1985-1986 N	1985-1986 %	1986-1987 N	1986-1987 %
Whapmagoostui	186	41,8	124	32,8	106	33,0
Chisasibi	43	9,7	47	12,4	69	21,5
Wemindji	44	9,9	29	7,7	41	12,8
Eastmain	34	7,6	43	11,4	15	4,7
Waskaganish	9	2,0	28	7,4	34	10,6
Nemaska	64	14,4	65	17,2	30	9,3
Mistassini	22	4,9	28	7,4	17	5,3
Waswanipi	43	9,7	14	3,7	9	2,8
TOTAL	**445**	**100,0**	**378**	**100,0**	**321**	**100,0**

Source : Bush call log, September 1984 to August 1987.

TABLE A.5

LENGTH OF STAYS IN THE BUSH BY COMMUNITY, IN PERCENTAGES

COMMUNITY	LENGTH				TOTAL	
	1 month	1 à 3 months	4 à 6 months	7 à 9 months	%	N
Whapmagoostui	36,4	54,5	9,1	-	100,0	22
Chisasibi	12,5	75,0	12,5	-	100,0	16
Wemindji	69,2	30,8	-	-	100,0	13
Eastmain	6,7	60,0	33,3	-	100,0	15
Waskaganish	6,7	60,0	33,3	-	100,0	15
Nemaska	5,9	-	-	94,1	100,0	17
Mistassini	-	25,0	25,0	50,0	100,0	12
Waswanipi	7,7	15,4	15,4	61,5	100,0	13
TOTAL	**11,4**	**45,5**	**18,7**	**24,4**	**100,0**	**123**

Source : Data from survey of Cree trappers, Summer 1987.

Note : p significant to ,000 according to Chi^2.

APPENDIX 2

EXCERPTS FROM THE BUSH-KIT MANUAL

INDEX

BUSH KIT CONTENT

MEDICATIONS - list revised and approved by Dr. Gordon Magonet on July 2, 1985

CODE			
Beige	1	ALGESAL ointment	2 tubes
Green	2	GARAMYCIN	1 bottle
Yellow	3a	BACTRIM liquid	2 bottles
Yellow	3b	BACTRIM D.S. pill	56 pill
Pink	4	BENADRYL capsule 25mg	40 capsules
Pink	6	CELESTODERM V cream 0.1% 15 mg	2 tubes
Beige	7	CORYPHEN pill 650mg	40 pills
Pink	8a	ERYTHROCIN liquid 250mg	1 bottle
Pink	8b	ERYTHROCIN pill 250mg	40 pills
Pink	9	FLAMAZINE cream 30mg	2 tubes
Green	10	ILOTYCIN ointment 3.5 mg	2 tubes
Yellow	11	IPECAC EMETIQUE 15cc	2 bottles
Pink	12	LOTION CALAMINE 100ml	1 bottle
Yellow	13	MINERAL OIL 150ml	1 bottle
Pink	14	NADOSTINE cream 15gm	2 tubes
Yellow	15	NEUTRALCA antiacid liquid	1 bottle
Blue	16	NITROGLYCERINE pill 1/200gr	1 small bottle
Green	17	NOVAMOXAN powder 250mg	4 bottles
Green	18	OIL OF CLOVES 4.5ml	1 bottle
Green	19	OPTREX drops	2 bottles
Green	20a	ORBENIN powder 125mg(Cloxacilline)	4 bottles
Green	20b	ORBENIN capsule 250mg	80 capsules

CODE			
Green	21	PENICILLINE pill 300mg	80 pills
Pink	23	POLYSPORIN ointment 15 mg	4 tubes
Pink	24	PROVIODINE DETERGENT 150cc	2 bottles
Green	26	SUDAFED syrup	2 bottles
Green	28	ATASOL drops 15ml	2 bottles
Green	29	ROBIGESIC-ELIXIR 100ml	2 bottles
Green	30	ATASOL pill 325 mg	50 pills
Yellow	31	T.R.O. powder	4 flacons
Green	32	VASELINE first aid size 50gm	1 tube
Pink	33	ZINCOFAX 50 mg	2 tubes

SUPPLIES

STERILE COMPRESSES 2" x 2"	1 box
STERILE COMPRESSES 4" x 4"	1 box
NON-STERILE COMPRESSES 4" x 4"	1 pkg
NON-STERILE KLING 2" x 4"	4 rolls
NON-STERILE KLING 4"	4 rolls
STERILE ABDOMINAL SURGIPADS	2
ORAL THERMOMETER	2
RECTAL THERMOMETER	2
ELASTOCREPE 2" (elastic bandage)	2 rolls
ELASTOCREPE 4"	2 rolls
TRIANGULAR sling bandage	4
ADHESIVE TAPE 1/2"	2 rolls
ADHESIVE TAPE 1"	2 rolls
TONGUE DEPRESSOR ADULTS	10
ELASTOPLAST STRIP BANDAGE 7.5 cm.	1 box
MEDICATION CUPS (plastic, 30 cc.)	10
TEASPOONS (plastic)	10
SAFETY PINS	24
Q-TIPS 3"	1 pkg.
MEDICINE DROPPERS	4

APPENDIX 3

BUSH CALL QUESTIONNAIRE AND LOG

CALL FROM THE BUSH

WHO IS INJURED OR SICK?

NAME: _____

AGE : _____

BAND NO: _____

Is the person known to have:

- ☐ Heart problem
- ☐ High blood pressure
- ☐ Diabetic (sugar problem)
- ☐ Breathing problem
- ☐ Drug allergy

REFER TO FIRST AID BOOK FOR THESE QUESTIONS

If the person is on medication(have medication ready)

WHY ARE YOU CALLING?

_____

_____

_____

WHEN DID IT HAPPEN?

_____

_____

_____

WHAT DID YOU DO?

_____

_____

_____

WHERE IS THE CAMP SITUATED? _____

_____

BUSH CALL LOG

E	HOUR	NAME OF PATIENT	AGE	PROBLEM	MEDICATION AND TREATMENT PRESCRIBED	EVACUATION PLACE-DATE REASON	WHO CALLED	DID RESPONSIBLE USE	
								BUSH KIT MANUAL	ANSWER QUESTION

APPENDIX 4

SURVEY QUESTIONNAIRE

No. du questionnaire ___ ___ ___ (1 - 3)

A. TRAPPERS' QUESTIONNAIRE

Don't write in this space

Name of trapper: _____

Chosen from: List of Cree Trappers Association 1
List of responsables of bush kit 2 (4)

Village: _____ (5)

Sex: Male 1
Female 2 (6)

Age Group: 18-29 years old 1
30-39 " " 2
40-49 " " 3
50-59 " " 4
> 60 " " 5 (7)

Name of interviewer: _____ (8)

Date of interview: ____ / ____ / ____ (9-10) (11)
yr mo day

Language(s) used during interview: _____ (12)

Length of interview: _____ (minutes) (13)

Result of interview:
Questionnaire completed 1
Person not available 2
Refusal 3
Interview not completed 4 (14)

Good Morning! My name is _____.

I work presently for the health services. As you may have heard, I am meeting hunters and trappers in order to help us understand how people deal with health problems in the bush.

This consultation is part of a process to improve health services to the people. The results will be made public and you will hear about it. We are interviewing people who spend a lot of time in the bush.

Your name has been chosen at random from the list of the Cree Trappers' Association. Your name will not appear anywhere in connection with this study and the information you will give us will remain confidential.

Question 1: When was the last time you or a member of your camp have had a health problem in the bush? (15)

Spring 1987 1

Winter 1986-87 ... 2

Fall 1986 3

Other 4

Never ..... 5 →(Go to Q 10)

Question 2: What kind of health problems did you have? **(Don't read list)** (16-17)

Pain in the chest 01

Diarrhea 02

Ear problems 03

Tooth pain 04

Cold or cough 05

High fever 06

Pain in the bones 07

Breathing problems 08

Trouble with the heart 09

Injury or accident 10

Pregnancy 11

Other (specify) _____ 12

(If you get more than one answer, ask 2A; if only one Go to Q 3)

Question 2A: According to you, which one of those problems was the worse?

_____

Question 3: Was the person who was sick a man or a woman, a boy or a girl? (18)

Man or boy 1

Woman or girl ... 2

Question 3A: What approximately was the age of that person:
(Don't read list)

(19)

- <15 years old 1
- 15 to 24 2
- 25 to 44 3
- 45 to 64 4
- ≥ 65 years old 5
- Doesn't know 8

Question 4: Who was the person in the camp who took care of the sick person? **(No names)**

_____ (20)

Question 5: What did that person do about it?

_____ (21-22)

_____

_____

_____

Question 5A: Was the sick person evacuated?

(23)

- Yes 1
- No 2
- Doesn't know 8

Question 6: If the sick person needed to be evacuated by your own means, how long would it take to bring her or him back?

(24)

- _____ hours
- _____ impossible by our own means

Question 7: What means of transportation would it be?
(Don't read list)

(25)

- Skidoo 1
- Canoe 2
- Truck 3
- Plane 4
- Helicopter 5
- Other **(specify)** _____ 6

Question 8: For that specific camp, we are talking about _____ (fill in season), how long did you stay in the bush?

_____ Months (26-27)

_____ Weeks

_____ Does not know

Question 9: Approximately, how many adults were there in that camp? And how many children?

_____ Adults (28-29)

_____ Children (30-31)

Question 10: Some Cree people might use traditional medicine or methods, does anyone in your camp use it?

Yes 1 (32)

No ..... 2 →(Go to Q 11)

Doesn't know 8

Question 10A: What kind of medicine or method would it be?

_____ (33-34)

Question 11: If you would need advice on a health problem, what person in your camp would you go to?

_____ (35)

Question 12: There is a big first aid box we call bush kit, did you have one at your last _____ (fill in season) camp?

Yes ..... 1 →(Go to Q 18) (36)

No 2

Doesn't know ... 8

Question 13: When you leave for the bush, do you bring medicine or Band-Aid in case of an emergency health problem?

Yes 1 (37)

No ..... 2 →(Go to Q 14)

Doesn't know ... 8 →(Go to Q 14)

Question 13A: Could you name a few items you would bring?

_____ (38)

Question 14: Have you heard about the bush kit?

Yes ..... 1 →**(Go to Q 16)** (39)

No 2

Question 15: Would you like to get information about it?

Yes ..... 1 } **End of interview** (40)

No ..... 2 } **Thank you for your cooperation**

Question 16: Some people bring it along when they leave for the bush, is there a reason why you did not have one at your camp? Tell me about it:

_____ (41)

_____

Question 17: If you had the possibility, would you like to get one?

Yes ..... 1 →**End of interview** (42)
Thank you for your cooperation

No 2

Question 17A: Why?

_____ (43)

_____

END OF INTERVIEW

THANK YOU FOR YOUR COOPERATION

Question 18: How often is there a bush kit box available in your camp when you leave for the bush...?

Never 1 (44)

Once in a while 2

Most of the time 3

Always 4

Doesn't know 8

Question 19: According to you, has the bush kit box been helpful or not helpful to the people in your camp...?

Helpful 1 (45)

Not helpful 2

Doesn't know 8

Question 20: When you have a person responsible for the bush kit in your camp, do you feel more secure?

Yes 1 (46)

No 2

Doesn't know 8

Question 21: Who has access to the content of the box?

Person responsable for the bush kit 1 (47)

Other **(specify)** _____ 2

Doesn't know 8

Question 22: Who was the person responsible for the bush kit box in your _____ camp?
(season)

I was ..... 1 **→(Go to Q 24)** (48)

Somebody else 2

Doesn't know 8

Question 23: If somebody cuts his finger in your camp, do you think that the person responsible for the bush kit is able to take care of it without calling the nurse?

Yes 1 (49)

No 2

Doesn't know 8

END OF INTERVIEW

THANK YOU

Question 24: Is the box too heavy for you, or is it the right weight?

Too heavy 1 (50)

The right weight 2

Doesn't know 8

Question 25: Do you think the bush kit box is the right size, is it:

Too small 1 (51)

Just the right size 2

Too big 3

Doesn't know 8

Question 26: From what you know, is one bush kit box enough for your camp?

Yes 1 (52)

No 2

Doesn't know 8

Question 27: According to you, what are the 3 kinds of medication or supplies you use the most often when you take care of people.

1. _____ (53-54)

2. _____

3. _____

Question 28: Do you think there is enough medication or supplies in the box?

Yes ..... 1 →(Go to Q 29) (55)

No 2

Doesn't know ..... 8 →(Go to Q 29)

Question 28A: Could you name the ones that you ran out of?

1. _____ (56)

2. _____

3. _____

4. None

Question 29: Have you had any kind of problem with the bush kit?

Yes 1 (57)

No ..... 2 →(Go to Q 30)

Doesn't know ... 8 →(Go to Q 30)

Question 29A: Which ones are they?

_____ (58)

_____

Now, I would like to ask you a few questions about the radio communications between your camp and the village.

Question 30: During the past year, have you used the radio to contact the nurse or doctor about a health problem in your camp?

Yes 1 (59)

No ..... 2 →(Go to Q 34)

Question 31: Does it happen that you have to call back because the communication is not good? Does it happen:

Often 1 (60)

Sometimes 2

Rarely 3

Never 4

Doesn't know 8

Question 32: When you call the nurse or doctor, do you use the "call from the bush" questionnaire?...

Each time 1 (61)

Most of the time 2

Rarely 3

Never 4

Question 33: According to you, what would be the most important problem concerning the radiocommunication between the camp and the village when it comes to health problems?

_____ (62)

_____

_____

Finally, I would like to have your opinion on the last bush kit course you took.

Question 34: In what year did you attend the course for the last time?

19___ (63)

Question 35: On that occasion, was the amount of information given to you...

Too much 1 (64)

Just the right amount 2

Not enough 3

Doesn't know 8

Question 36: How did you find the way the instructor gave the course? Was it...

Easy to understand ..... 1 →(Go to Q 37) (65)

Difficult to understand ... 2

Doesn't know 8

Question 36A: Why?

_____ (66)

_____

Question 37: According to you is the bush kit Manual

Easy to read ..... 1 →(Go to Q 38) (67)

Hard to read 2

Doesn't know 8

Question 37A: Why?

_____ (68)

_____

Question 38: Generally speaking, were you satisfied with the last bush kit course you attended? Were you:

Satisfied 1 (69)

More or less satisfied ... 2

Not satisfied 3

Doesn't know 8

Question 39: According to your experience, what improvements could be made to the bush kit?

_____ (70)

_____

Thank you for your kind cooperation.